APPENDIX A

SUPPORTING DOCUMENTS

2035 Traffic Forecast Volume Memo
Traffic Forecasting Model Validation Report
Traffic Analysis Report
Traffic Analysis Report Appendix
License Plate Survey Summary
VISSIM Microsimulation Report
Cultural Resources Element
Technical Advisory Committee (TAC) meetings
Community Workshops December 2011
Mini-Charrettes March 2012
Community Workshops July 2012
Public Comments
Literature Review
Arroyo Seco Corridor Management Plan (2004)
TAC List

AFSHA CONSULTING, INC.

Technical Memorandum

DRAFT

TO: Bill Delo / Fred Glick

FROM: Mahmoud Ahmadi, AFSHA Consulting Inc.

DATE: May 1, 2011

SUBJECT: Arroyo Seco Parkway Corridor Partnership Plan (CPP) - 2035 Traffic Forecasts

---

This report presents the 2035 traffic forecasts prepared in support of transportation analysis of the Arroyo Seco Parkway Corridor Partnership Plan (CPP). The project calls for analysis of the No-build scenario and two project alternatives using the sub-area travel demand model (based on the SCAG Regional Model) that is developed for this project.

SCAG 2008 RTP Baseline model is used as the No-Build scenario for the purpose of this study. All regional baseline transportation improvements associated with the RTP Baseline forecast are included in the model network and SCAG socio-economic data from the 2008 RTP are used and no changes were made.

In addition to No-Build scenario, two project alternatives are modeled and analyzed as follows:

- Alternative 1: Auxiliary Lanes
- Alternative 2: Ramp Closures and Modifications

Detailed descriptions of alternatives are provided in the Traffic Analysis Memorandum. Furthermore, the No-Build and the two alternatives are modeled "With" and "Without" the I-710 extension. The I-710 extension is assumed to be a freeway with 3 general purpose lanes and one HOV lane in each direction.

1.0 Socio-Economic Data (SED) Assumptions

Year 2008 and 2035 population, household and employment are summarized in Table 1. The geographical representations of household and employment growth are presented in Figure 1-4.

Table 1.
SED Assumptions

	2008	2035	Diff.	%Diff
Population	107,935	117,439	9504	9%
Households	34,992	40,520	5,528	16%
Employment	25,625	30,521	4,896	19%

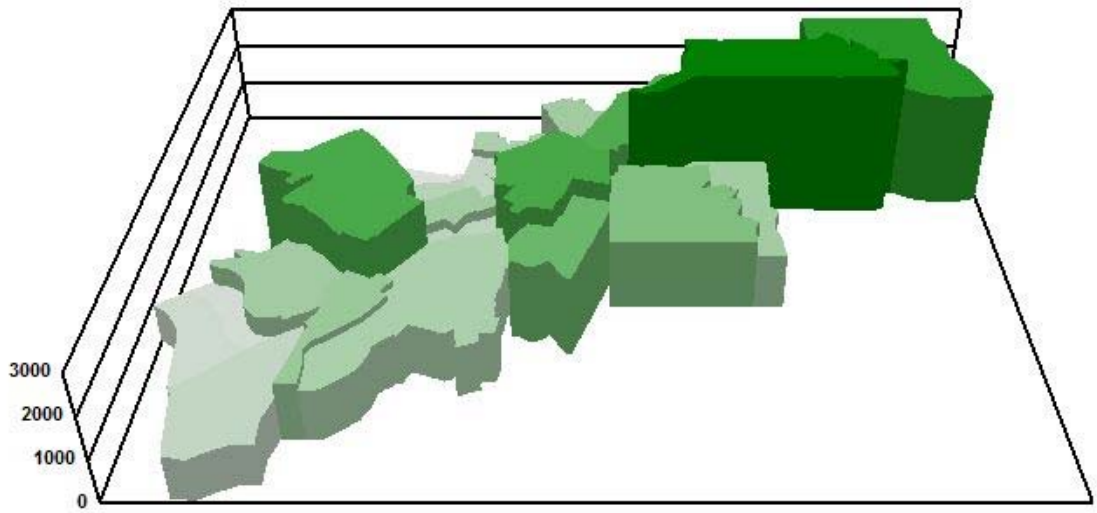


Figure 1. 2008 Household in Study Area

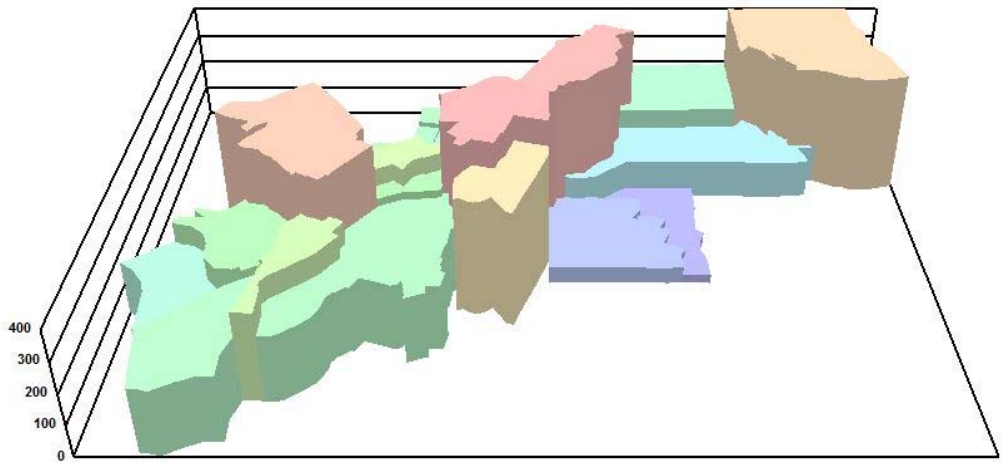


Figure 2. Increase in Households by 2035

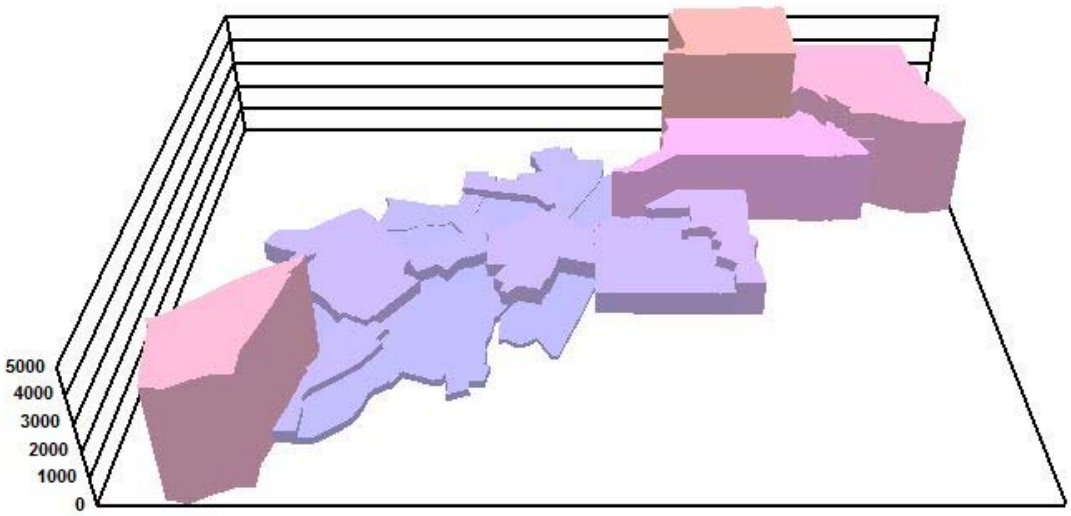


Figure 3. 2008 Employment in Study Area

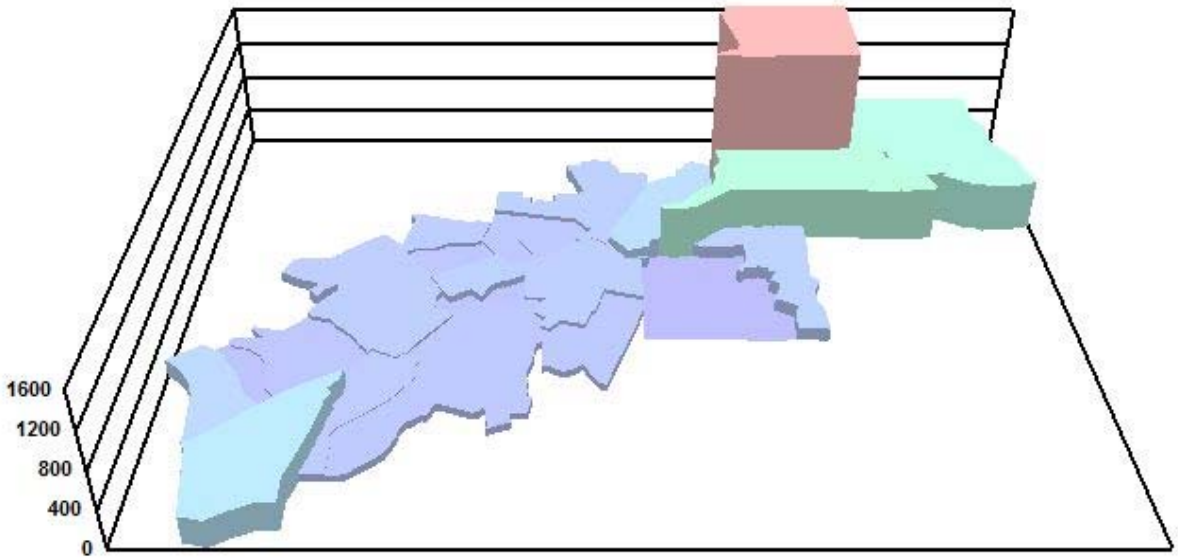


Figure 4. Increase in Employment by 2035

Study area population is forecast to grow by 9%, and study area households is forecast to grow by 16%, implying smaller household size in future. Employment follows a similar pattern with 19% growth.

1.0 Screenline Analysis

To analyze the alternatives' traffic flows and impacts, screenline traffic volumes are summarized by SR-110 and arterials for the AM, PM and daily time periods. Model results including the 2011 base year are presented in Figures 5-7. Screenline locations are presented in Figure 8. To provide comparative and relevant summaries, model runs without I-710 extension are discussed first. Then model runs with the I-710 extension are reviewed and analyzed.

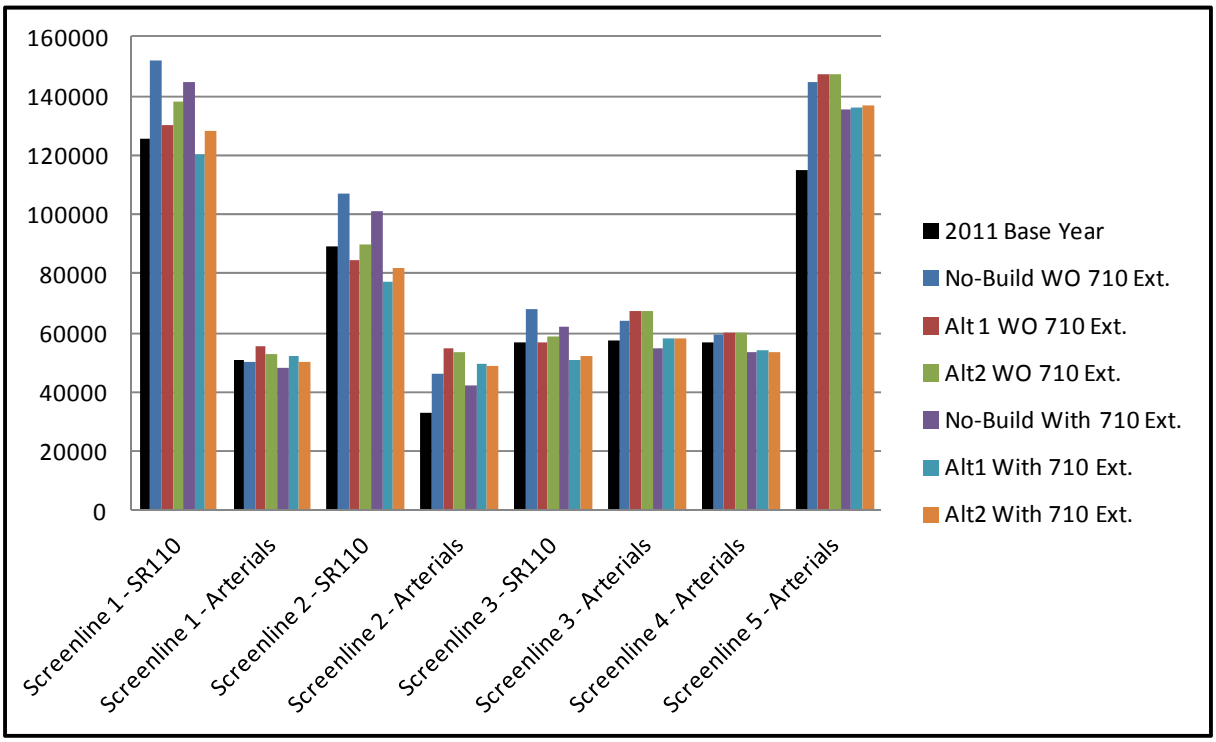


Figure 5. Daily Screenline Traffic Volume Comparisons Across Alternatives

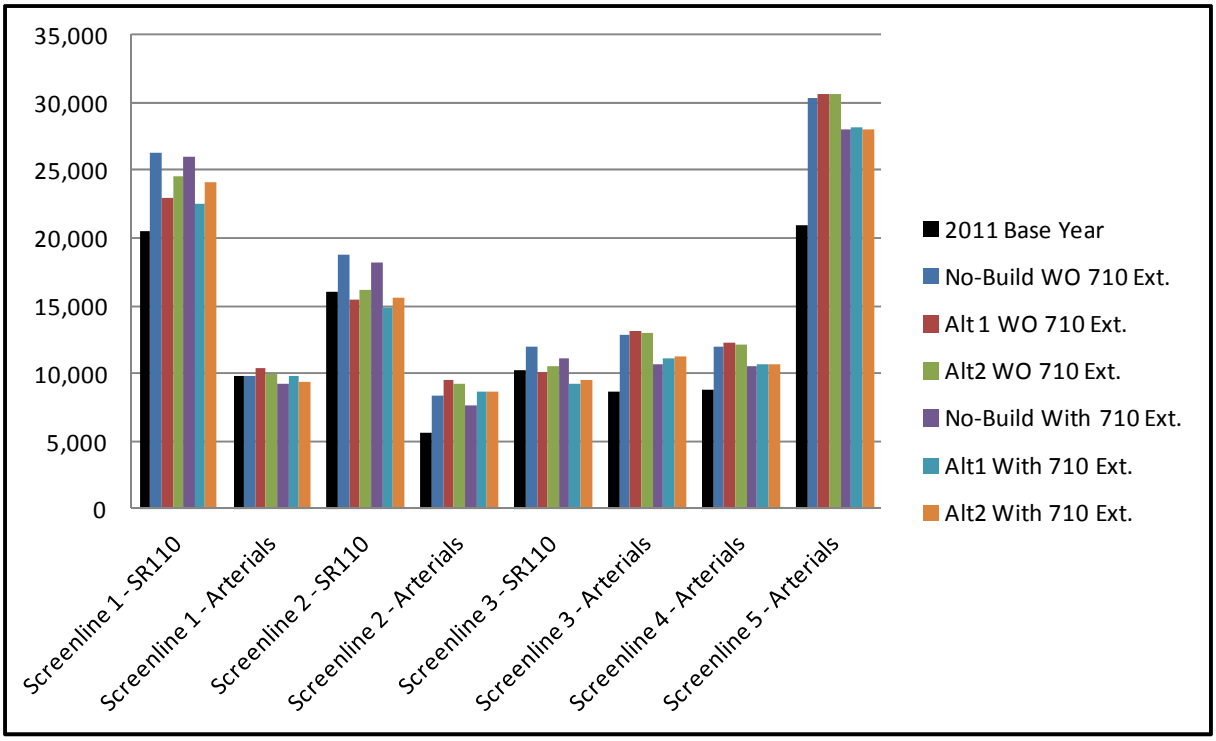


Figure 6. AM Peak Period Screenline Traffic Volume Comparisons Across Alternatives

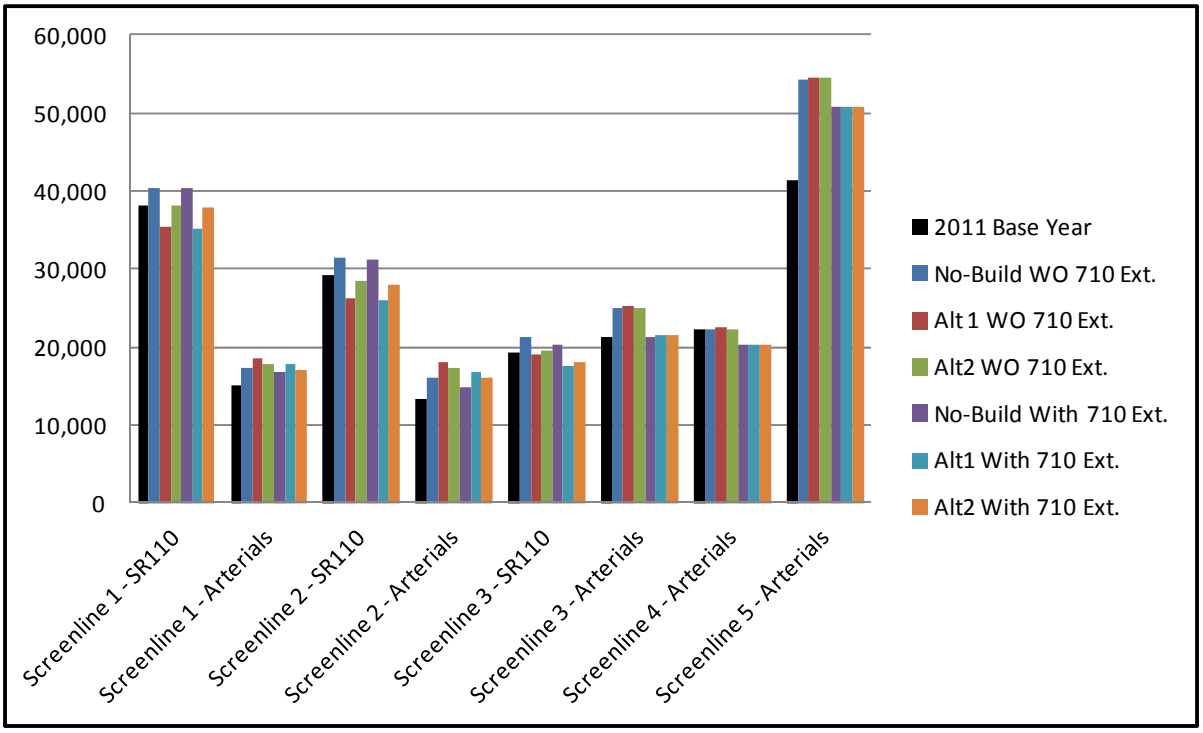


Figure 7. PM Peak Period Screenline Traffic Volume Comparisons Across Alternatives

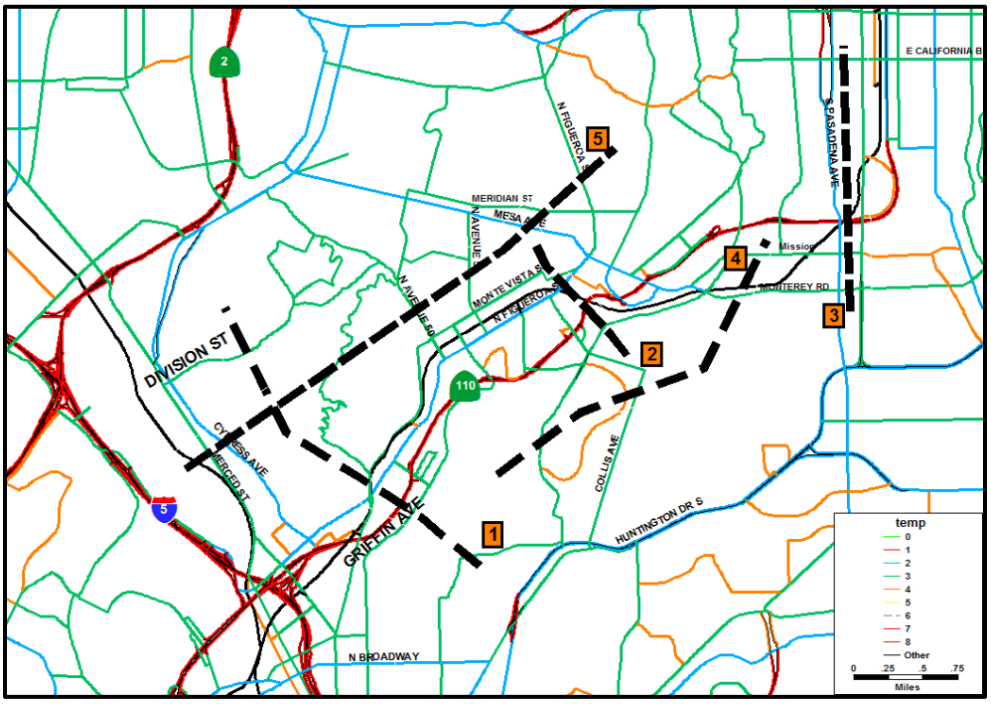


Figure 8. Screenline Locations

1.1 Screenline Analysis without I-710 Extension

The model results indicate an increase in daily traffic volumes in 2035 No-Build compared to the base year as expected. The daily traffic volumes are expected to grow approximately by 20% and 17% on SR-110 and arterials, respectively. The highest increase in SR-110 traffic volumes occurs at screenline 1. Arterials on screenline 5 have the highest increase in traffic volumes and arterials on screenline 1 have no change in traffic volumes. Remaining arterials show increase in traffic volumes in 2035 compared to the base year. AM and PM peak periods have similar patterns as the daily traffic volumes.

Comparison of alternative 1 and alternative 2 with No-build indicate that SR-110 daily traffic volumes are decreased under both alternatives compared to No-Build. Alternative 1 results in higher reduction of traffic than Alternative 2 on SR-110. Both alternatives have the opposite impact on arterials, as expected. Arterial traffic volumes are increased compared to 2035 No-build. The increase in arterial traffic volumes is higher in Alternative 1 as compared to Alternative 2.

The highest reduction of daily traffic volume on SR-110 occurs on screenline 1 with reduction of approximately 14% under Alternative 1 and 9% reduction under Alternative 2. Screenlines on arterials have the highest increase in traffic volume of approximately 18% in both Alternatives 1 and 2.

1.2 Screenline Analysis with I-710 Extension

The addition of I-710 extension as a freeway in the model results in the traffic reduction within our study area for the No-Build, Alternatives 1 and 2 scenarios. Comparing each alternative "with" and "without" I-710 extension indicates that the I-710 extension could results in reduction of traffic by approximately 8% within the study area.

Comparing the Alternative 1 and 2 with No-Build show similar traffic patterns as discussed in previous section. Alternative 1 results in a greater reduction of traffic than Alternative 2 on SR-110. Both alternatives have the opposite impact on arterials, as expected. Arterial traffic volumes are increased compared to 2035 No-build. The increase in arterial traffic volumes is higher in Alternative 1 as compared to Alternative 2.

AFSHA CONSULTING, INC.

Technical Memorandum

DRAFT

TO: Bill Delo / Fred Glick

FROM: Mahmoud Ahmadi, AFSHA Consulting Inc.

DATE: December 18, 2011

SUBJECT: Arroyo Seco Parkway Corridor Partnership Plan (CPP) Travel Forecasting Model Validation Report

1.0 INTRODUCTION

This report presents the methodologies and results of the traffic forecasting task for the Arroyo Seco Parkway Corridor Partnership Plan (CPP) Study. The forecasts are the output of a travel demand model that estimates traffic volumes by vehicle class (e.g., drive-alone, shared-ride, and trucks) for a network of highway and roadway links of interest in the study area. The travel demand model generates traffic forecasts for four different time periods, which together makes up the average daily traffic volumes.

The traffic forecasts provide inputs for a number of subsequent tasks including:

- Traffic operations analysis that characterizes traffic flow conditions in the study area.
- The basis for defining traffic circulation impacts of different alternatives.

The report provides an overview of the methodology used to develop the traffic forecasts including the model development assumptions and enhancements. Next the report presents the model validation targets based on the Caltrans Travel Forecasting Guidelines, November 1992 and Travel Model Improvement Program (TMIP) Model Validation and Reasonableness Checking Manual, September 2010. Last the model validation result which compares the base year model outputs with actual traffic count data is discussed.

2.0 Overview of the Arroyo Seco Parkway CPP Travel Forecasting Methodology.

A travel forecasting model is a critical tool for the Arroyo Seco Parkway CPP Study. It provides forecast traffic volumes for all of the roadways and highways in study area. The information will be used in evaluating design concepts to alleviate bottlenecks and improve traffic flow. The Arroyo Seco Parkway CPP Model is developed based on the SCAG's 2008 Regional Transportation Plan (RTP) travel demand model. By using the SCAG 2008 RTP model, the consistency with the regional plans and assumptions are assured.

The SCAG (2008 RTP) travel demand model is a traditional four-step model comprised of trip generation, trip distribution, mode choice, and traffic assignment components. The base year model is comprised of 4,192 traffic analysis zones covering the entire six county SCAG Region (Ventura, Los Angeles, San Bernardino, Riverside, Orange, and Imperial Counties). Trip generation estimates the number of trips that originate and terminate in each zone. Trip distribution links the origins and destinations of trips (i.e., how many trips travel from zone A to zone B). Mode choice for passenger trips determines whether trips are made by auto (drive alone, share ride two passengers, and shared ride three passengers), transit, or non-motorized (walk and bicycle). Traffic assignment determines the routing of vehicle trips on the roadway network. (Transit assignment determines routing of transit passenger trips on the transit system.)

The model forecasts traffic for an average weekday and divides the day into four time periods as shown in Table 1. A separate traffic assignment is conducted for each time period to appropriately account for the varying roadway congestion conditions in each of the four time periods.

TABLE 1.
SCAG RTP Model Time Period

Period	Time
AM Peak Period	6:00 a.m. to 9:00 a.m.
Midday Period	9:00 a.m. to 3:00 p.m.
PM Peak Period	3:00 p.m. to 7:00 p.m.
Night Period	7:00 p.m. to 6:00 a.m.

DRAFT

The SCAG RTP model also includes a separate set of procedures for forecasting truck traffic (also known as the Heavy-Duty Truck (HDT) model). There are three major components of the HDT model: 1) the external model which incorporates trip generation and trip distribution of interregional truck trips based on commodity flow data, 2) the internal model which incorporates trip generation and trip distribution of intra-regional trips using procedures similar to those used to generate and distribute person trips and 3) the special generator model which includes the Ports of Long Beach and Los Angeles truck trips.

The HDT and auto trip tables are combined together for a multiclass traffic assignment process. The results of traffic assignments for the SCAG model are reported for six vehicle classes:

1. Drive alone autos;
2. Shared ride (2 occupants) autos;
3. Shared ride (3+ occupants) autos;
4. Light heavy-duty trucks (8,500 to 14,000 lbs. Gross Vehicle Weight);
5. Medium heavy-duty trucks (14,001 to 33,000 lbs. Gross Vehicle Weight); and
6. Heavy heavy-duty trucks (more than 33,000 lbs. Gross Vehicle Weight).

2.1 Model Enhancements

To develop a robust travel demand forecasting model that is calibrated to local conditions within the study area, the model has been refined in the study area by subdividing the Traffic Analysis Zones (TAZs) within the study area as shown in Figure 1. The TAZs within the study area were reviewed and subdivided into smaller zones to ensure more accurate loading points onto the circulation system. The highway network links and connections were reviewed and corrections made within the Study Area to accurately represent existing conditions.

DRAFT

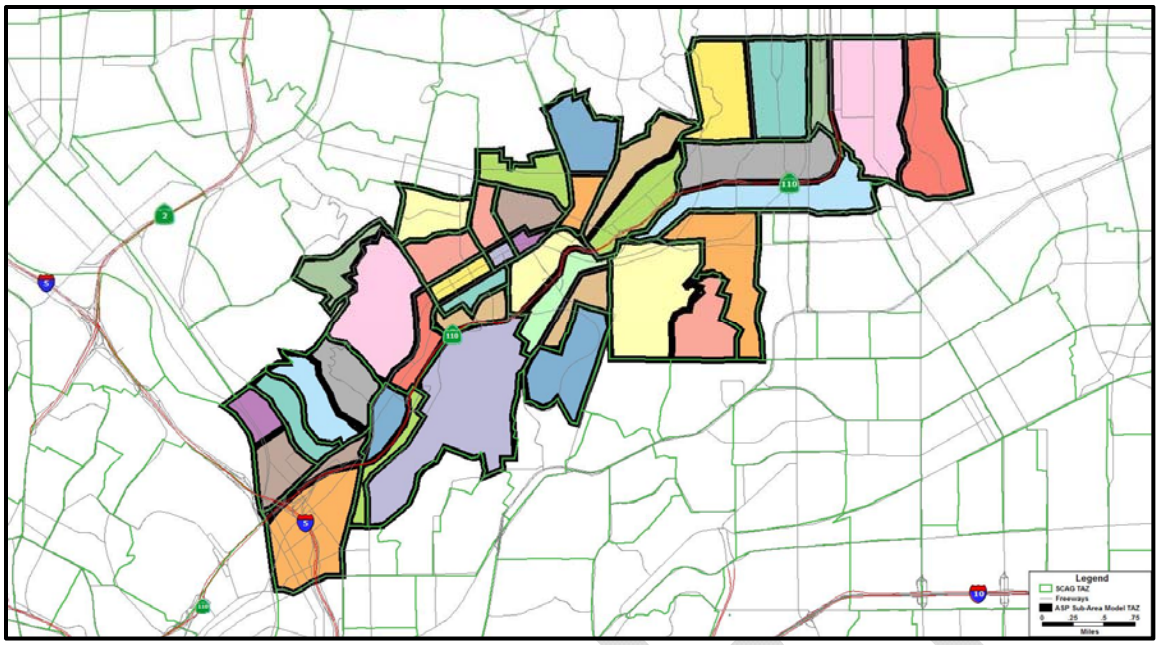


Figure 1. Study Area TAZ system

There are total of 41 TAZs within the study area. The roadway network and centroid connectors are updated to be compatible with the new zone systems structure. The socio-economic data were split among the disaggregated TAZs using the aerial photos. Highway network attributes including speed, facility type, and number of lanes were carefully reviewed and updated within the study area. These attributes were updated based on aerial imagery and field surveys. The key model enhancements are as follows:

- The SR-110 free flow speeds were reduced from 55 to 45 mph and the freeway capacity by 10% from 1,900 to 1,710 pc/h/lane in order to better represent the traffic operation of the parkway.

- In the highway assignment, daily vehicle trips are split into four time periods and are assigned, or loaded, onto each of the four time period (am peak, mid-day, pm peak, and night) highway networks. During the model calibration/validation process, it was observed the time distribution of the model traffic volumes on SR-110 was not consistent with the observed data as shown in Table 2. The time distribution of traffic volume are developed by averaging the model traffic volumes and observed traffic counts at the screenline locations.

TABLE 2.

SR-110 Daily Traffic Volume Distribution

Time Period	Northbound		Southbound	
	Observed	Model	Observed	Model
AM	13%	19%	19%	24%
MD	28%	30%	35%	30%
PM	32%	36%	22%	31%
NT	28%	14%	25%	15%

To correct the model over-predicting and under-predicting of the traffic volumes on the SR-110 during the day, select link analysis of the northbound and southbound SR-110 were performed. Based on the examination of the select link model runs, origin/destination of trips utilizing the SR-110 were identified as shown in Figures 2 and 3. The select link origin-destination trip matrices were used to adjust the four time period trip tables as follows:

- The AM peak period trip tables are reduced by the approximately 9,400 trips based on the link trip matrices. The northbound and southbound select link trip reductions are 4,000 and 5,400 trips, respectively. The reduced AM peak period trips were added to the night time period trips.

- The PM peak period trip tables are reduced by the approximately 23,300 based on the select link trip matrices. The northbound and southbound select link trip reductions are 14,000 and 9,300 trips, respectively. The reduced PM peak period trips were added to the mid-day time period trips.

DRAFT

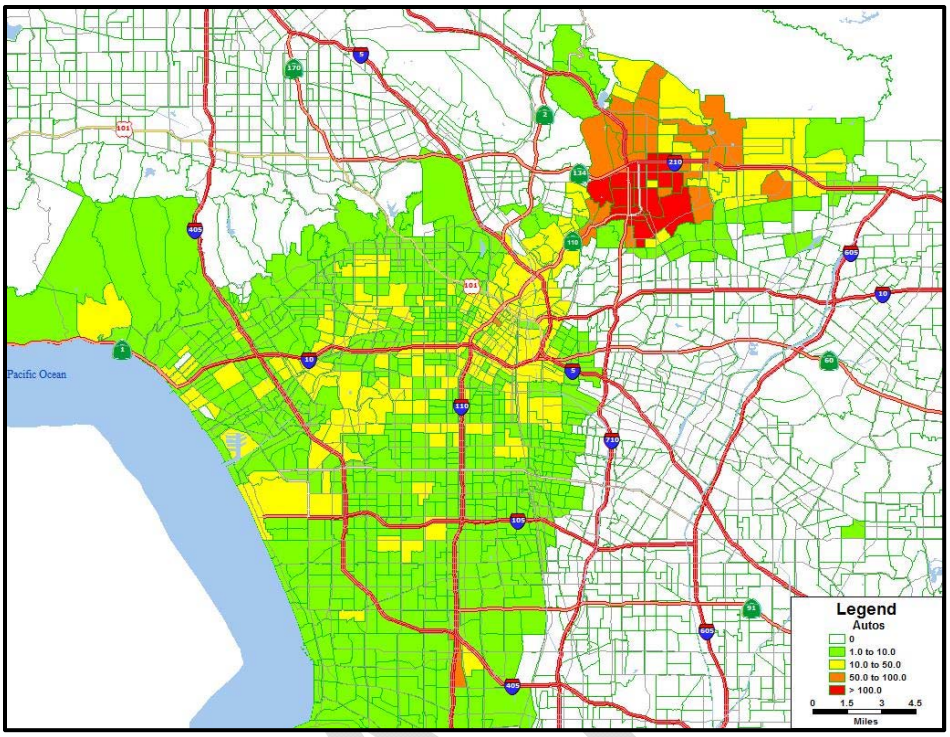


Figure 2. SR-110 Select Link Analysis - AM Peak Period

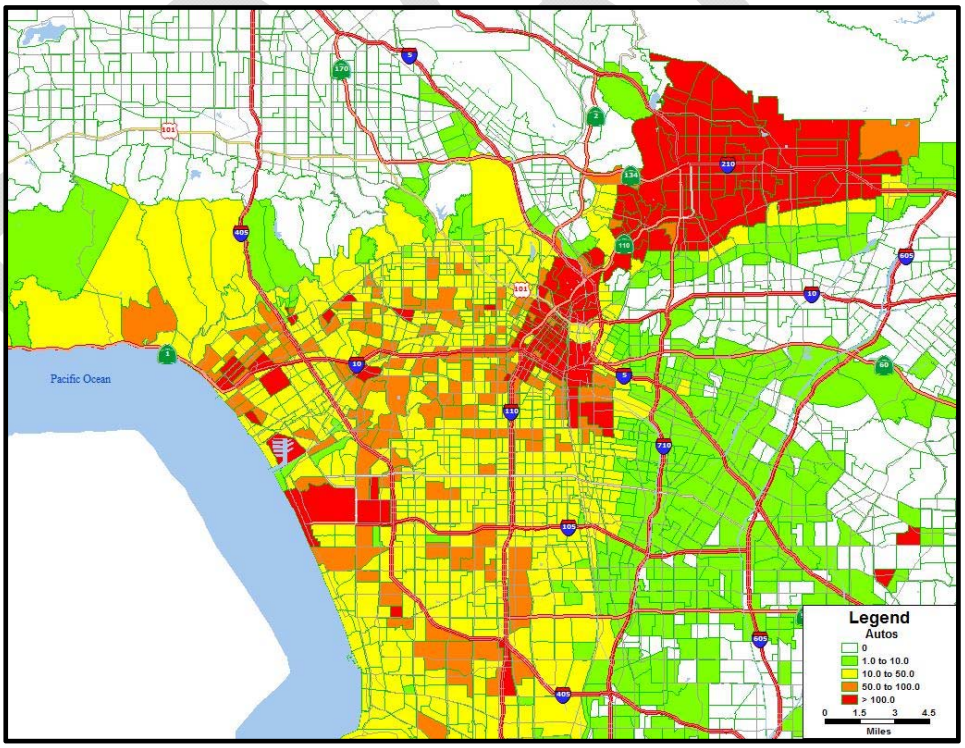


Figure 3. SR-110 Select Link Analysis - PM Peak Period

3.0 Sub-Area Model Validation

Validation involves testing the model's predictive capabilities. Travel demand models need to be able to replicate observed conditions within reasonable accuracy before being used to produce future-year forecasts. Validation process requires comparing the model predictions with observed information other than that used in model estimation and calibration. It usually involves checking the model results against observed data and adjusting model parameters until model results fall within an acceptable range of error.

As part of the model validation, a series of screenlines running north-south (three screenlines) and east-west (two screenlines) across the study area were identified as shown in Figure 4. Model validation requires a reliable and comprehensive set of traffic counts against which model results can be compared for the base year. Traffic counts were assembled from various sources including new traffic counts, City of Los Angeles traffic count database, City of Pasadena traffic map and Caltrans annual traffic count book. In addition, Caltrans Performance Measurement System (PeMS) counts were used to validate the model.

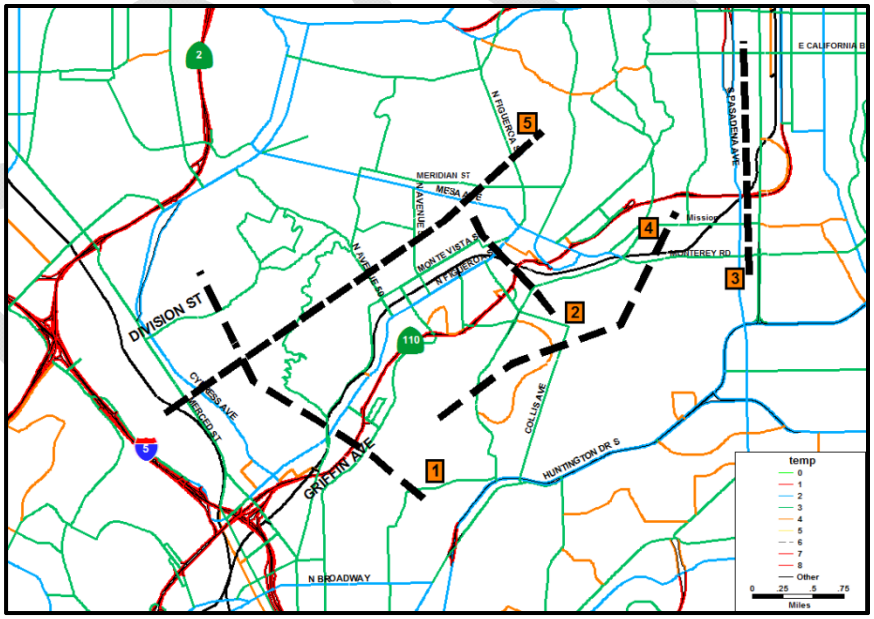


Figure 4. Screenline Locations

3.1 Traffic Assignment Model Validation Targets

The validation process is primarily a comparison of model generated traffic volumes with the observed traffic volumes. To ensure the travel forecasting model replicates the existing conditions, a set of validation targets need to be established. For the purposes of this study, the model validation criteria is based on the *Caltrans Travel Forecasting Guidelines, November 1992 and Travel Model Improvement Program (TMIP) Model Validation and Reasonableness Checking Manual, September 2010.* The validation process is conducted at three levels:

- **Screenline Level of Analysis** – Screenlines are imaginary lines drawn across several sections of various roadways to assess the performance of the model by comparing the model assigned volumes and observed counts for the roadway sections. Caltrans screenline criterion states that 75% of freeways, principal arterials and all screenlines should meet the maximum desirable deviation as shown in Figure 5.

- **System-wide Level of Analysis** – In addition to screenline validation, it is helpful to compute aggregate statistics to assess the validity of model forecast traffic assignment. R^2 (Coefficient of determination) or the goodness of the fit shows how well the model generated traffic volumes correlate with the observed data. The Caltrans guideline value for system-wide R^2 is greater than or equal to 0.88.

- **Percent Root Mean Square Error (%RMSE)** - Percent root mean square error is a statistical measure that corrects for the sign of the error. For example, in a set of validation results, sometimes the difference between counts and model results will be positive and sometimes they will be negative. %RMSE adjusts for sign difference and thus provides a better measure for overall error rates. The industry guidance for %RMSE is equal or less than of 35%.

DRAFT

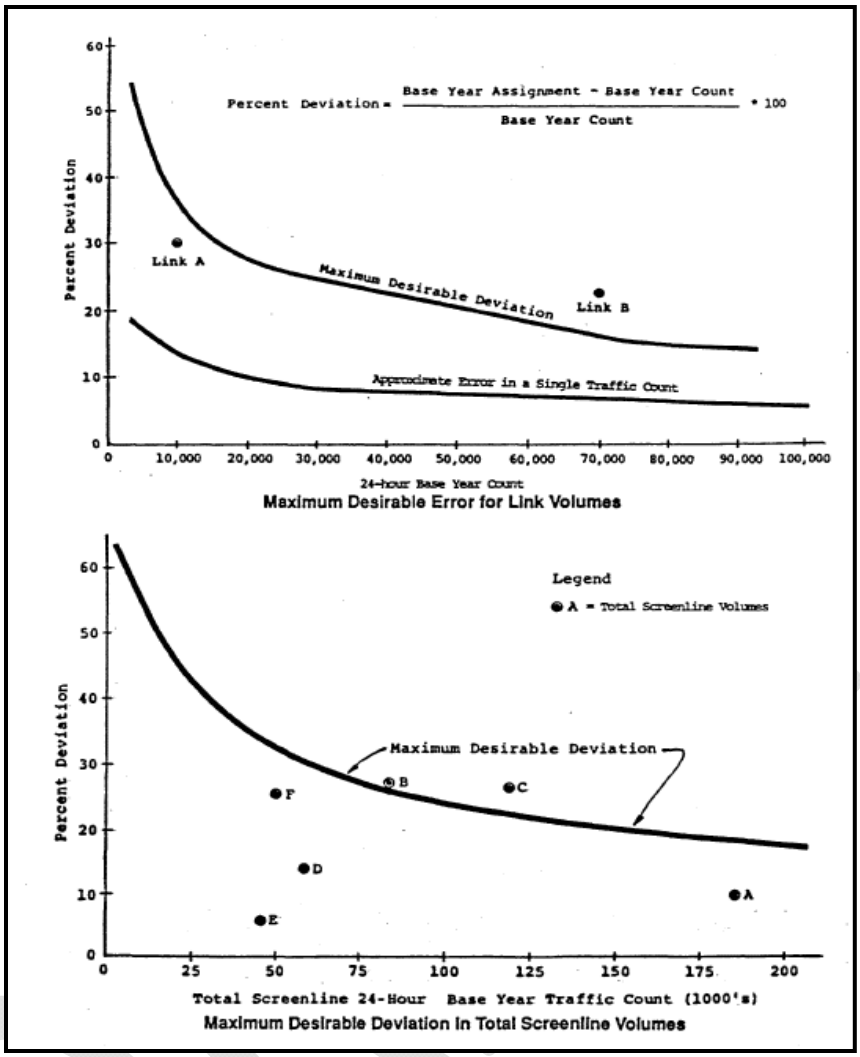


Figure 5 - Screenline Criterion

3.2 Traffic Assignment Model Results

This section of the report presents the model validation results. The thresholds of acceptability of model results are examined for screenline links and total screenline volumes as prescribed by Caltrans guidelines. First AM, PM and daily link level traffic volumes are reviewed. Next AM, PM and daily total screenline traffic volume validation are presented. Last the R^2 and %RMSE results are discussed.

AM, PM peak period and daily link traffic volumes are presented in Figures 6-8. As shown in Figures 6-8, the link traffic volumes meet the requirement of the maximum desirable error link criteria. Total AM,

PM peak period and daily screenline model volumes are presented in Figure 9. As shown in Figure 9, all screenlines meet the requirement of the maximum desirable deviation in total screenline criteria as well. The screenline detail data are provided in Appendix A.

The %RMSE and R^2 results are presented in Table 3. The R^2 value or goodness of fit is met for all screenlines. As shown in Table 3, all screenlines meet the %RMSE square with the exception of the Screenlines 1 for the AM peak period. It should be noted that screenline 4 is comprised of 5 arterial locations with total screenline volume of 8,800 during AM peak period. Higher %RMSE is expected for a screenline with such characteristics. The graphical presentation of R^2 for AM, PM, and daily time periods are provided in Appendix B.

4.0 Conclusion

The local and national standard practices are followed in the development and validation of the Arroyo Seco Parkway CPP Model. The model was developed using the SCAG's 2008 Regional Transportation Plan (RTP) travel demand. The model validation exercise reveals that reasonable and reliable base year traffic forecasts are generated by the model for the AM, PM peak periods as well as daily traffic volumes. The model can be applied for future years with a reasonable degree of reliability.

However, it is often necessary to develop additional methods to ensure the future forecast traffic volumes more closely match base year traffic counts and patterns. The common methodology is to post-process the model traffic volumes and it is regularly applied in corridor studies. The post-processing method integrates within the model so the entire system takes full advantage of what the model does well, while recognizing the need to use base year traffic count data that is directly comparable with base year traffic forecasts. For the purpose of this study, the post-processing methodology will be based on accepted industry standards including the National Cooperative Highway Research Program (NCHRP) 255 Report.

DRAFT

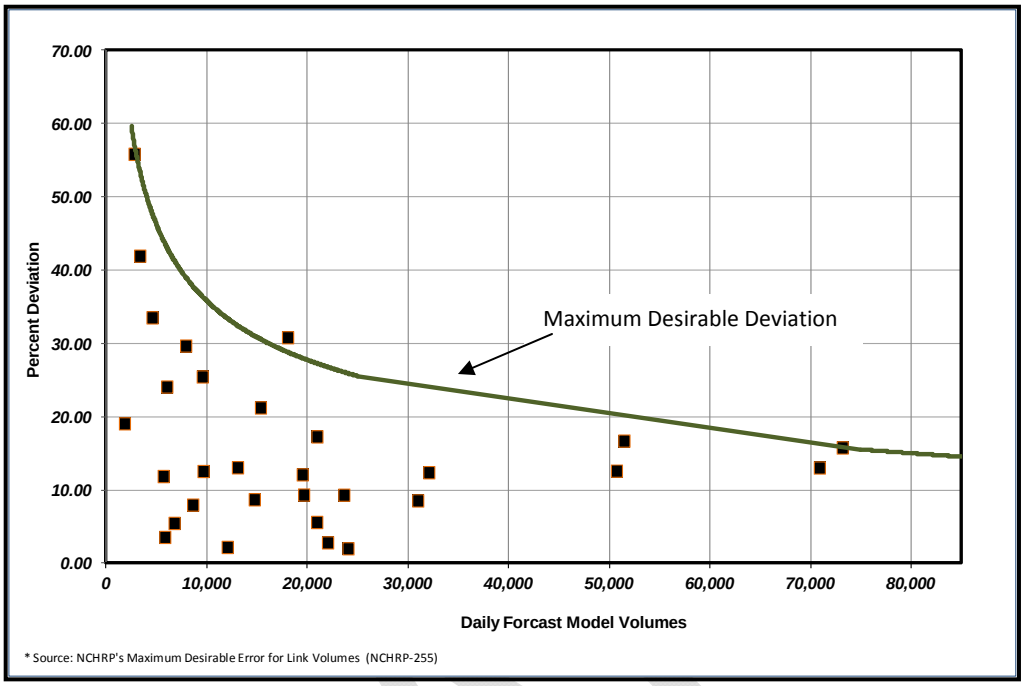


Figure 6. Link Based Daily Traffic Volume Validation

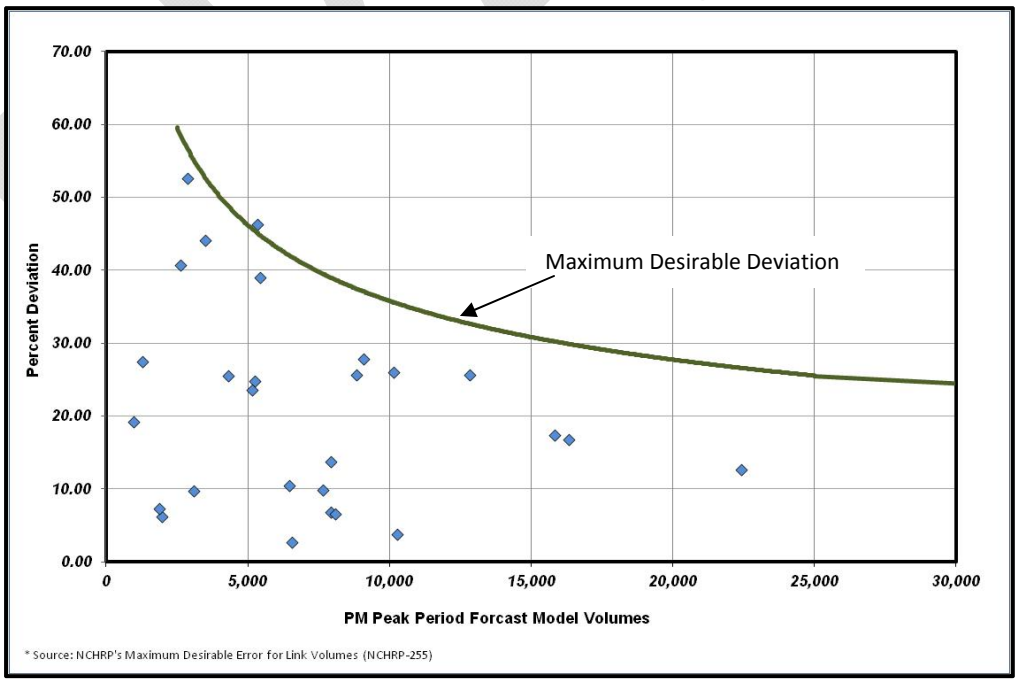


Figure 7. Link Based PM Traffic Volume Validation

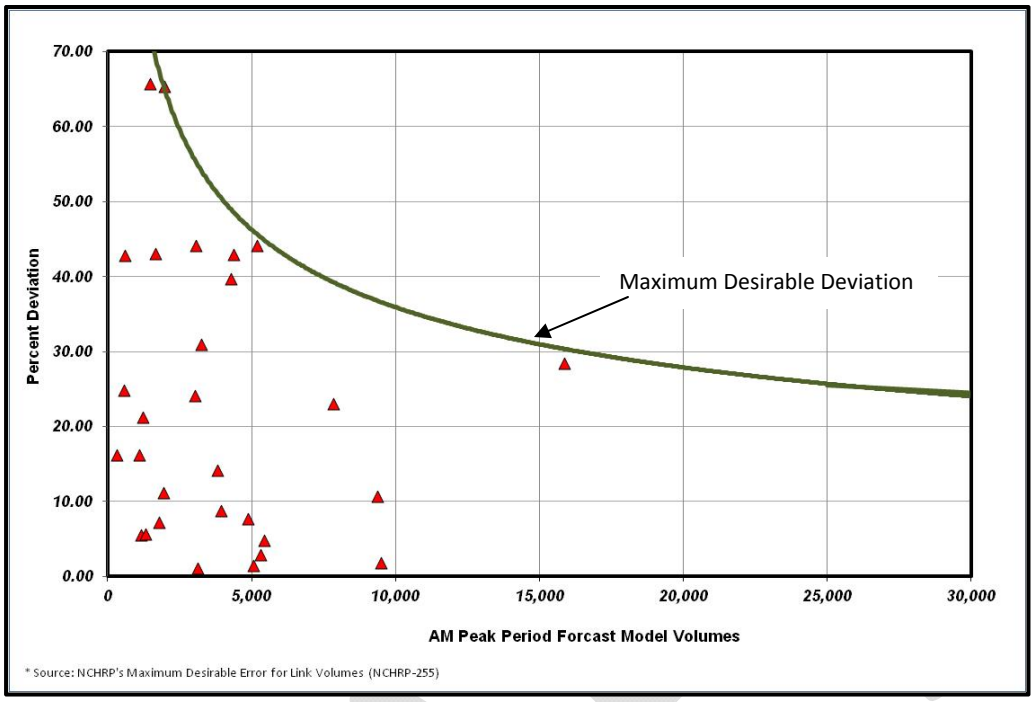


Figure 8. Link Based AM Traffic Volume Validation

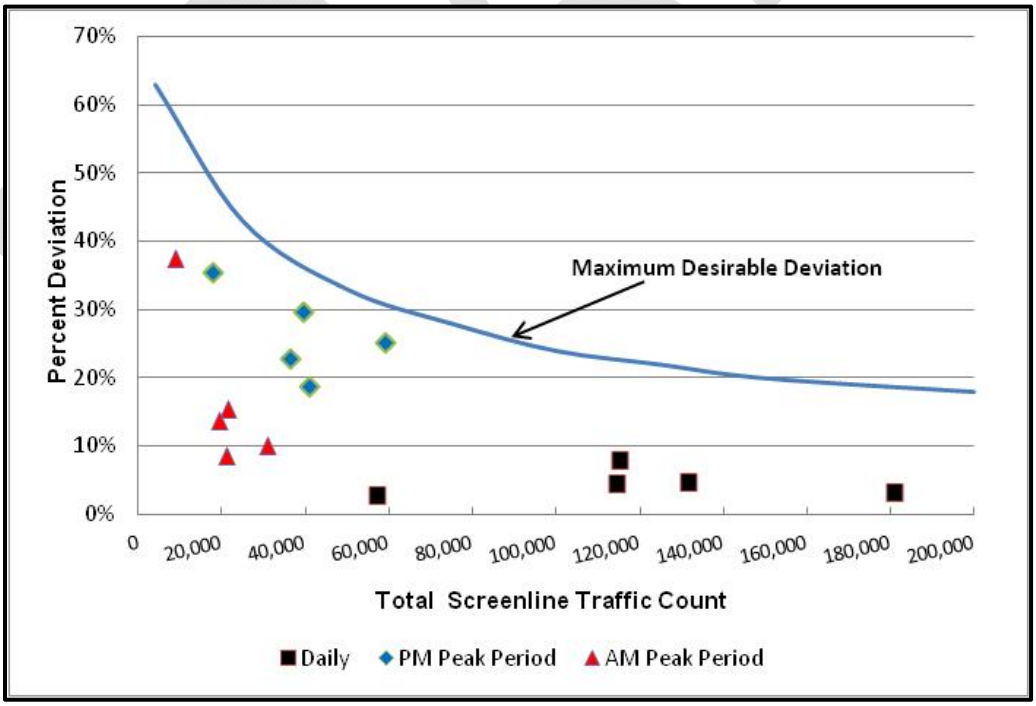


Figure 9. Total Screenline Traffic Volume Validation

TABLE 3.

Screenline Validation Summary

Screenline	Counts	Model Volume	Absolute Volume Difference	Percent Volume Difference	%RMSE	R-Squared
Daily						
1.00	176,500	186,500	10,000	6%	23%	0.974
2.00	122,400	137,400	15,000	12%	17%	
3.00	114,400	119,700	5,300	5%	9%	
4.00	56,800	55,200	-1,600	-3%	9%	
5.00	114,900	105,700	-9,200	-8%	16%	
PM Peak Period						
1.00	47,500	53,200	5,700	12%	23%	0.965
2.00	34,500	42,400	7,900	23%	27%	
3.00	37,200	40,600	3,400	9%	17%	
4.00	17,600	22,200	4,600	26%	32%	
5.00	36,100	41,400	5,300	15%	21%	
AM Peak Period						
1.00	30,300	33,700	3,400	11%	32%	0.945
2.00	21,700	24,700	3,000	14%	25%	
3.00	19,000	21,600	2,600	14%	22%	
4.00	8,800	12,100	3,300	38%	44%	
5.00	20,900	22,700	1,800	9%	18%	

DRAFT

Appendix A

DRAFT

Table A1.

Daily Traffic Volume Screenline Validation

Screenline	Road Name	Count	Model Volume	Absolute Volume Difference	Percent Volume Difference
1	SIERRA ST.	3,390	4,526	1,136	34%
1	PASADENA FWY - SB	63,155	73,116	9,961	16%
1	PASADENA FWY - NB	62,675	70,843	8,168	13%
1	GRIFFIN AVE.	5,588	5,786	198	4%
1	N FIGUEROA ST.	26,009	17,998	-8,011	-31%
1	MARMION WAY	9,307	8,566	-741	-8%
1	DIVISION ST.	6,387	5,630	-757	-12%
	TOTAL	***176,500***	***186,500***	***10,000***	***6%***
2	MONTEREY RD	7,581	9,510	1,929	25%
2	PASADENA FWY - SB	45,011	50,681	5,670	13%
2	PASADENA FWY - NB	44,066	51,423	7,357	17%
2	N FIGUEROA ST.	23,529	24,000	471	2%
2	PIEDMONT AVE.	2,201	1,782	-419	-19%
	TOTAL	***122,400***	***137,400***	***15,000***	***12%***
3	MONTEREY RD.	22,128	19,452	-2,676	-12%
3	MISSION ST.	12,621	15,300	2,679	21%
3	PASADENA FWY - SB	28,500	32,030	3,530	12%
3	PASADENA FWY - NB	28,500	30,932	2,432	9%
3	W CALIFORNIA BLVD.	22,609	21,973	-636	-3%
	TOTAL	***114,400***	***119,700***	***5,300***	***5%***
4	MONTEREY RD.	22,128	20,891	-1,237	-6%
4	VIA MARISOL	7,111	6,723	-388	-5%
4	COLLIS AVE.	4,825	5,987	1,162	24%
4	MONTEREY RD.	11,743	12,000	257	2%
4	MISSION ST.	10,978	9,600	-1,378	-13%
	TOTAL	***56,800***	***55,200***	***-1,600***	***-3%***
5	SAN FRENANDO RD.	25,283	20,914	-4,369	-17%
5	CYPRESS AVE.	14,973	13,018	-1,955	-13%
5	SAN RAFAEL AVE	1,762	2,746	984	56%
5	N AVENUE 50	13,509	14,683	1,174	9%
5	N AVENUE 54	6,065	7,865	1,800	30%
5	YORK	21,609	19,591	-2,018	-9%
5	MERIDIAN ST.	5,691	3,304	-2,387	-42%
5	N FIGUEROA ST	26,009	23,587	-2,422	-9%
	TOTAL	***114,900***	***105,700***	***-9,200***	***-8%***

DRAFT

Table A2.

AM Peak Period Traffic Volume Screenline Validation

Screenline	Road Name	Count	Model Volume	Absolute Volume Difference	Percent Volume Difference
1	SIERRA ST.	926	1,077	151	16%
1	PASADENA FWY - SB	13,122	15,859	2,737	21%
1	PASADENA FWY - NB	7,394	9,360	1,966	27%
1	GRIFFIN AVE.	986	1,196	210	21%
1	N FIGUEROA ST.	4,706	3,250	-1,456	-31%
1	MARMION WAY	1,922	1,784	-138	-7%
1	DIVISION ST.	1,225	1,157	-68	-6%
	TOTAL	***30,300***	***33,700***	***3,400***	***11%***
2	MONTEREY RD	1,728	1,921	193	11%
2	PASADENA FWY - SB	9,934	9,477	-457	-5%
2	PASADENA FWY - NB	6,112	7,837	1,725	28%
2	N FIGUEROA ST.	3,590	5,175	1,585	44%
2	PIEDMONT AVE.	366	306	-60	-16%
	TOTAL	***21,700***	***24,700***	***3,000***	***14%***
3	MONTEREY RD.	3,050	4,263	1,213	40%
3	MISSION ST.	1,301	2,661	1,360	105%
3	PASADENA FWY - SB	5,159	5,410	251	5%
3	PASADENA FWY - NB	5,153	5,306	153	3%
3	W CALIFORNIA BLVD.	4,296	3,918	-377	-9%
	TOTAL	***19,000***	***21,600***	***2,600***	***14%***
4	MONTEREY RD.	3,050	4,362	1,312	43%
4	VIA MARISOL	1,245	1,316	71	6%
4	COLLIS AVE.	888	1,472	584	66%
4	MONTEREY RD.	2,440	3,029	589	24%
4	MISSION ST.	1,186	1,961	775	65%
	TOTAL	***8,800***	***12,100***	***3,300***	***38%***
5	SAN FRENANDO RD.	5,132	5,053	-79	-2%
5	CYPRESS AVE.	3,144	3,110	-35	-1%
5	SAN RAFAEL AVE	449	561	112	25%
5	N AVENUE 50	2,126	3,064	938	44%
5	N AVENUE 54	1,146	1,640	494	43%
5	YORK	3,337	3,811	474	14%
5	MERIDIAN ST.	1,043	597	-446	-43%
5	N FIGUEROA ST	4,524	4,872	348	8%
	TOTAL	***20,900***	***22,700***	***1,800***	***9%***

DRAFT

Table A3.

PM Peak Period Traffic Volume Screenline Validation

Screenline	Road Name	Count	Model Volume	Absolute Volume Difference	Percent Volume Difference
1	SIERRA ST.	639	2,086	1,447	226%
1	PASADENA FWY - SB	13,469	15,805	2,336	17%
1	PASADENA FWY - NB	19,888	22,395	2,507	13%
1	GRIFFIN AVE.	1,866	2,626	760	41%
1	N FIGUEROA ST.	6,967	5,238	-1,729	-25%
1	MARMION WAY	2,810	3,083	273	10%
1	DIVISION ST.	1,846	1,960	114	6%
	TOTAL	***47,500***	***53,200***	***5,700***	***12%***
2	MONTEREY RD	2,431	3,502	1,071	44%
2	PASADENA FWY - SB	10,208	12,821	2,613	26%
2	PASADENA FWY - NB	13,979	16,326	2,347	17%
2	N FIGUEROA ST.	7,018	8,817	1,799	26%
2	PIEDMONT AVE.	816	973	157	19%
	TOTAL	***34,500***	***42,400***	***7,900***	***23%***
3	MONTEREY RD.	6,957	7,915	958	14%
3	MISSION ST.	3,913	5,439	1,526	39%
3	PASADENA FWY - SB	7,106	9,085	1,979	28%
3	PASADENA FWY - NB	10,675	10,265	-410	-4%
3	W CALIFORNIA BLVD.	8,502	7,919	-583	-7%
	TOTAL	***37,200***	***40,600***	***3,400***	***9%***
4	MONTEREY RD.	6,957	7,641	684	10%
4	VIA MARISOL	2,016	1,869	-147	-7%
4	COLLIS AVE.	1,546	3,006	1,460	94%
4	MONTEREY RD.	3,647	5,335	1,688	46%
4	MISSION ST.	3,436	4,315	879	26%
	TOTAL	***17,600***	***22,200***	***4,600***	***26%***
5	SAN FRENANDO RD.	8,037	10,128	2,091	26%
5	CYPRESS AVE.	5,839	6,447	608	10%
5	SAN RAFAEL AVE	534	937	403	75%
5	N AVENUE 50	4,166	5,149	983	24%
5	N AVENUE 54	1,867	2,850	983	53%
5	YORK	6,390	6,563	173	3%
5	MERIDIAN ST.	1,736	1,259	-477	-27%
5	N FIGUEROA ST	7,568	8,064	496	7%
	TOTAL	***36,100***	***41,400***	***5,300***	***15%***

DRAFT

Appendix B

DRAFT

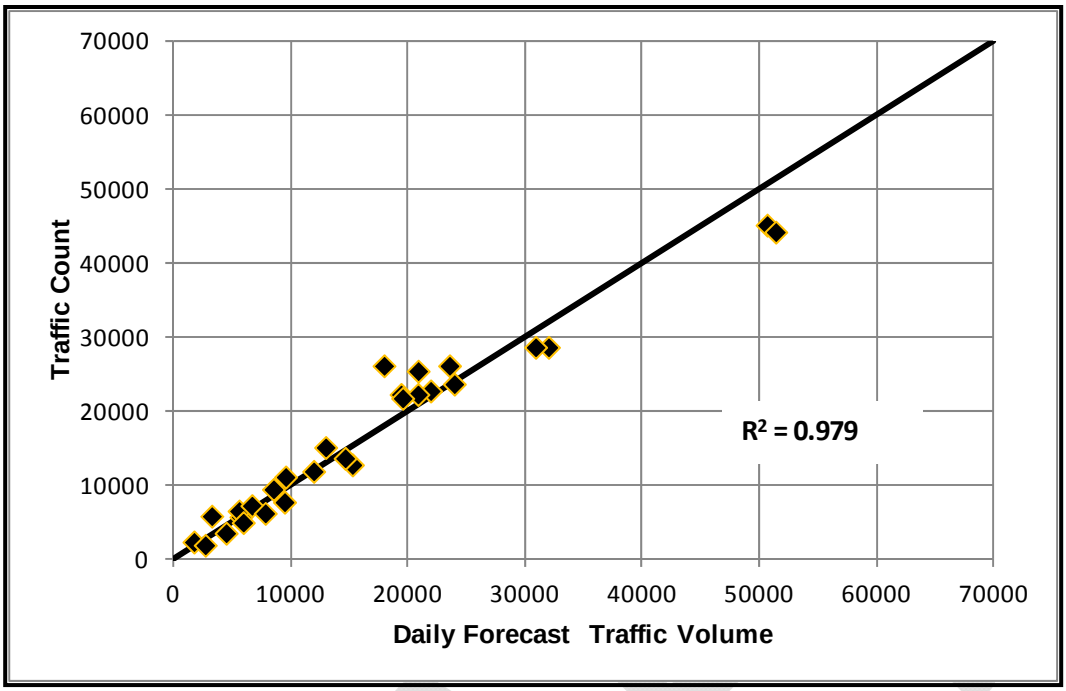


Figure B1. R^2 Analysis - Daily Forecast Traffic Volume

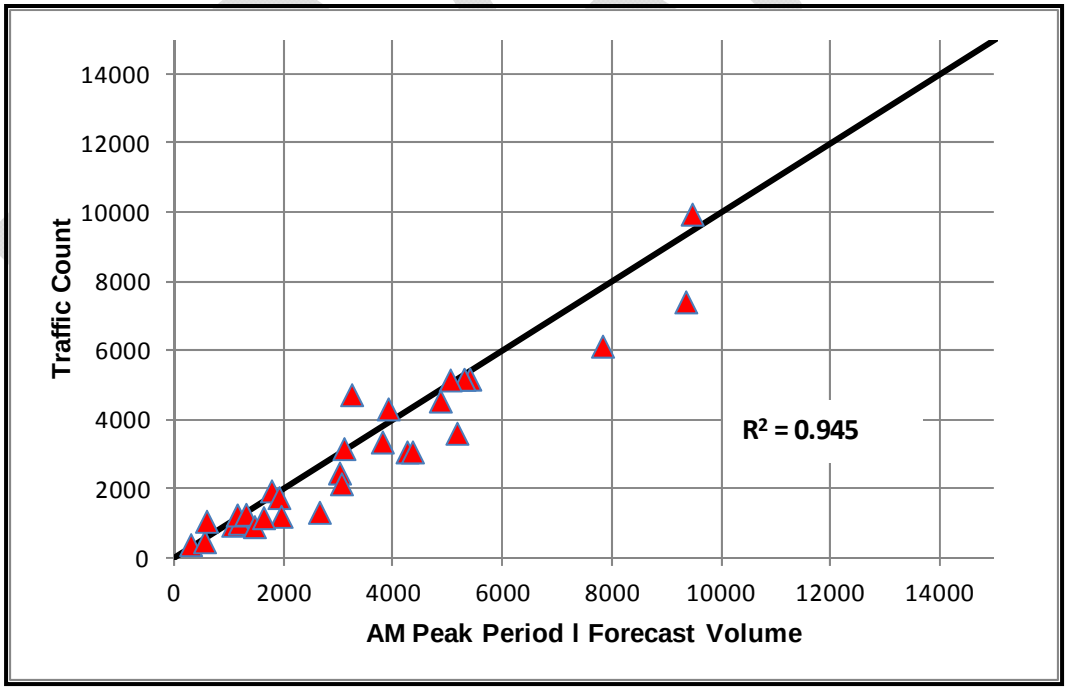


Figure B2. R^2 Analysis - AM Peak Period Forecast Volume

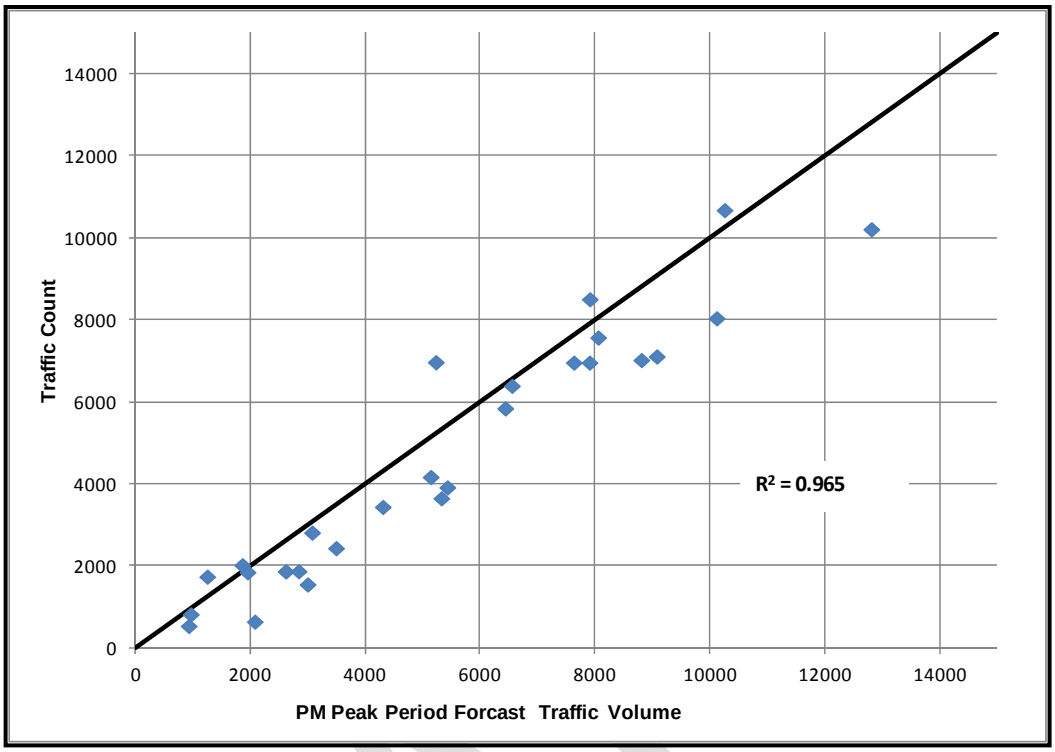


Figure B3. R^2 Analysis - PM Peak Period Forecast Volume

DRAFT

California Department of Transportation (Caltrans), District 7
Southern California Association of Governments (SCAG)

ARROYO SECO PARKWAY CORRIDOR PARTNERSHIP PLAN TRAFFIC IMPACT ANALYSIS

TECHNICAL REPORT

JUNE 29, 2012

IBI GROUP

DOCUMENT CONTROL

Client:	California Department of Transportation (Caltrans), District 7 Southern California Association of Governments (SCAG)
Project Name:	Arroyo Seco Parkway Corridor Partnership Plan
Report Title:	Traffic Impact Analysis Report
IBI Reference:	31097
Version:	Draft #1
Originator:	[Lydia La Point]
Reviewer:	[Name]
Authorization:	[Name]
Circulation List:	
History:	

Contents

1. INTRODUCTION 1
1.1 Study Area 1
2. METHODOLOGY 3
2.1 Analysis Scenarios 3
2.2 Intersection Level of Service 3
2.2.1 Signalized Intersections 3
2.2.2 Unsignalized Intersections 5
2.2.3 Mainline Analysis 6
2.2.4 Freeway Weaving Analysis 7
2.2.5 Limitations of the HCM Methodology 7
3. EXISTING CONDITION 8
3.1 Study Intersections 8
3.2 Lane Geometry and Control 9
3.3 Traffic Volumes 10
3.4 Intersection Level of Service Analysis 23
3.5 Mainline Analysis 28
3.1 Ramp Merge and Diverge Analysis 30
3.1 Weaving Analysis 32
3.2 Queuing Analysis 33
4. YEAR 2035 WITHOUT PROJECT CONDITIONS 34
4.1 Traffic Model 34
4.2 SR-710 Sensitivity Analysis 34
4.3 Traffic Volumes 34
4.4 Intersection Level of Service Analysis 47
4.4.1 Intersection Level of Service Analysis Results 47
4.4.2 SR-710 Sensitivity Analysis 52
4.4.3 Variation between Baseline and SR-710 Sensitivity Analysis 56
4.5 Mainline Analysis 57
4.5.1 Mainline Analysis Results for Year 2035 Without Project 57
4.5.2 SR-710 Sensitivity Analysis Results for Year 2035 Without Project – Mainline 59
4.1 Ramp Merge and Diverge Analysis 61
4.1.1 Ramp Analysis Results for Year 2035 Without Project 61
4.1.2 SR-710 Sensitivity Analysis Results for Year 2035 Without Project - Ramps 64

4.2 Weaving Analysis 67
4.3 Queuing Analysis 67

5. CONCEPT 1 69
5.1 Project Description 69
5.1.1 Intersection Lane Geometry and Control 70
5.1.2 Traffic Volumes 70
5.2 Intersection Level of Service 83
5.2.1 Intersection Level of Service Analysis Results for Concept 1 83
5.2.2 SR-710 Sensitivity Analysis for Concept 1 – Intersection LOS 87
5.2.3 Variation between Baseline and SR-710 Sensitivity Analysis 91
5.3 Mainline Analysis 92
5.3.1 Mainline Analysis Results for Concept 1 92
5.3.2 SR-710 Sensitivity Analysis for Concept 1 - Mainline 97
5.3.3 Variation between Baseline and SR-710 Sensitivity Analysis 102
5.1 Ramp Merge and Diverge Analysis 103
5.1.1 Ramp Analysis Results for Concept 1 103
5.1.2 SR-710 Sensitivity Analysis Results for Concept 1 – Ramps 108
5.2 Weaving Analysis 113
5.3 Queuing Analysis 114

6. CONCEPT 2 116
6.1 Concept Description 116
6.1.1 Lane Geometry and Control 116
6.1.2 Traffic Volumes 116
6.2 Intersection Level of Service Analysis 129
6.2.1 Intersection Level of Service Analysis Results for Concept 2 129
6.2.2 SR-710 Sensitivity Analysis for Concept 2 – Intersection LOS 134
6.2.3 Variation between Baseline and SR-710 Sensitivity Analysis 138
6.3 Mainline Analysis 139
6.3.1 Mainline Analysis Results for Concept 2 139
6.3.2 SR-710 Sensitivity Analysis for Concept 2 – Mainline 143
6.3.3 Variation between Baseline and SR-710 Sensitivity Analysis 146
6.4 Ramp Merge and Diverge Analysis 147
6.4.1 Ramp Analysis Results for Concept 2 147
6.4.2 SR-710 Sensitivity Analysis Results for Concept 2 – Ramps 152
6.5 Weaving Analysis 156
6.6 Queuing Analysis 156

7. FINDINGS 159

Figures

Figure 1.1: Study Area 2
Figure 3.1A: Study Intersection Locations 11
Figure 3.1B: Study Intersection Locations 12
Figure 3.1C: Study Intersection Locations 13
Figure 3.2A: Study Intersection Lane Geometry 14
Figure 3.2B: Study Intersection Lane Geometry 15
Figure 3.2C: Study Intersection Lane Geometry 16
Figure 3.3A: Existing (Year 2011) Study Intersection Volumes – AM Peak Hour 17
Figure 3.3B: Existing (Year 2011) Study Intersection Volumes – AM Peak Hour 18
Figure 3.3C: Existing (Year 2011) Study Intersection Volumes – AM Peak Hour 19
Figure 3.4A: Existing (Year 2011) Study Intersection Volumes – PM Peak Hour 20
Figure 3.4B: Existing (Year 2011) Study Intersection Volumes – PM Peak Hour 21
Figure 3.4C: Existing (Year 2011) Study Intersection Volumes – PM Peak Hour 22
Figure 4.1A: Year 2035 Without Project Volumes – AM Peak Hour 35
Figure 4.1B: Year 2035 Without Project Volumes – AM Peak Hour 36
Figure 4.1C: Year 2035 Without Project Volumes – AM Peak Hour 37
Figure 4.2A: Year 2035 Without Project Volumes – PM Peak Hour 38
Figure 4.2B: Year 2035 Without Project Volumes – PM Peak Hour 39
Figure 4.2C: Year 2035 Without Project Volumes – PM Peak Hour 40
Figure 4.3A: Year 2035 Without Project Volumes (SR-710 Sensitivity Analysis) – AM Peak Hour 41
Figure 4.3B: Year 2035 Without Project Volumes (SR-710 Sensitivity Analysis) – AM Peak Hour 42
Figure 4.3C: Year 2035 Without Project Volumes (SR-710 Sensitivity Analysis) – AM Peak Hour 43
Figure 4.4A: Year 2035 Without Project Volumes (SR-710 Sensitivity Analysis) – PM Peak Hour 44
Figure 4.4B: Year 2035 Without Project Volumes (SR-710 Sensitivity Analysis) – PM Peak Hour 45
Figure 4.4C: Year 2035 Without Project Volumes (SR-710 Sensitivity Analysis) – PM Peak Hour 46
Figure 5.1A: Intersection Volumes: Concept 1 – AM Peak Hour 71
Figure 5.1B: Intersection Volumes: Concept 1 – AM Peak Hour 72
Figure 5.1C: Intersection Volumes: Concept 1 – AM Peak Hour 73
Figure 5.2A: Intersection Volumes: Concept 1 – PM Peak Hour 74
Figure 5.2B: Intersection Volumes: Concept 1 – PM Peak Hour 75
Figure 5.2C: Intersection Volumes: Concept 1 – PM Peak Hour 76
Figure 5.3A. Intersection Volumes: Concept 1 (SR-710 Sensitivity Analysis) – AM Peak Hour 77
Figure 5.3B: Intersection Volumes: Concept 1 (SR-710 Sensitivity Analysis) – AM Peak Hour 78
Figure 5.3C: Intersection Volumes: Concept 1 (SR-710 Sensitivity Analysis) – AM Peak Hour 79
Figure 5.4A: Intersection Volumes: Concept 1 (SR-710 Sensitivity Analysis) – PM Peak Hour 80

Figure 5.4B: Intersection Volumes: Concept 1 (SR-710 Sensitivity Analysis) – PM Peak Hour 81
Figure 5.4C: Intersection Volumes: Concept 1 (SR-710 Sensitivity Analysis) – PM Peak Hour 82
Figure 6.1A: Intersection Volumes: Concept 2 – AM Peak Hour 117
Figure 6.1B: Intersection Volumes: Concept 2 – AM Peak Hour 118
Figure 6.1C: Intersection Volumes: Concept 2 – AM Peak Hour 119
Figure 6.2A: Intersection Volumes: Concept 2 – PM Peak Hour 120
Figure 6.2B: Intersection Volumes: Concept 2 – PM Peak Hour 121
Figure 6.2C: Intersection Volumes: Concept 2 – PM Peak Hour 122
Figure 6.3A: Intersection Volumes: Concept 2 (SR-710 Sensitivity Analysis) – AM Peak Hour 123
Figure 6.3B: Intersection Volumes: Concept 2 (SR-710 Sensitivity Analysis) – AM Peak Hour 124
Figure 6.3C: Intersection Volumes: Concept 2 (SR-710 Sensitivity Analysis) – AM Peak Hour 125
Figure 6.4A: Intersection Volumes: Concept 2 (SR-710 Sensitivity Analysis) – PM Peak Hour 126
Figure 6.4B: Intersection Volumes: Concept 2 (SR-710 Sensitivity Analysis) – PM Peak Hour 127
Figure 6.4C: Intersection Volumes: Concept 2 (SR-710 Sensitivity Analysis) – PM Peak Hour 128

Tables

Table 2-1: Signalized Intersection Level of Service Criteria 3
Table 2-2: Thresholds for Significant Impact – Los Angeles 4
Table 2-3: Thresholds for Significant Impact – Pasadena 4
Table 2-4: Thresholds for Significant Impact – South Pasadena 5
Table 2-5: Unsignalized Intersection Level of Service Criteria 5
Table 2-6: Caltrans Freeway Mainline and Ramp HCM LOS Criteria 6
Table 2-7: Caltrans Weaving HCM LOS Criteria 7
Table 3-1 Study Intersections 8
Table 3-2: Existing Condition (Year 2011) LOS Results – AM Peak Hour 23
Table 3-3: Existing Condition (Year 2011) LOS Results – PM Peak Hour 25
Table 3-4 Existing Condition (Year 2011) Arroyo Seco Parkway LOS – Northbound 28
Table 3-5 Existing Condition (Year 2011) Arroyo Seco Parkway LOS – Southbound 29
Table 3-6: Existing Condition (Year 2011) Ramp Analysis Results – Northbound 30
Table 3-7: Existing Condition (Year 2011) Ramp Analysis Results – Southbound 31
Table 3-8: Existing (Year 2011) Ramp Queuing Analysis 33
Table 4-1: Year 2035 Without Project LOS Results – AM Peak Hour 47
Table 4-2: Year 2035 Without Project LOS Results – PM Peak Hour 49
Table 4-3: Year 2035 Without Project (SR-710 Sensitivity) LOS Results – AM Peak 52
Table 4-4: Year 2035 Without Project (SR-710 Sensitivity) LOS Results – PM Peak 54
Table 4-5 Year 2035 Without Project Segment LOS – Northbound 57
Table 4-6 Year 2035 Without Project Segment LOS – Southbound 58
Table 4-7 Year 2035 Without Project (SR-710 Sensitivity) Segment LOS – Northbound 59
Table 4-8 Year 2035 Without Project (SR-710 Sensitivity) Segment LOS – Southbound 60
Table 4-9: Year 2035 Without Project Ramp Analysis Results – Northbound 61
Table 4-10: Year 2035 Without Project Ramp Analysis Results – Southbound 62
Table 4-11: Year 2035 Without Project (SR-710 Sensitivity) Ramp Analysis Results – Northbound 64
Table 4-12: Year 2035 Without Project (SR-710 Sensitivity) Ramp Analysis Results – Southbound 65
Table 4-13: Year 2035 Without Project Ramp Queuing Analysis 67
Table 4-14: Year 2035 Without Project (SR-710 Sensitivity) Ramp Queuing Analysis 68
Table 5-1: Northbound Arroyo Seco Parkway – Proposed Auxiliary Lane Locations 69
Table 5-2: Southbound Arroyo Seco Parkway – Proposed Auxiliary Lane Locations 70
Table 5-3: Concept 1 LOS Results 83
Table 5-4: Concept 1 (SR-710 Sensitivity) LOS Results 87
Table 5-5 Concept 1 Arroyo Seco Parkway Segment LOS – Northbound 92
Table 5-6 Concept 1 Arroyo Seco Parkway Segment LOS – Southbound 93
Table 5-7 Changes to Segment LOS in Concept 1 – Northbound 94
Table 5-8 Changes to Segment LOS in Concept 1 – Southbound 95

Table 5-9 Concept 1 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – Northbound 97
Table 5-10 Concept 1 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – Southbound 98
Table 5-11 Changes to Segment LOS in Concept 1 (SR-710 Sensitivity) – Northbound 99
Table 5-12 Changes to Segment LOS in Concept 1 (SR-710 Sensitivity) – Southbound 101
Table 5-13: Concept 1 Ramp Analysis Results – Northbound 103
Table 5-14: Concept 1 Ramp Analysis Results – Southbound 104
Table 5-15: Changes to Ramp LOS in Concept 1 – Northbound 105
Table 5-16: Changes to Ramp LOS in Concept 1 – Southbound 106
Table 5-17: Concept 1 (SR-710 Sensitivity) Ramp Analysis Results – Northbound 108
Table 5-18: Concept 1 (SR-710 Sensitivity) Ramp Analysis Results – Southbound 109
Table 5-19: Changes to Ramp LOS in Concept 1 (SR-710 Sensitivity) – Northbound 110
Table 5-20: Changes to Ramp LOS in Concept 1 (SR-710 Sensitivity) – Southbound 111
Table 5-21: Concept 1 Weaving Analysis Results – NB Arroyo Seco Parkway 113
Table 5-22: Concept 1 Weaving Analysis Results – SB Arroyo Seco Parkway 113
Table 5-23: Concept 1 (SR-710 Sensitivity) Weaving Analysis Results – NB Arroyo Seco Parkway 114
Table 5-24: Concept 1 (SR-710 Sensitivity) Weaving Analysis Results – SB Arroyo Seco Parkway 114
Table 5-25: Concept 1 Ramp Queuing Analysis 114
Table 5-26: Concept 1 (SR-710 Sensitivity) Ramp Queuing Analysis 115
Table 6-1: Concept 2 LOS Results 129
Table 6-2: Concept 2 (SR-710 Sensitivity) Intersection LOS Results 134
Table 6-3 Concept 2 Arroyo Seco Parkway Segment LOS – Northbound 139
Table 6-4 Concept 2 Arroyo Seco Parkway Segment LOS – Southbound 140
Table 6-5 Changes to Segment LOS in Concept 2 – Northbound 141
Table 6-6 Changes to Segment LOS in Concept 2 – Southbound 141
Table 6-7 Concept 2 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – NB 143
Table 6-8 Concept 2 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – SB 144
Table 6-9 Changes to Segment LOS in Concept 2 (SR-710 Sensitivity) – Northbound 145
Table 6-10 Changes to Segment LOS in Concept 2 (SR-710 Sensitivity) – Southbound 145
Table 6-11: Concept 2 Ramp Analysis Results – Northbound 147
Table 6-12: Concept 2 Ramp Analysis Results – Southbound 148
Table 6-13: Changes to Ramp LOS in Concept 2– Northbound 149
Table 6-14: Changes to Ramp LOS in Concept 2 – Southbound 150
Table 6-15: Concept 2 (SR-710 Sensitivity) Ramp Analysis Results – Northbound 152
Table 6-16: Concept 2 (SR-710 Sensitivity) Ramp Analysis Results – Southbound 153
Table 6-17: Changes to Ramp LOS in Concept 2 (SR-710 Sensitivity) – Northbound 154
Table 6-18: Changes to Ramp LOS in Concept 2 (SR-710 Sensitivity) – Southbound 155
Table 6-19: Concept 2 Ramp Queuing Analysis 157
Table 6-20: Concept 2 (SR-710 Sensitivity) Ramp Queuing Analysis 158
Table 7-1: Impacts at Signalized Intersections 159
Table 7-2: Signal Warrant Analysis Results Summary 159
Table 7-3 Mainline Segments Forecast to Operate at LOS F 160
Table 7-4 Arroyo Seco Parkway Ramp Segments Forecast to Operate at LOS F 161

1. INTRODUCTION

The Arroyo Seco Parkway Corridor Partnership Plan applies to the portion of State Route 110 (SR-110) between Interstate 5 (I-5) and Glenarm Street in Pasadena. The Arroyo Seco Parkway is a six-lane divided roadway that was designed to serve 27,000 vehicles per day, and is not superelevated. It has not been significantly modified since its opening day in 1940, although it now serves about 122,000 vehicles per day that travel well above the design speed of 45 miles per hour. While the Parkway conformed to standards at the time of construction, many of the access ramps provide inadequate length for acceleration and deceleration and no longer comply with current highway design standards.

This traffic analysis has been prepared to identify and analyze the traffic conditions and traffic impacts associated with potential modifications to the corridor. The results of this analysis will be used to develop recommendations for the corridor that will be included in the Arroyo Seco Parkway Corridor Partnership Plan Report.

Two improvement concepts have been developed for analysis, and are described in further detail Section 5 and Section 6. The concepts take the historic nature of the parkway and the right-of-way limitations into consideration, but also consider a full range of modifications that may provide safety or operational enhancements to the corridor. The concepts include reconfiguration of the mainline, ramps and ramp terminal intersections. The analysis considers:

- Intersection level of service results for the analysis scenarios
- Queuing at parkway off-ramps
- Mainline and ramp volume and capacity
- Weaving

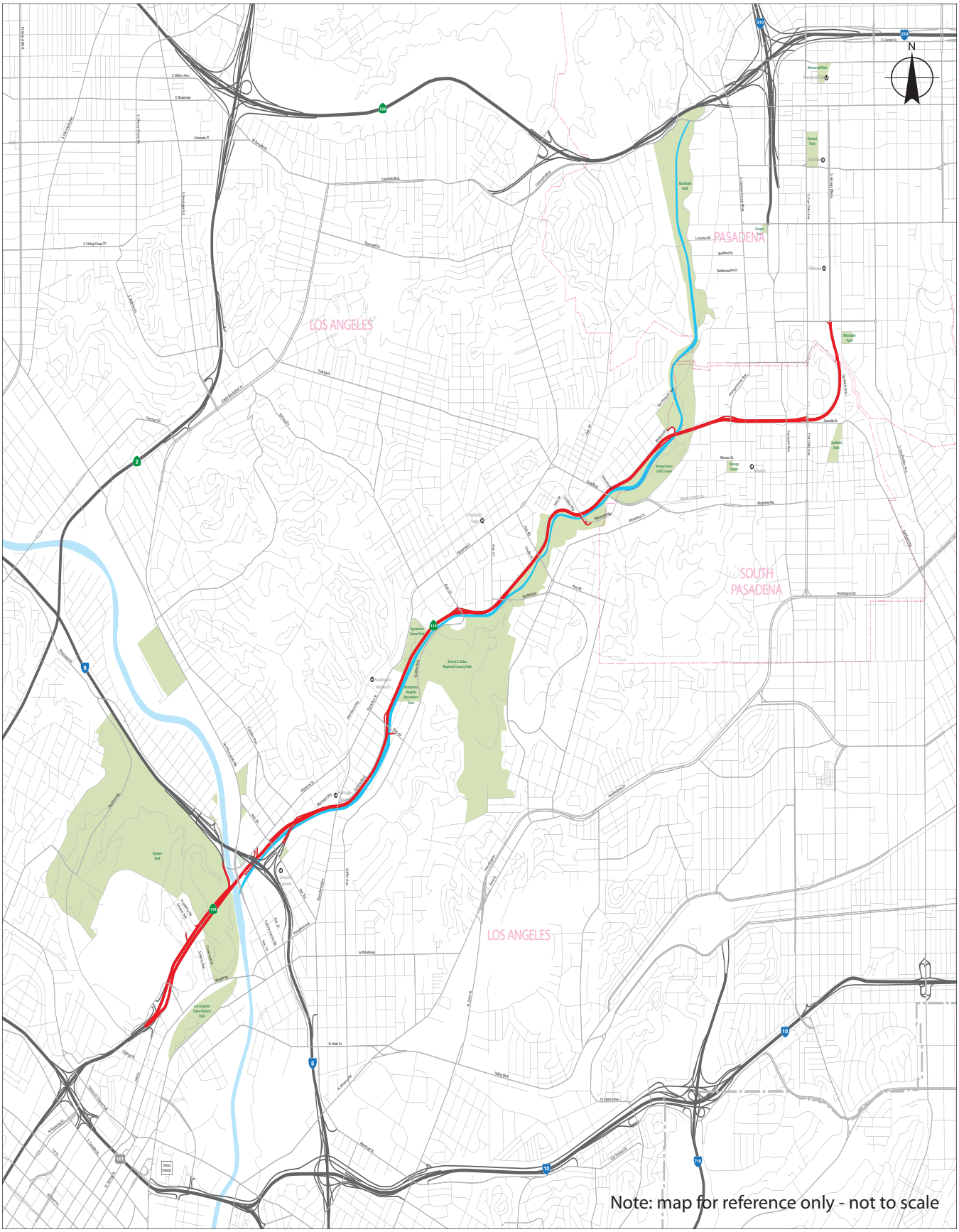
Elements that are common to both Concepts include:

- Speed limit reduction from 55 miles per hour to 45 miles per hour
- Improved signage
- Intelligent Transportation System/Transportation System Management (ITS/TSM)

1.1 Study Area

The project study area is shown in Figure 1.1. Portions of the study area are located in the cities of Los Angeles, South Pasadena and Pasadena.

Figure 1.1 - Study Area



2. METHODOLOGY

This traffic impact analysis is consistent with the guidelines and procedures in the Caltrans *Guide for the Preparation of Traffic Impact Studies* (2002). Study intersections located within the City of Los Angeles have also been analyzed using the methodology in the *Traffic Study Policies and Procedures* (2011) published by the City of Los Angeles Department of Transportation (LADOT). Intersections located in the City of Pasadena have been analyzed using the methodology described in the *Transportation Impact Review Current Practice & Guidelines* (2005) prepared by the Transportation Planning and Development Division of the Department of Transportation. Intersections within the City of South Pasadena have been analyzed using the methodology described in the *Traffic Impact Analysis Report Guidelines* (1997) prepared by the County of Los Angeles Department of Public Works.

2.1 Analysis Scenarios

The analysis years and scenarios examined in this report include:

- Existing Year 2011
- Horizon Year 2035, Without Project
- Horizon Year 2035, Without Project (SR-710 Sensitivity)
- Horizon Year 2035, Concept 1
- Horizon Year 2035, Concept 1 (SR-710 Sensitivity)
- Horizon Year 2035, Concept 2
- Horizon Year 2035, Concept 2 (SR-710 Sensitivity)

2.2 Intersection Level of Service

Traffic operations are analyzed using the capacity analysis methodology published in the 2000 Highway Capacity Manual (HCM 2000) using TRAFFIX software. TRAFFIX is a network-based interactive computer program that enables calculation of levels of service at signalized and unsignalized intersections for multiple locations and scenarios.

2.2.1 SIGNALIZED INTERSECTIONS

Traffic conditions at signalized Arroyo Seco Parkway ramp terminal intersections have been evaluated using the operations methodology from Chapter 17 of the HCM 2000, which evaluates capacity in terms of the volume-to-capacity (v/c) ratio and evaluates LOS based on controlled delay per vehicle. The relationship between controlled delay per vehicle and LOS for signalized intersections is summarized in Table 2-1.

Table 2-1: Signalized Intersection Level of Service Criteria

LOS	Description of Traffic Conditions	Controlled Delay (sec/veh)
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 – 35

LOS	Description of Traffic Conditions	Controlled Delay (sec/veh)
D	Tolerable delays: drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 – 55
E	Significant delays: volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream.	> 55 – 80
F	Excessive delays: represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2000

2.2.1.1 City of Los Angeles

Level of service estimates for intersections located within the City of Los Angeles have been calculated using the Circular 212 Critical Movement Analysis (CMA) spreadsheet developed by LADOT. The thresholds for significant impact at intersections in the City of Los Angeles are summarized in Table 2-2.

Table 2-2: Thresholds for Significant Impact – Los Angeles

Final LOS	Final V/C	Project V/C Increase
C	0.701 to 0.800	≥ 0.04
D	0.801 to 0.900	≥ 0.02
E	0.901 to 1.000	≥ 0.01
F	Greater then 1.000	≥ 0.01

Source: LADOT Traffic Study Policies and Procedures (2011).

2.2.1.2 City of Pasadena

Signalized intersections in the City of Pasadena have been analyzed using the Intersection Capacity Utilization (ICU) method. The relationship between volume-to-capacity ratios and LOS, and the thresholds for significant impact are summarized in Table 2-3.

Table 2-3: Thresholds for Significant Impact – Pasadena

Pre-Project		Project V/C Increase
LOS	V/C	
A	0.000 to 0.600	0.06 or more
B	0.610 to 0.700	0.05 or more
C	0.710 to 0.800	0.04 or more
D	0.810 to 0.900	0.03 or more
E	0.910 to 1.000	0.02 or more
F	> 1.000	0.01 or more

Source: Transportation Impact Review Current Practice & Guidelines (2005) prepared by the Transportation Planning and Development Division of the Department of Transportation

2.2.1.3 City of South Pasadena

Intersections located in the City of South Pasadena have been analyzed using the Intersection Capacity Utilization (ICU) methodology. A capacity of 1,600 vehicles per hour per lane and a ten percent yellow clearance has also been included.

The thresholds for significant impact at intersections in the City of South Pasadena are summarized in Table 2-4.

Table 2-4: Thresholds for Significant Impact – South Pasadena

Pre-Project		Project V/C Increase
LOS	V/C	
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E or F	0.91 or more	0.01 or more

Source: Traffic Impact Analysis Report Guidelines (1997) prepared by the County of Los Angeles Department of Public Works

2.2.2 UNSIGNALIZED INTERSECTIONS

Traffic conditions at unsignalized intersections were evaluated using the operations methodology from Chapter 16 of the HCM 2000, which evaluates level of service (LOS) based on controlled delay per vehicle. Controlled delay is defined as the portion of the total delay attributed to the traffic signal operation including deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The relationship between controlled delay per vehicle and LOS for unsignalized intersections is described in Table 2-5.

Table 2-5: Unsignalized Intersection Level of Service Criteria

LOS	Description of Traffic Conditions	Controlled Delay (sec/veh)
A	No delay for stop-controlled approaches.	0 – 10
B	Operations with minor delay.	> 10 – 15
C	Operations with moderate delays.	> 15 – 25
D	Operations with some delays.	> 25 – 35
E	Operations with high delays and long queues.	> 35 – 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2000

2.2.3 MAINLINE ANALYSIS

The Arroyo Seco Parkway mainline analysis is based on the methodologies in Chapter 21 (Multilane Highways) and Chapter 23 (Basic Freeway Segments) of the Highways Capacity Manual (HCM 2000). The methodology for multilane highways applies to roadways with free flow speeds between 45 miles per hour and 65 miles per hour with up to three travel lanes in each direction. The methodology for basic freeway segments applies to facilities with two or more travel lanes and free flow speeds between 55 and 75 miles per hour. Segments of Arroyo Seco Parkway within the study area that have a cross section with four or more travel lanes in a given direction are analyzed as Basic Freeway Segments. However, it is noted that Basic Freeway Segments cannot be analyzed with a 45 mile per hour speed limit as proposed in Concept 1 and Concept 2. Segments with three or less travel lanes in each direction are analyzed as Multilane Highways.

The ramp merge and diverge analysis is based on the methodology in Chapter 25 (Ramps and Ramp Junctions). The methodology applies to ramps connecting to freeway segments with speed limits between 55 and 75 miles per hour, so the speed reduction proposed on Arroyo Seco Parkway in Concepts 1 and 2 is not reflected in the ramp analysis. Existing count data was provided by Caltrans was used to derive freeway mainline volumes.

The Highway Capacity Software (HCS) was used for the mainline, ramp merge and diverge analyses. Per the HCM methodology, the ramp merge and diverge areas focus on an influential area of 1,500 feet, including the acceleration or deceleration lane and adjacent freeway lanes. The methodology incorporates three fundamental steps:

- Determination of the traffic entering the freeway lanes upstream of the merge or at the beginning of the deceleration lane at diverge;
- Determination of the capacity for the segment; and
- Determination of the density of traffic flow within the ramp influence area and its level of service

Table 2-6 summarizes the correlation between LOS and density in terms of passenger cars per mile per lane (pc/mi/ln) for both freeway ramps and basic freeway segments. Level of service D has been established by Caltrans District 7 as the operating standard for freeway mainline segments and freeway ramps.

Table 2-6: Caltrans Freeway Mainline and Ramp HCM LOS Criteria

LOS	Freeway Ramp Density (pc/mi/ln)	Basic Freeway Segment Density (pc/mi/ln)
A	≤ 10.0	0-11.0
B	> 10.0 and ≤ 20.0	11.0-18.0
C	> 20.0 and ≤ 28.0	18.0-26.0
D	> 28.0 and ≤ 35.0	26.0-35.0
E	> 35.0	35.0-45.0
F	Exceeds Capacity	>45.0

Source: Highway Capacity Manual, Transportation Research Board, 2000

2.2.4 FREEWAY WEAVING ANALYSIS

Freeway weaving is defined as the crossing of two streams of traffic traveling in the same direction along a significant length of highway without the aid of traffic control devices. Segments of Arroyo Seco Parkway with less than 2,500 feet between a pair of on- and off-ramps are analyzed using the methodology in Chapter 24 (Freeway Weaving) of the HCM 2000. If weaving behavior is not expected on the segment based on ramp and mainline volumes, the segment is analyzed as a series of ramp and multilane highway or basic freeway segments. The relationship between LOS and associated freeway weaving densities is summarized in Table 2-7.

Table 2-7: Caltrans Weaving HCM LOS Criteria

LOS	Freeway Weaving Segment Density (pc/mi/ln)	Multilane and Collector-Distributor Weaving Segments Density (pc/mi/ln)
A	≤ 10.0	≤ 12.0
B	> 10.0 and ≤ 20.0	> 12.0 and ≤ 24.0
C	> 20.0 and ≤ 28.0	> 24.0 and ≤ 32.0
D	> 28.0 and ≤ 35.0	> 32.0 and ≤ 36.0
E	> 35.0 and≤ 43.0	> 36.0 and≤ 40.0
F	>43.0	>40.0

Source: Highway Capacity Manual, Transportation Research Board, 2000

2.2.5 LIMITATIONS OF THE HCM METHODOLOGY

The Highway Capacity Manual (HCM 2000) methodology applies to facilities that conform to current geometric design standards. The non-standard design of existing on-ramp and off-ramp facilities with little or no acceleration or deceleration length cannot be accounted for in this analysis. The results of the ramp analysis represent conditions that would be expected on a standard facility with the same volumes. Also, the ramp analysis methodology applies to facilities where the mainline free flow speed is between 55 and 75 miles per hour. The proposed reduction in the speed limit from 55 miles per hour to 45 miles per hour in Concepts 1 and 2 cannot be reflected in the ramp analysis.

3. EXISTING CONDITION

3.1 Study Intersections

A total of 65 intersections have been selected for analysis as part of this study. Twenty-six of these intersections provide direct access onto or off of Arroyo Seco Parkway, and are numbered between 1 and 29. The intersection numbers 10, 22 and 25 have been reserved for modeling purposes, but are excluded from analysis because they represent locations where there are no conflicting traffic movements. Intersections numbered 101 through 106 are located in Pasadena, intersections numbered 201 through 210 are located in South Pasadena, and those numbered 301 through 323 are located in the City of Los Angeles. The study intersection locations are shown in Figures 3.1A, 3.1B and 3.1C.

The full list of study intersections, the presence of traffic signal control, and the agencies that have jurisdiction over each intersection are indicated in Table 3-1.

Table 3-1 Study Intersections

No.	Intersection	Signal Control	Caltrans	Pasadena	South Pasadena	Los Angeles
1	Arroyo Pkwy & Glenarm St	X	X	X		
2	Arroyo Seco Pkwy SB Exit 31B & State St		X		X	
3	Fair Oaks Av & State St	X	X		X	
4	Fair Oaks Av & Grevelia St	X	X		X	
5	Orange Grove Bl & Arroyo Seco Pkwy SB Exit 31A	X	X		X	
6	Orange Grove Bl & Arroyo Seco Pkwy NB Exit 31A	X	X		X	
7	Bridewell St & Hough St		X			X
8	Bridewell St & Arroyo Seco Pkwy SB Exit 30		X			X
9	Arroyo Seco Pkwy NB Exit 30A & Marmion Wy		X			X
11	La Riba Wy & Ave 66		X			X
12	Arroyo Seco Pkwy NB Exit 29 & Ave 60		X			X
13	Arroyo Dr & Arroyo Seco Pkwy SB Exit 29/Shults St		X			X
14	Arroyo Seco Pkwy NB Exit 28B & Via Marisol		X			X
15	Ave 57 & Arroyo Seco Pkwy SB Exit 28B		X			X
16	ASP SB Exit 28A & Ave 52		X			X
17	Arroyo Seco Pkwy NB Exit 28A & Ave 52		X			X
18	Arroyo Seco Pkwy SB Exit 27 & Ave 43		X			X
19	Homer St & Ave 43		X			X
20	Arroyo Seco Pkwy SB Exit 26A & Ave 26		X			X
21	Arroyo Seco Pkwy NB on-ramp & Ave 26		X			X
23	Arroyo Seco Pkwy NB Exit 26B & Figueroa St	X	X			X
24	Arroyo Seco Pkwy NB on-ramp & San Fernando Rd		X			X
26	Arroyo Seco Pkwy NB Exit 25 & Casanova St		X			X
27	Amador Pl & Amador St		X			X
28	Stadium Wy & Arroyo Seco Pkwy SB Exit 24D		X			X
29	Stadium Wy & Arroyo Seco Pkwy NB Exit 24B		X			X
101	Pasadena Av & Glenarm St	X		X		
102	Fair Oaks Av & Glenarm St	X		X		
103	Raymond Av & Glenarm St	X		X		
104	Marengo Av & Glenarm St	X		X		

No.	Intersection	Signal Control	Caltrans	Pasadena	South Pasadena	Los Angeles
105	Orange Grove Bl & Columbia St	X		X		
106	Fair Oaks Av & Columbia St	X		X		
201	Orange Grove Bl & Mission St	X			X	
202	Fremont Av & Mission St	X			X	
203	Fair Oaks Av & Mission St	X			X	
204	Arroyo Verde Rd & Pasadena Av	X			X	
205	Pasadena Av & Monterey Rd	X			X	
206	Monterey Rd & Monterey Rd	X			X	
207	Fremont Av & Monterey Rd	X			X	
208	Fair Oaks Av & Monterey Rd	X			X	
209	Fremont Av & Huntington Dr	X			X	
210	Fair Oaks Av & Huntington Dr	X			X	
301	Figueroa St & York Bl	X				X
302	Ave 64 & York Bl	X				X
303	Figueroa St & Ave 60	X				X
304	Monterey Rd & Ave 60	X				X
305	Figueroa St & Ave 57	X				X
306	Monterey Rd & Via Marisol	X				X
307	Figueroa St & Ave 52	X				X
308	Figueroa St & Ave 43	X				X
309	Griffin Av & Ave 43					X
310	Figueroa St & Marmion Wy/Pasadena Av	X				X
311	Figueroa St & Cypress Av	X				X
312	Figueroa St & Ave 26	X				X
313	Lacy St & Ave 26	X				X
314	Griffin Av & Broadway	X				X
315	I-5 NB ramps & Pasadena Av	X				X
316	I-5 SB ramps & Pasadena Av	X				X
317	Ave 19 & San Fernando Rd					X
318	Figueroa St & San Fernando Rd	X				X
319	San Fernando Rd & Pasadena Av	X				X
320	Daly St & Main St	X				X
321	Ave 21 & Main St					X
322	Pasadena Av & Broadway	X				X
323	Hill St & College St	X				X

1. NB – northbound; SB – southbound
2. Intersection numbers 10, 22 and 25 have been reserved for modeling purposes, but are excluded from analysis because they represent locations where there are no conflicting traffic movements.

3.2 Lane Geometry and Control

Lane geometry and traffic control at the 66 intersections selected for analysis are illustrated in Figures 3.2A, 3.2B and 3.2C.

3.3 Traffic Volumes

Turning movement counts were made by Pacific Traffic Data Services (PTDS) at the Arroyo Seco Parkway ramp terminal intersections on Tuesday, December 6th, 2011. Volume data for other locations were obtained from the Cities of Los Angeles, Pasadena and South Pasadena, or collected by PTDS on January 18th, 2012. Mainline volumes on Arroyo Seco Parkway were derived from counts provided by Caltrans. Year 2011 AM peak hour turning movement volumes are shown in Figures 3.3A, 3.3B and 3.3C. The PM peak hour volumes are shown in Figures 3.4A, 3.4B and 3.4C.

FIGURE 3.1A: STUDY INTERSECTION LOCATIONS

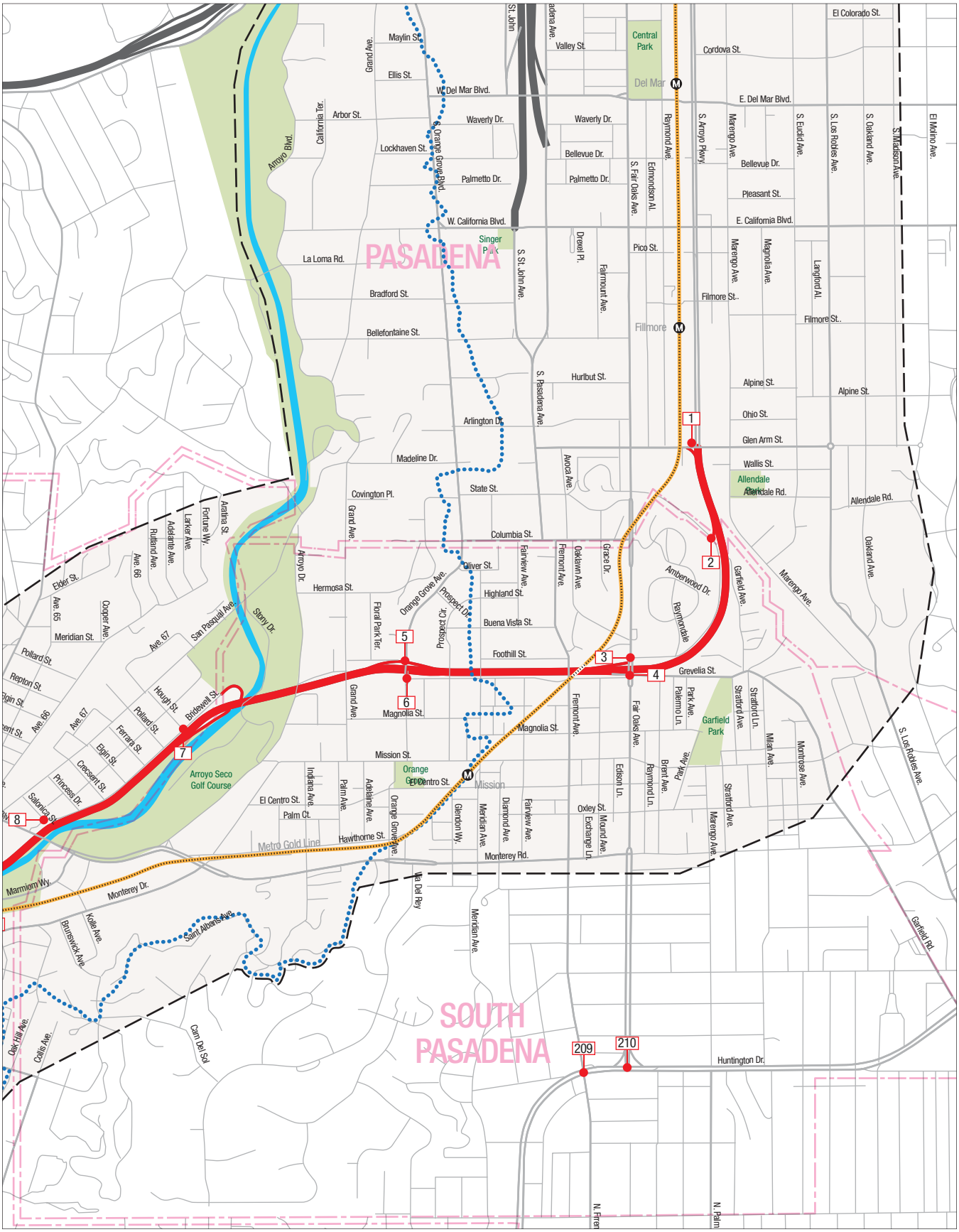


FIGURE 3.1B: STUDY INTERSECTION LOCATIONS

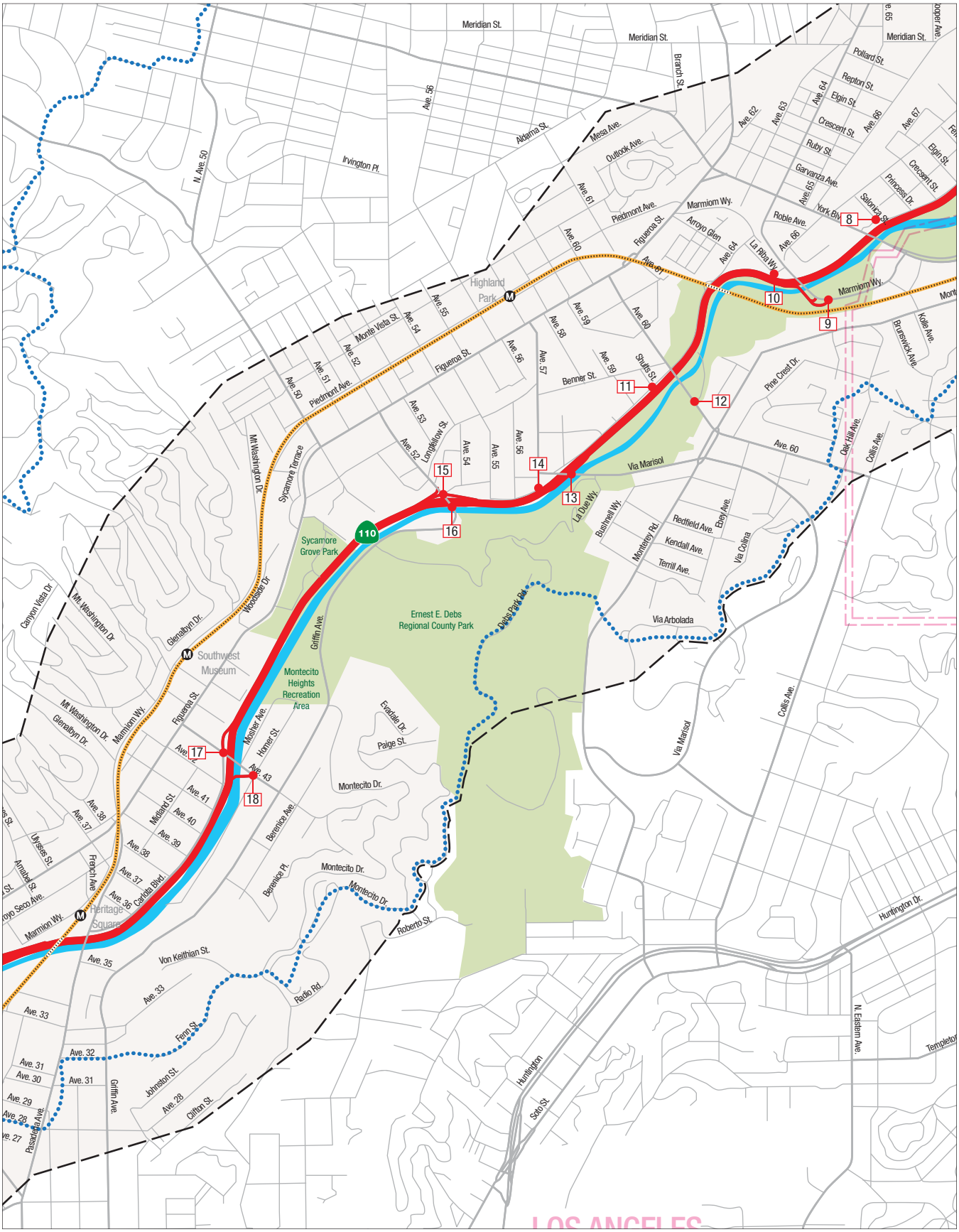


FIGURE 3.1C: STUDY INTERSECTION LOCATIONS

FIGURE 3.2A: STUDY INTERSECTION LANE GEOMETRY

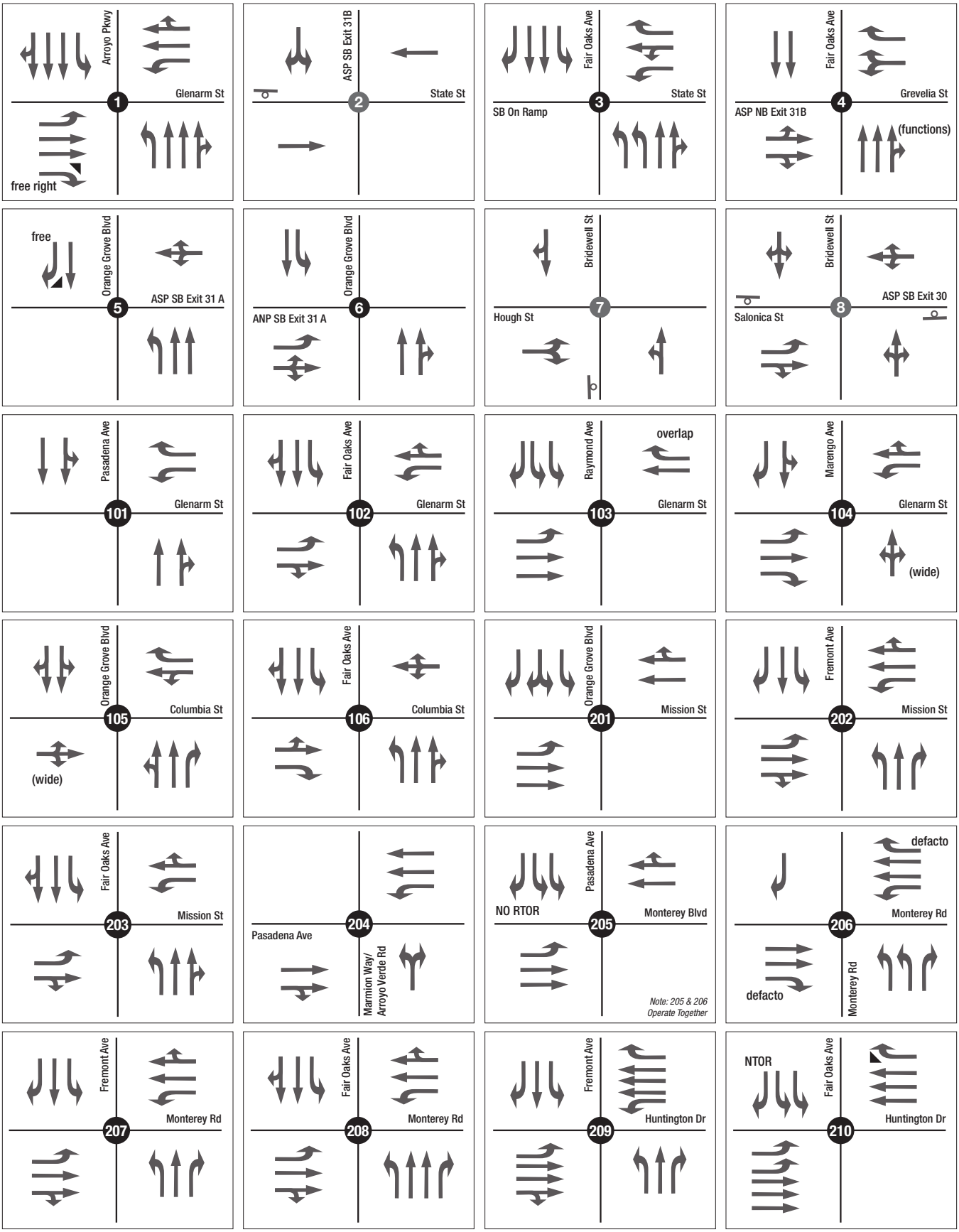


FIGURE 3.2B: STUDY INTERSECTION LANE GEOMETRY

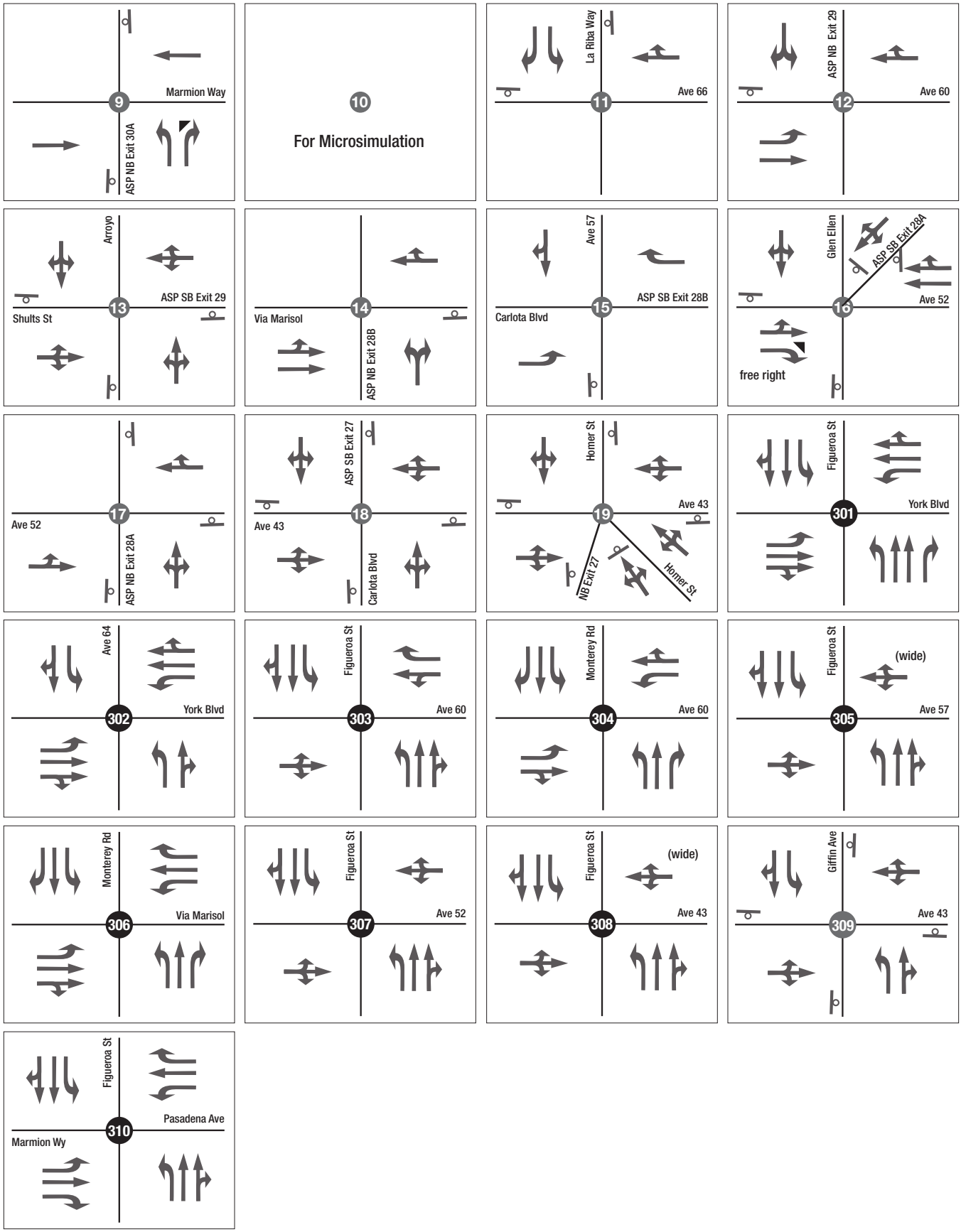


FIGURE 3.2C: STUDY INTERSECTION LANE GEOMETRY

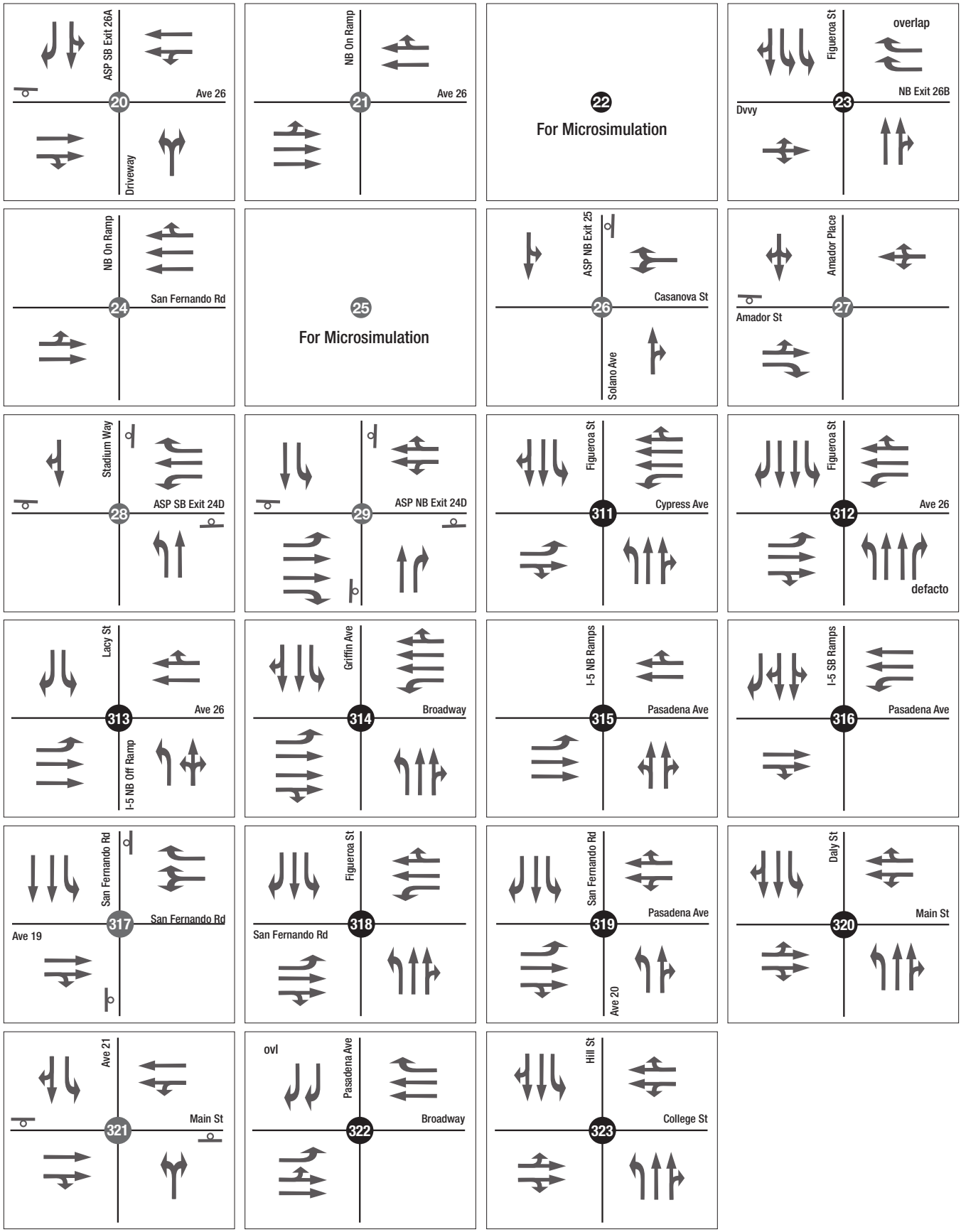


FIGURE 3.3A: EXISTING (YEAR 2011) STUDY INTERSECTION VOLUMES - AM PEAK HOUR

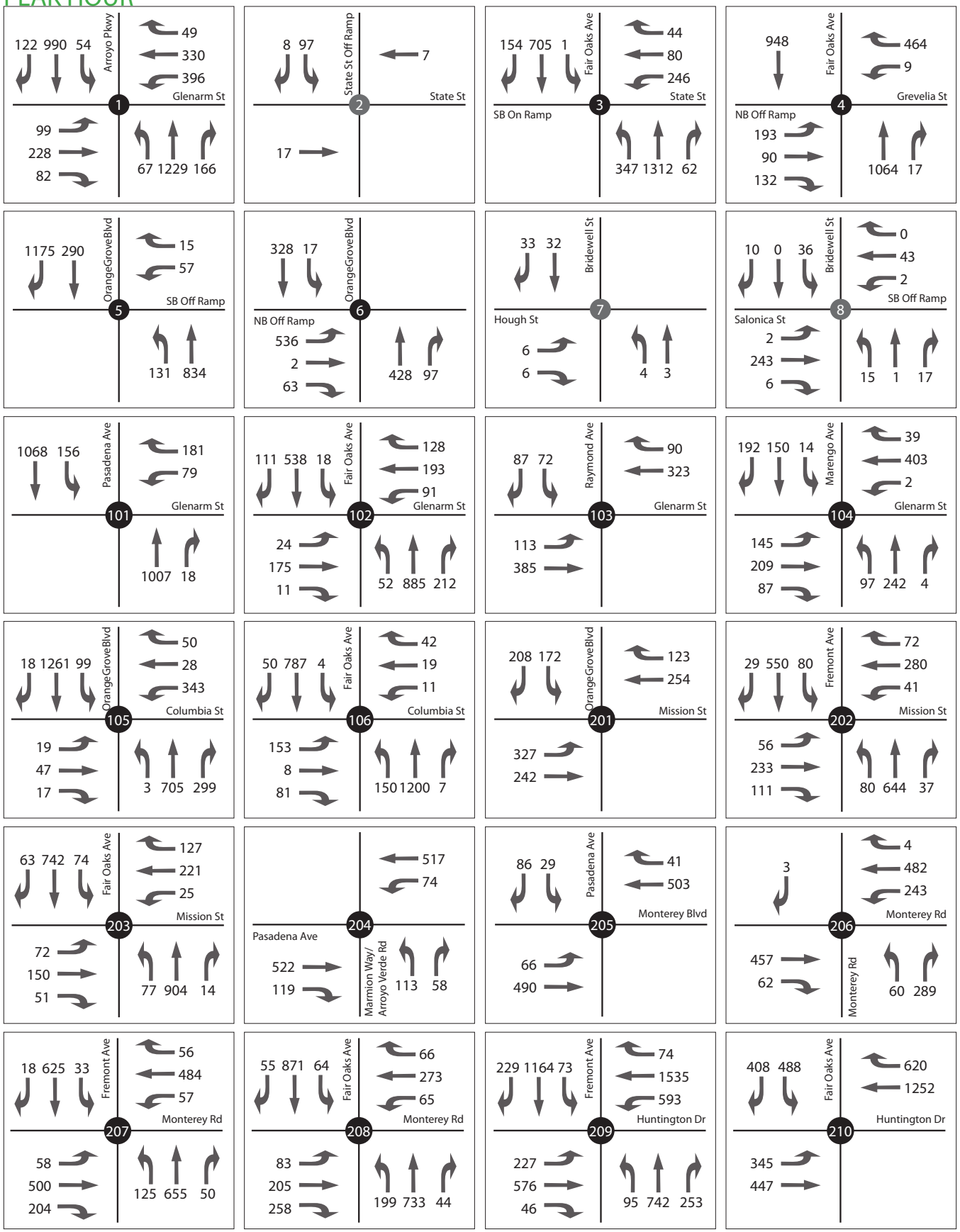


FIGURE 3.3B: EXISTING (YEAR 2011) STUDY INTERSECTION VOLUMES - AM PEAK HOUR

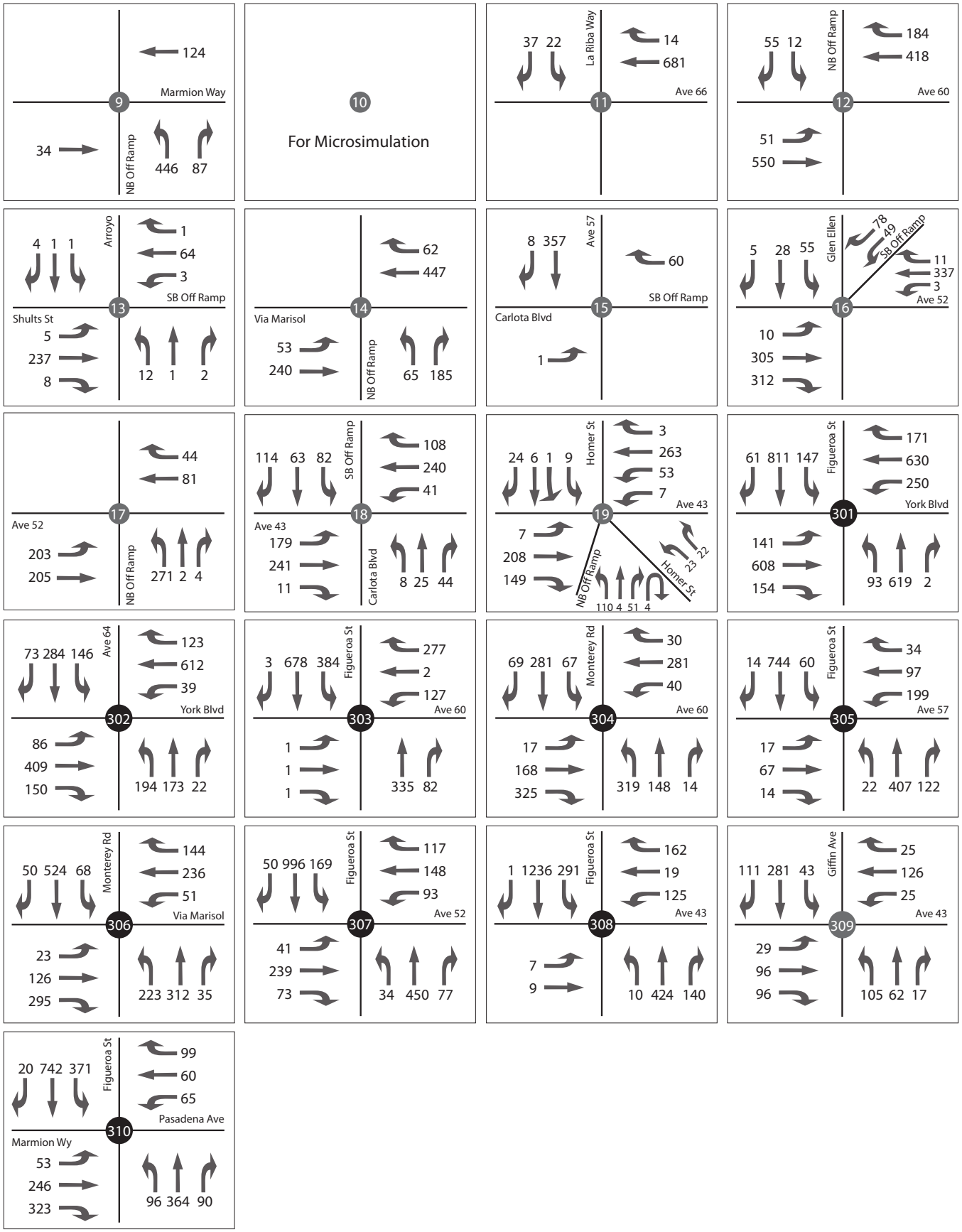


FIGURE 3.3C: EXISTING (YEAR 2011) STUDY INTERSECTION VOLUMES - AM PEAK HOUR

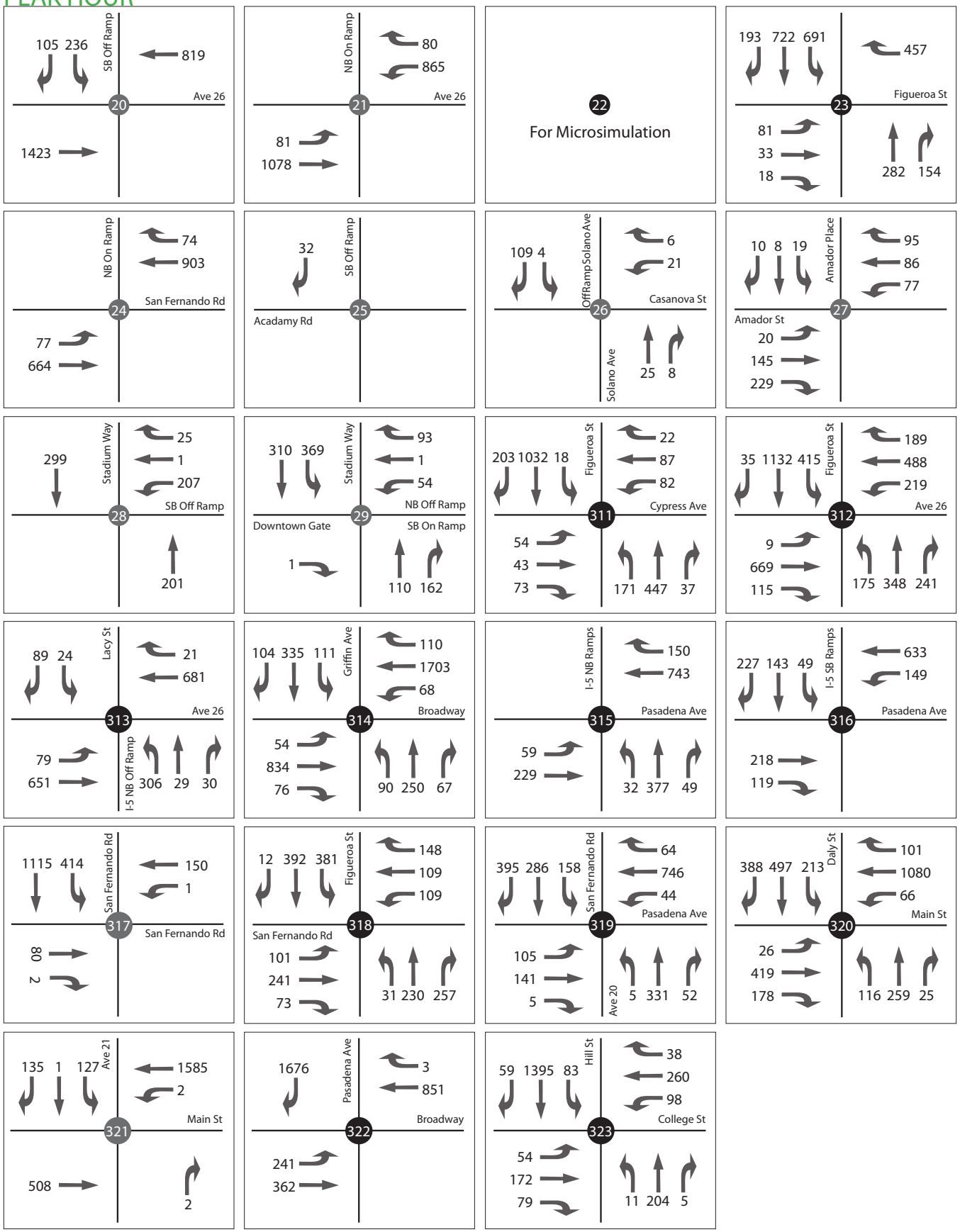


FIGURE 3.4A: EXISTING (YEAR 2011) STUDY INTERSECTION VOLUMES - PM PEAK HOUR

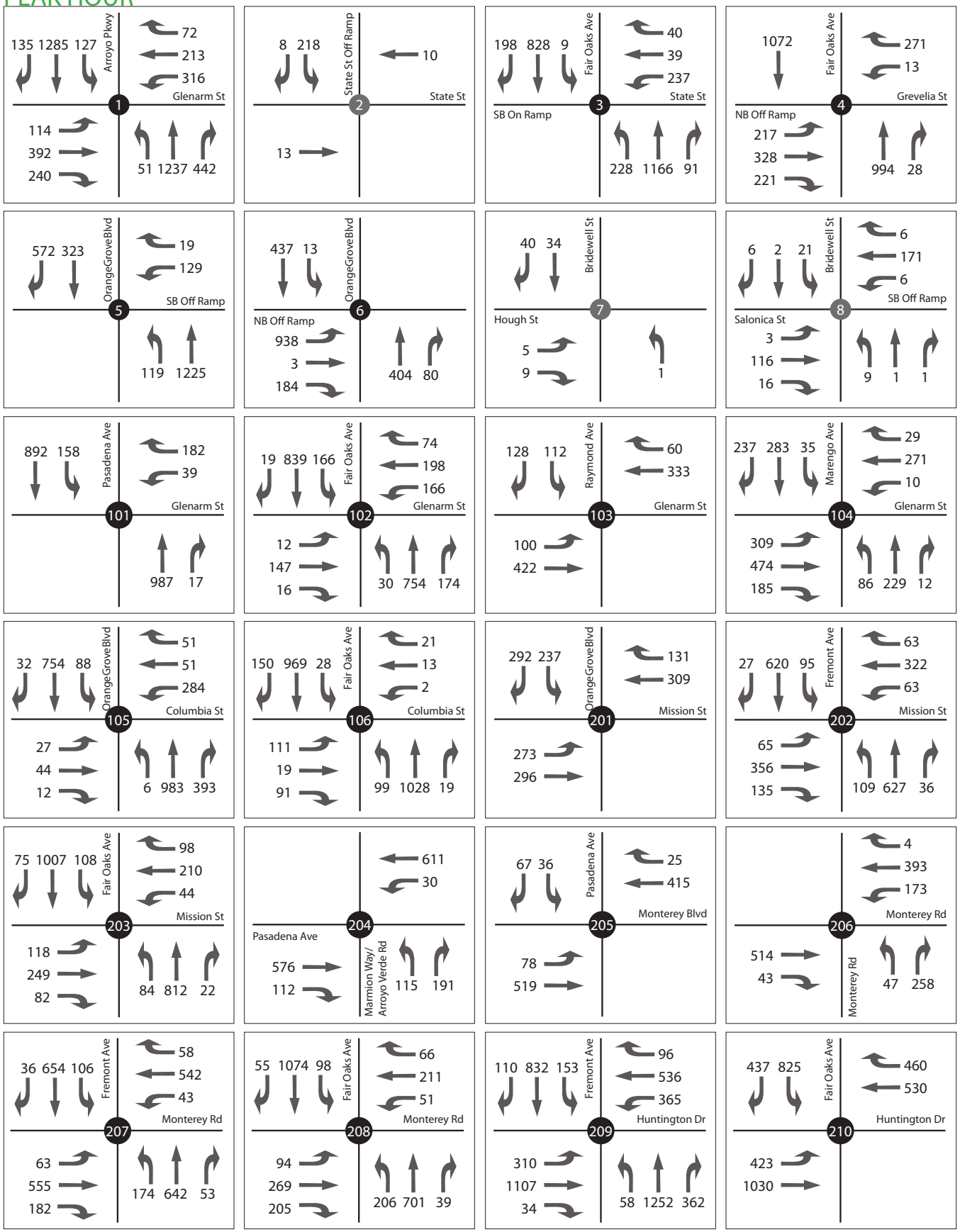


FIGURE 3.4B: EXISTING (YEAR 2011) STUDY INTERSECTION VOLUMES - PM PEAK HOUR

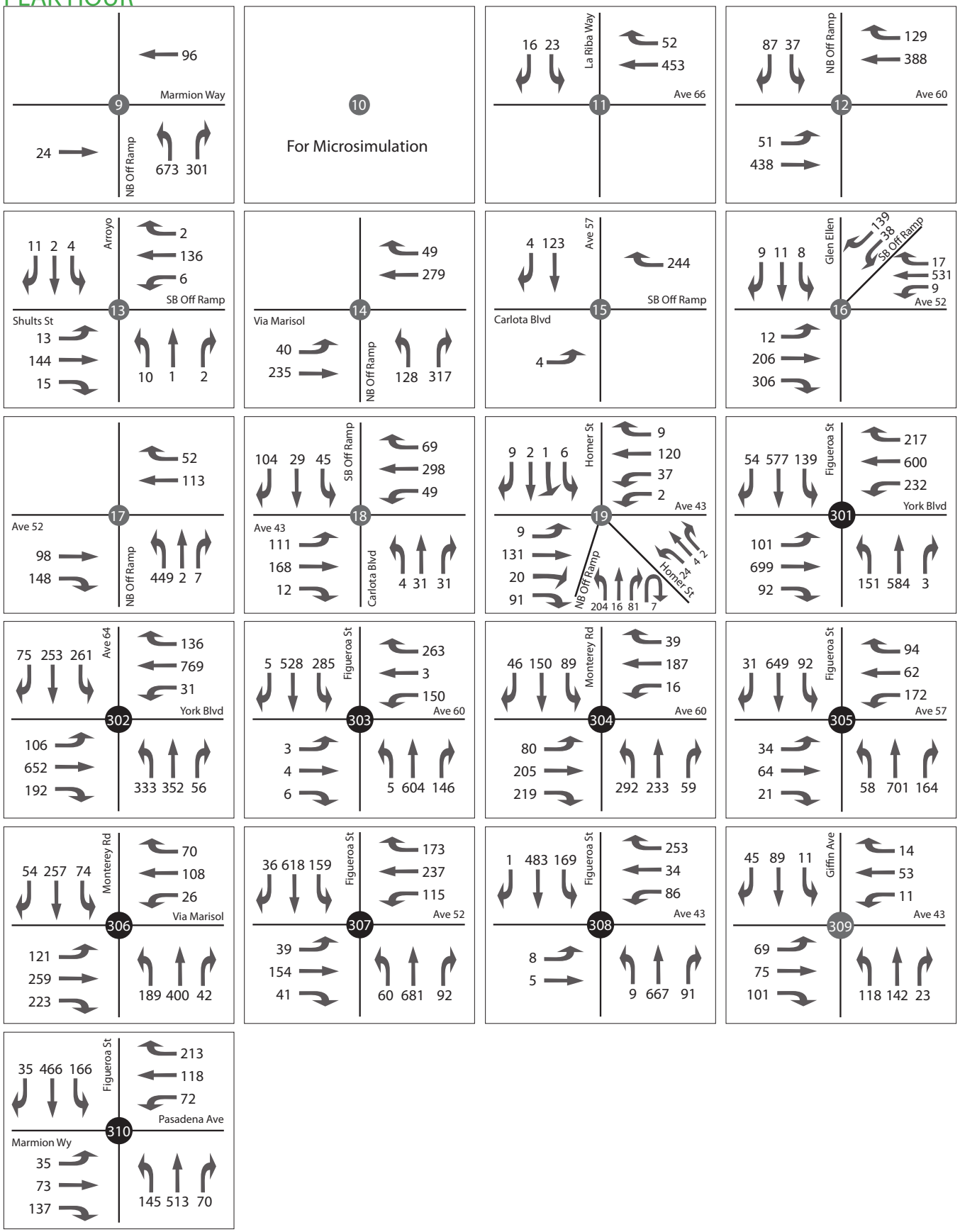
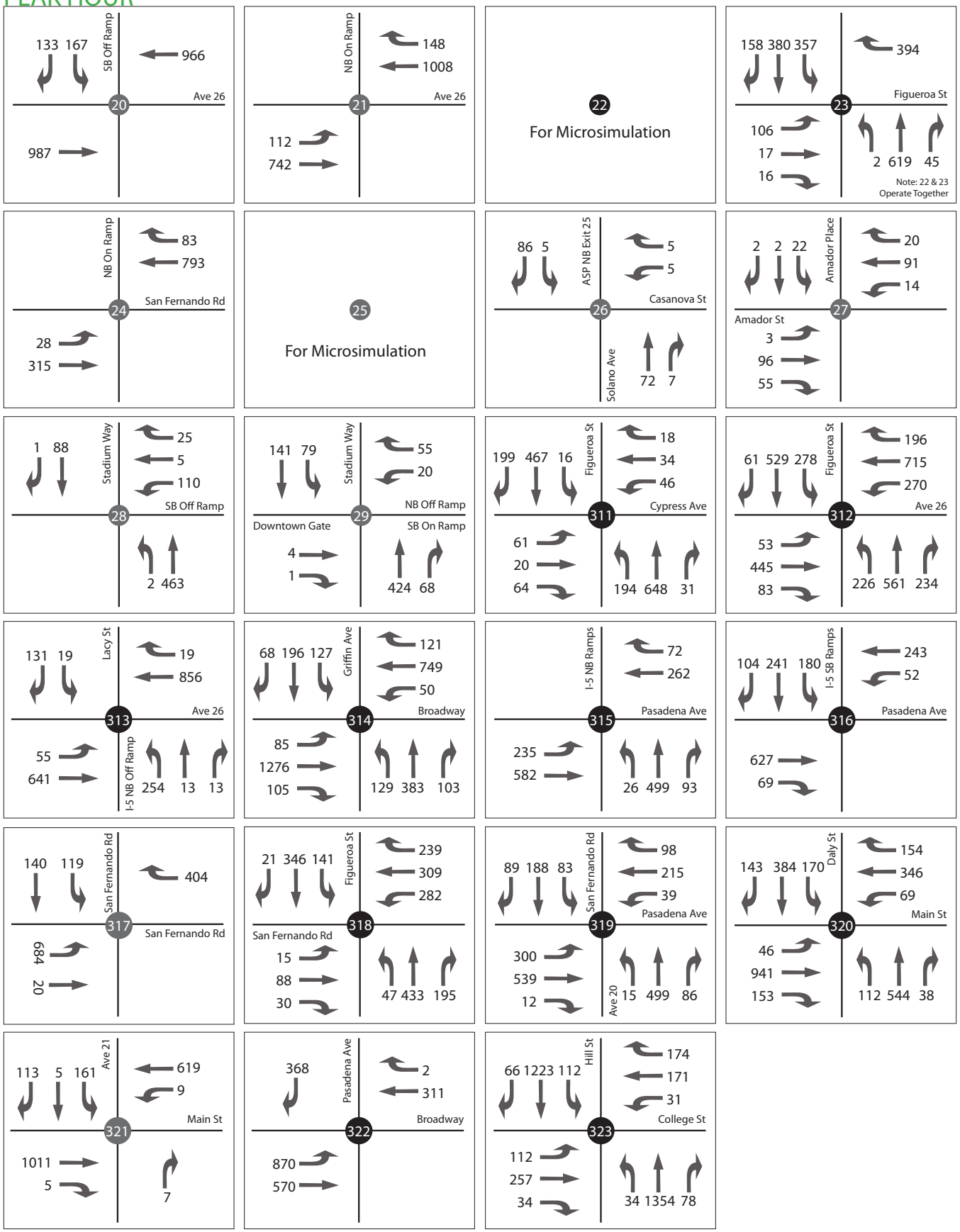


FIGURE 3.4C: EXISTING (YEAR 2011) STUDY INTERSECTION VOLUMES - PM PEAK HOUR



3.4 Intersection Level of Service Analysis

A summary of the AM and PM peak hour level of service analysis results for the Existing Condition (Year 2011) scenario are included in Tables 3-2 and 3-3.

Table 3-2: Existing Condition (Year 2011) LOS Results – AM Peak Hour

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
1	Arroyo Pkwy & Glenarm St	SIG		24.0 s	C	0.658	B
2	ASP SB Exit 31B & State St	2WS		9.0 s	A		
3	Fair Oaks Av & State St	SIG		13.5 s	B	0.532	A
4	Fair Oaks Av & Grevelia St	SIG		21.9 s	C	0.574	A
5	Orange Grove Bl & ASP SB Exit 31A	SIG		9.5 s	A	0.308	A
6	Orange Grove Bl & ASP NB Exit 31A	SIG		22.8 s	C	0.393	A
7	Bridewell St & Hough St	2WS		8.7 s	A		
8	Bridewell St & ASP SB Exit 30	2WS		10.6 s	B		
9	ASP NB Exit 30A & Marmion Wy	2WS		45.8 s	E		
11	La Riba Wy & Ave 66	AS		19.0 s	C		
12	ASP NB Exit 29 & Ave 60	2WS		14.8 s	B		
14	ASP NB Exit 28B & Via Marisol	2WS		14.3 s	B		
15	Ave 57 & ASP SB Exit 28B	2WS		11.4 s	B		
16	ASP SB Exit 28A & Ave 52	AS		13.0 s	B		
17	ASP NB Exit 28A & Ave 52	AS		12.5 s	B		
18	ASP SB Exit 27 & Ave 43	AS		16.0 s	C		
19	Homer St & Ave 43	AS		11.8 s	B		
20	ASP SB Exit 26A & Ave 26	2WS	X	426.4 s	F		
21	ASP NB on-ramp & Ave 26	2WS		10.5 s	B		
23	ASP NB Exit 26B & Figueroa St	SIG		8.7 s	A	0.735	C
24	ASP NB on-ramp & San Fernando	2WS		10.6 s	B		
26	ASP NB Exit 25 & Casanova St	2WS		9.2 s	A		
27	Amador Pl & Amador St	2WS		10.9 s	B		
28	Stadium Wy & ASP SB Exit 24D	AS		12.0 s	B		
29	Stadium Wy & ASP NB Exit 24B	2WS		12.5 s	B		
101	Pasadena Av & Glenarm St	SIG		7.1 s	A	0.531	A
102	Fair Oaks Av & Glenarm St	SIG		12.9 s	B	0.570	A
103	Raymond Av & Glenarm St	SIG		7.1 s	A	0.327	A
104	Marengo Av & Glenarm St	SIG		15.2 s	B	0.590	A
105	Orange Grove Bl & Columbia St	SIG		16.4 s	B	0.699	B

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
106	Fair Oaks Av & Columbia St	SIG		8.4 s	A	0.520	A
201	Orange Grove Bl & Mission St	SIG		11.9 s	B	0.401	A
202	Fremont Av & Mission St	SIG		14.5 s	B	0.597	A
203	Fair Oaks Av & Mission St	SIG		21.7 s	C	0.596	A
204	Arroyo Verde Rd & Pasadena Av	SIG		10.5 s	B	0.353	A
205	Pasadena Av & Monterey Rd	SIG		3.2 s	A	0.211	A
206	Monterey Rd & Monterey Rd	SIG		21.5 s	C	0.477	A
207	Fremont Av & Monterey Rd	SIG		17.1 s	B	0.724	C
208	Fair Oaks Av & Monterey Rd	SIG		18.3 s	B	0.616	B
209	Fremont Av & Huntington Dr	SIG		90.1 s	F	1.287	F
210	Fair Oaks Av & Huntington Dr	SIG		21.9 s	C	0.762	C
301	Figueroa St & York Bl	SIG		24.0 s	C	0.814	D
302	Ave 64 & York Bl	SIG		21.0 s	C	0.705	C
303	Figueroa St & Ave 60	SIG		17.4 s	B	0.526	A
304	Monterey Rd & Ave 60	SIG		28.7 s	C	0.824	D
305	Figueroa St & Ave 57	SIG		16.1 s	B	0.499	A
306	Monterey Rd & Via Marisol	SIG		15.1 s	B	0.671	B
307	Figueroa St & Ave 52	SIG		20.0 s	B	0.704	C
308	Figueroa St & Ave 43	SIG		11.3 s	B	0.628	B
309	Griffin Av & Ave 43	AS		13.4 s	B		
310	Figueroa St & Marmion Wy	SIG		22.7 s	C	0.658	B
311	Figueroa St & Cypress Av	SIG		8.1 s	A	0.658	B
312	Figueroa St & Ave 26	SIG		29.2 s	C	0.994	E
313	Lacy St & Ave 26	SIG		17.5 s	B	0.465	A
314	Griffin Av & Broadway	SIG		12.0 s	B	0.645	B
315	I-5 NB ramps & Pasadena Av	SIG		12.4 s	B	0.490	A
316	I-5 SB ramps & Pasadena Av	SIG		11.4 s	B	0.305	A
317	Ave 19 & San Fernando Rd	2WS		388.6 s	F		
318	Figueroa St & San Fernando Rd	SIG		21.4 s	C	0.615	B
319	San Fernando Rd & Pasadena Av	SIG		16.4 s	B	0.715	C
320	Daly St & Main St	SIG		18.7 s	B	0.828	D
321	Ave 21 & Main St	2WS	X	468.3 s	F		
322	Pasadena Av & Broadway	SIG		837.1 s	F	0.899	D
323	Hill St & College St	SIG		13.2 s	B	0.660	B

AS – all-way stop control; 2WS – 2-way stop control; SIG – signalized.

Table 3-3: Existing Condition (Year 2011) LOS Results – PM Peak Hour

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
1	Arroyo Pkwy & Glenarm St	SIG		24.7 s	C	0.749	C
2	ASP SB Exit 31B & State St	2WS		9.6 s	A		
3	Fair Oaks Av & State St	SIG		11.7 s	B	0.485	A
4	Fair Oaks Av & Grevelia St	SIG		22.4 s	C	0.663	B
5	Orange Grove Bl & ASP SB Exit 31A	SIG		11.7 s	B	0.475	A
6	Orange Grove Bl & ASP NB Exit 31A	SIG		24.8 s	C	0.625	B
7	Bridewell St & Hough St	2WS		8.7 s	A		
8	Bridewell St & ASP SB Exit 30	2WS		10.7 s	B		
9	ASP NB Exit 30A & Marmion Wy	2WS		199.9 s	F		
11	La Riba Wy & Ave 66	AS		11.5 s	B		
12	ASP NB Exit 29 & Ave 60	2WS		16.4 s	C		
14	ASP NB Exit 28B & Via Marisol	2WS		18.1 s	C		
15	Ave 57 & ASP SB Exit 28B	2WS		10.5 s	B		
16	ASP SB Exit 28A & Ave 52	AS		14.4 s	B		
17	ASP NB Exit 28A & Ave 52	AS		14.2 s	B		
18	ASP SB Exit 27 & Ave 43	AS		12.3 s	B		
19	Homer St & Ave 43	AS		10.5 s	B		
20	ASP SB Exit 26A & Ave 26	2WS	X	159.0 s	F		
21	ASP NB on-ramp & Ave 26	2WS		12.2 s	B		
23	ASP NB Exit 26B & Figueroa St	SIG		23.4 s	C	0.490	A
24	ASP NB on-ramp & San Fernando	2WS		9.8 s	A		
26	ASP NB Exit 25 & Casanova St	2WS		9.1 s	A		
27	Amador Pl & Amador St	2WS		9.4 s	A		
28	Stadium Wy & ASP SB Exit 24D	AS		14.1 s	B		
29	Stadium Wy & ASP NB Exit 24B	2WS		11.6 s	B		
101	Pasadena Av & Glenarm St	SIG		6.8 s	A	0.526	A
102	Fair Oaks Av & Glenarm St	SIG		12.1 s	B	0.599	A
103	Raymond Av & Glenarm St	SIG		9.5 s	A	0.351	A
104	Marengo Av & Glenarm St	SIG		15.8 s	B	0.633	B
105	Orange Grove Bl & Columbia St	SIG		15.0 s	B	0.593	A
106	Fair Oaks Av & Columbia St	SIG		6.5 s	A	0.503	A
201	Orange Grove Bl & Mission St	SIG		13.3 s	B	0.418	A
202	Fremont Av & Mission St	SIG		15.3 s	B	0.648	B
203	Fair Oaks Av & Mission St	SIG		22.8 s	C	0.657	B

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
204	Arroyo Verde Rd & Pasadena Av	SIG		15.6 s	B	0.425	A
205	Pasadena Av & Monterey Rd	SIG		3.8 s	A	0.186	A
206	Monterey Rd & Monterey Rd	SIG		20.3 s	C	0.430	A
207	Fremont Av & Monterey Rd	SIG		17.3 s	B	0.775	C
208	Fair Oaks Av & Monterey Rd	SIG		18.4 s	B	0.662	B
209	Fremont Av & Huntington Dr	SIG		91.5 s	F	1.344	F
210	Fair Oaks Av & Huntington Dr	SIG		22.1 s	C	0.721	C
301	Figueroa St & York Bl	SIG		22.6 s	C	0.768	C
302	Ave 64 & York Bl	SIG		22.9 s	C	0.862	D
303	Figueroa St & Ave 60	SIG		17.9 s	B	0.599	A
304	Monterey Rd & Ave 60	SIG		24.4 s	C	0.641	B
305	Figueroa St & Ave 57	SIG		15.3 s	B	0.591	A
306	Monterey Rd & Via Marisol	SIG		14.5 s	B	0.494	A
307	Figueroa St & Ave 52	SIG		23.2 s	C	0.779	C
308	Figueroa St & Ave 43	SIG		13.9 s	B	0.619	B
309	Griffin Av & Ave 43	AS		9.9 s	A		
310	Figueroa St & Marmion Wy	SIG		22.1 s	C	0.437	A
311	Figueroa St & Cypress Av	SIG		6.5 s	A	0.438	A
312	Figueroa St & Ave 26	SIG		28.2 s	C	0.795	C
313	Lacy St & Ave 26	SIG		15.8 s	B	0.517	A
314	Griffin Av & Broadway	SIG		13.8 s	B	0.587	A
315	I-5 NB ramps & Pasadena Av	SIG		14.1 s	B	0.474	A
316	I-5 SB ramps & Pasadena Av	SIG		13.3 s	B	0.387	A
317	Ave 19 & San Fernando Rd	2WS		99.3 s	F		
318	Figueroa St & San Fernando Rd	SIG		20.0 s	B	0.559	A
319	San Fernando Rd & Pasadena Av	SIG		16.9 s	B	0.776	C
320	Daly St & Main St	SIG		17.1 s	B	0.749	C
321	Ave 21 & Main St	2WS	X	88.8 s	F		
322	Pasadena Av & Broadway	SIG		8.0 s	A	0.424	A
323	Hill St & College St	SIG		11.8 s	B	0.752	C

AS – all-way stop control; 2WS – 2-way stop control; SIG – signalized.

The following signalized intersections currently operate at LOS E or worse during one or both peak hour time periods:

- Fremont Avenue & Huntington Drive (#209)
- Figueroa Street & Avenue 26 (#312)
- Pasadena Avenue & Broadway (#322)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop-controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy MUTCD Signal Warrant 3 based on peak hour volume in the existing condition.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay:

- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)
- Avenue 21 & Main Street (#321)

3.5 Mainline Analysis

The mainline analysis was conducted using the methodologies described in Chapter 21 (Multilane Highways) and Chapter 23 (Basic Freeway Segments) of the Highway Capacity Manual (HCM 2000) with the HCS2010 software package. Results of the northbound Arroyo Seco Parkway mainline analysis for the Existing Condition (Year 2011) scenario are presented in Table 3-4. The southbound Arroyo Seco Parkway segment level of service is summarized in Table 3-5.

Table 3-4 Existing Condition (Year 2011) Arroyo Seco Parkway LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	0	AM	5,827	28.8	D
			PM	9,426	62.9	F
Between Solano Ave and NB I-5 / Riverside Dr	4	0	AM	5,760	28.5	D
			PM	9,316	60.6	F
Between NB I-5 / Riverside Dr and Figueroa St	3	0	AM	3,326	21.9	C
			PM	5,381	37.3	E
Between Figueroa St and San Fernando Rd	3	0	AM	2,864	18.9	C
			PM	4,633	31.1	D
Between San Fernando Rd and Ave 26	3	0	AM	2,941	19.4	C
			PM	4,758	32.1	D
Between Ave 26 and Ave 43	3	0	AM	4,149	27.5	D
			PM	6,711	> 45.0	F
Between Ave 43 and Ave 52	3	0	AM	3,945	26.0	D
			PM	6,382	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	3	0	AM	3,622	23.9	C
			PM	5,859	> 45.0	F
Between Ave 57 / Via Marisol and Ave 60	3	0	AM	3,329	21.9	C
			PM	5,386	37.3	E
Between Ave 60 and Ave 64 / Marmion Way	3	0	AM	3,308	21.8	C
			PM	5.351	37.0	E
Between Ave 64 / Marmion Way and Bridewell St	3	0	AM	2,741	18.1	C
			PM	4,434	29.6	D
Between Bridewell St and Orange Grove Ave	3	0	AM	2,692	17.7	B
			PM	4,354	29.0	D
Between Orange Grove Ave and Fair Oaks Ave	3	0	AM	2,056	13.5	B
			PM	3,326	21.9	C
Downstream of Fair Oaks Ave	3	0	AM	1,551	9.1	A
			PM	2,509	16.5	B

Table 3-5 Existing Condition (Year 2011) Arroyo Seco Parkway LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,534	7.6	A
			PM	1,083	5.3	A
Upstream of Fair Oaks Ave	2	1	AM	1,379	10.2	A
			PM	973	6.4	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	2,272	15.0	B
			PM	1,603	10.5	A
Between Orange Grove Ave and York Blvd	3	0	AM	3,339	22.0	C
			PM	2,356	15.5	B
Between York Blvd and Ave 64 / Marmion Wy	3	0	AM	3,523	23.2	C
			PM	2,486	16.4	B
Between Ave 64 / Marmion Wy and Ave 60	3	0	AM	4,312	28.7	D
			PM	3,043	20.0	C
Between Ave 60 and Ave 57 / Via Marisol	3	0	AM	4,312	28.7	D
			PM	3,043	20.0	C
Between Ave 57 / Via Marisol and Ave 52	3	0	AM	4,510	30.2	D
			PM	3,182	20.9	C
Between Ave 52 and Ave 43	3	0	AM	5,088	34.8	D
			PM	3,590	23.6	C
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	5,375	37.3	E
			PM	3,792	25.0	C
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,720	24.5	C
			PM	2,625	17.3	B
Between Ave 26 and Figueroa St	3	0	AM	3,518	23.2	C
			PM	2,482	16.3	B
Between Figueroa St and SB I-5	3	0	AM	4,345	28.9	D
			PM	3,066	20.2	C
Between SB I-5 and Academy Rd	3	2	AM	8,529	33.8	D
			PM	6,018	23.8	C
Between Academy Rd and Amador St	3	2	AM	8,463	33.5	D
			PM	5,971	23.6	C
Downstream of Amador	3	2	AM	8,656	34.3	D
			PM	6,107	24.1	C

3.1 Ramp Merge and Diverge Analysis

The ramp analysis was conducted using the merge and diverge segment methodology described in Chapter 25 of the Highway Capacity Manual (HCM 2000) with the HCS2010 software package. Results of the northbound Arroyo Seco Parkway ramp analysis for the Existing Condition (Year 2011) scenario are presented in Table 3-6. The southbound Arroyo Seco Parkway ramp level of service is summarized in Table 3-7.

The Highway Capacity Manual (HCM 2000) ramp merge and diverge analysis methodology was developed to measure the density (vehicles per hour per lane) of freeway and multilane highway facilities in the vicinity of on- and off-ramps. It is assumed that the facilities have been designed according to current engineering standards. While the ramp length is an input, the upstream or downstream mainline volumes and lane configurations have a greater impact on the level of service value than the ramp configuration. The impacts to operations that result from on-ramps with stop control and no acceleration length may not be adequately reflected in these results.

Table 3-6: Existing Condition (Year 2011) Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	5,827	1	15	160	101	27.1	C
			PM	9,426				143	44.5	F
ON	Solano Ave	4	AM	5,726	1	15	50	34	24.8	C
			PM	9,283				33	36.9	F
OFF	NB I-5	4	AM	5,760	1	35	1,525	2,434	30.7	F
			PM	9,316	2			3,935	18.6	F
OFF	Figueroa St	3	AM	3,326	1	35	800	462	19.8	B
			PM	5,381				748	30.6	D
ON	San Fernando Rd	3	AM	2,864	1	15	25	77	20.0	B
			PM	4,633				125	29.0	D
ON	I-5/Avenue 26	3	AM	2,941	1	35	1,930	1,208	21.2	C
			PM	4,758				1,953	36.6	F
OFF	Avenue 43	3	AM	4,149	1	35	300	274	27.1	C
			PM	6,711				411	41.1	F
ON	Avenue 43	3	AM	3,875	1	15	50	70	24.7	C
			PM	6,300				82	38.2	F
OFF	Avenue 52	3	AM	3,945	1	35	325	432	26.1	C
			PM	6,382				621	37.8	F
ON	Avenue 52	3	AM	3,513	1	15	25	109	25.1	C
			PM	5,761				98	39.3	E
OFF	Avenue 57	3	AM	3,622	1	35	425	358	23.4	C
			PM	5,859				543	34.0	D
ON	Avenue 57	3	AM	3,264	1	15	25	65	21.8	C
			PM	5,316				70	31.9	D

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 60	3	AM	3,329	1	35	730	109	18.7	B
			PM	5,386				161	28.8	D
ON	Avenue 60	3	AM	3,220	1	15	50	88	22.8	C
			PM	5,225				126	35.7	E
OFF	Avenue 64	3	AM	3,308	1	35	600	567	20.6	C
			PM	5,351				917	31.0	D
OFF	Bridewell	3	AM	2,741	1	35	1,740	49	8.4	A
			PM	4,434				80	17.4	B
OFF	Orange Grove	3	AM	2,692	1	35	500	728	18.5	B
			PM	4,354				1,124	27.9	C
ON	Orange Grove	3	AM	1,964	1	15	50	92	16.0	B
			PM	3,230				96	23.5	C
OFF	Fair Oaks	3	AM	2,056	1	35	430	505	15.0	B
			PM	3,326				817	22.8	C

Table 3-7: Existing Condition (Year 2011) Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,534	1	35	425	155	11.0	B
			PM	1,083				110	8.0	A
ON	Fair Oaks	2	AM	1,379	1	35	600	893	20.5	C
			PM	973				630	15.0	B
OFF	Orange Grove	2	AM	2,272	1	35	800	81	18.3	B
			PM	1,603				111	12.0	B
ON	Orange Grove	2	AM	2,191	1	35	760	1,148	28.4	D
			PM	1,492				864	20.3	C
OFF	York Blvd	3	AM	3,339	1	15	80	54	24.5	C
			PM	2,356				83	19.0	B
ON	York Blvd	3	AM	3,285	1	15	70	238	23.1	C
			PM	2,273				213	17.9	B
ON	Avenue 64	3	AM	3,523	1	35	100	789	28.5	D
			PM	2,486				557	21.5	C
OFF	Avenue 60	3	AM	4,312	1	15	50	106	33.7	D
			PM	3,043				147	24.9	C
ON	Avenue 60	3	AM	4,206	1	35	50	106	26.7	C
			PM	2,896				147	20.5	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 57	3	AM	4,312	1	35	200	74	28.5	D
			PM	3,043				71	21.8	C
ON	Avenue 57	3	AM	4,238	1	15	25	272	28.3	D
			PM	2,972				210	21.6	C
OFF	Avenue 52	3	AM	4,510	1	35	350	15	28.0	15
			PM	3,182				80	22.8	C
ON	Avenue 52	3	AM	4,495	1	15	50	593	32.0	D
			PM	3,102				488	24.3	C
OFF	Avenue 43	3	AM	5,088	1	35	380	153	30.6	D
			PM	3,590				101	23.2	C
ON	Avenue 43	3	AM	4,935	1	15	80	440	32.7	D
			PM	3,489				303	24.5	C
OFF	I-5	3	AM	5,375	2	35	3,500	1,655	-5.1	A
			PM	3,792				1,167	-14.3	A
OFF	Avenue 26	3	AM	3,720	1	35	800	202	20.3	C
			PM	2,625				143	14.2	B
ON	Figueroa St	3	AM	3,518	1	35	550	827	26.3	C
			PM	2,482				584	19.2	B
ON	I-5	3	AM	4,345	2	35	4,500	4,184	31.7	F
			PM	3,066				2,952	15.7	B
OFF	Academy Rd	3	AM	8,529	1	35	300	66	29.7	D
			PM	6,018				47	22.6	C
ON	Amador Pl	3	AM	8,463	1	35	250	193	26.3	C
			PM	5,971				136	20.4	C

3.1 Weaving Analysis

There are no valid weave segments within the study area in the Existing Condition (Year 2011). The corridor has been analyzed as a series of basic segments utilizing the methodology from Chapter 23 of the Highway Capacity Manual (HCM 2000) and ramp merge and diverge segments using the methodology from HCM 2000 Chapter 25.

3.2 Queuing Analysis

A queuing analysis was conducted for intersections where an Arroyo Seco Parkway off-ramp is signalized or stop-controlled. The storage capacity of each facility was derived based on the number of lanes and an approximate measurement of ramp length from Google Earth. The Existing (Year 2011) queuing analysis results are shown in Table 3-8. All ramps have sufficient capacity to accommodate existing demand.

Table 3-8: Existing (Year 2011) Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks (State St)	425	105	0		226	0	
4	NB Exit 31B: Fair Oaks Ave	750	415	150		766	275	
5	SB Exit 31A: Orange Grove Ave	800	72	75		148	125	
6	NB Exit 31A: Orange Grove Ave	875	601	200		1125	450	
12	NB Exit 29: Ave 60	730	67	0		0	0	
14	NB Exit 28B: Via Marisol	425	250	0		445	0	
16	SB Exit 28A: Ave 52	350	215	25		557	25	
17	NB Exit 28A: Ave 52	325	277	25		458	50	
18	SB Exit 27: Ave 43	380	259	25		178	25	
19	NB Exit 27: Ave 43	300	363	25		315	25	
20	SB Exit 26A: Ave 26	1,240	341	0		300	0	
23	NB Exit 26 B: Figueroa St	800	457	50		895	175	
28	SB Exit 24D: Stadium Way	1,560	233	25		140	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

4. YEAR 2035 WITHOUT PROJECT CONDITIONS

4.1 Traffic Model

The mainline, ramp and intersection turning movement forecast volumes used in this analysis are the output of a sub-area travel demand model that was developed for the Arroyo Seco Parkway Corridor Partnership Plan. SCAG 2008 RTP Baseline model is used as the No-Build scenario for the purpose of this study. All regional baseline transportation improvements associated with the RTP Baseline forecast are included in the model network. SCAG socio-economic data from the 2008 RTP are used and no changes were made.

4.2 SR-710 Sensitivity Analysis

Two baseline conditions have been modeled for the future without project condition. The first condition is consistent with the SCAG 2008 RTP Baseline, and the second assumes that State Route 710 (SR-710) would be extended from its current terminus at Valley Boulevard up to Del Mar Boulevard in Pasadena. The facility is assumed to be a direct connection with no intermediate ramps, with three general purpose lanes and a high occupancy vehicle (HOV) lane in each direction. The SR-710 connection is not assumed to be a toll facility.

4.3 Traffic Volumes

Year 2035 Without Project forecast AM peak hour turning movement volumes are shown in Figures 4.1A, 4.1B and 4.1C. The PM peak hour volumes are shown in Figures 4.2A, 4.2B and 4.2C.

FIGURE 4.1A: YEAR 2035 WITHOUT PROJECT VOLUMES - AM PEAK HOUR

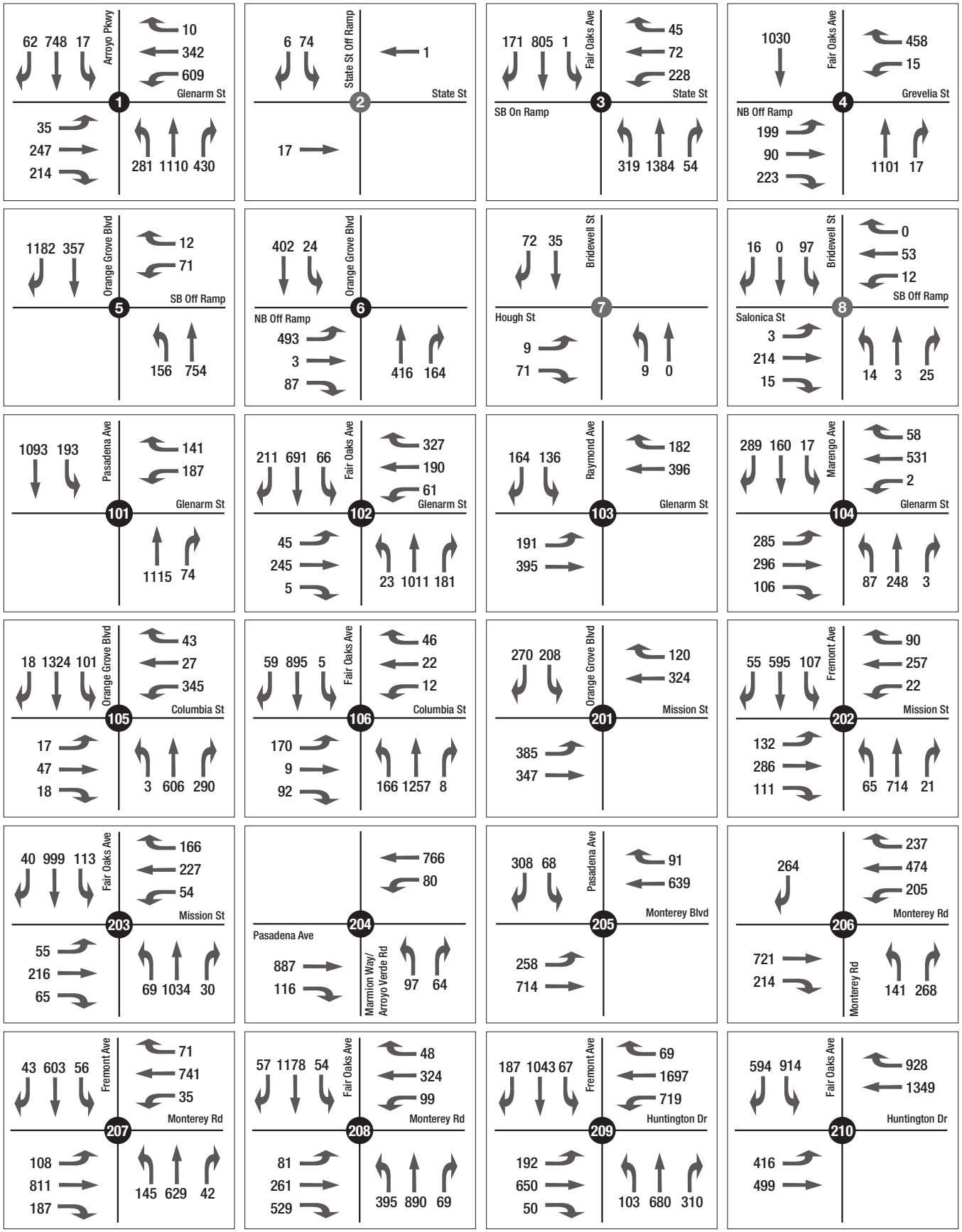


FIGURE 4.1B: YEAR 2035 WITHOUT PROJECT VOLUMES - AM PEAK HOUR

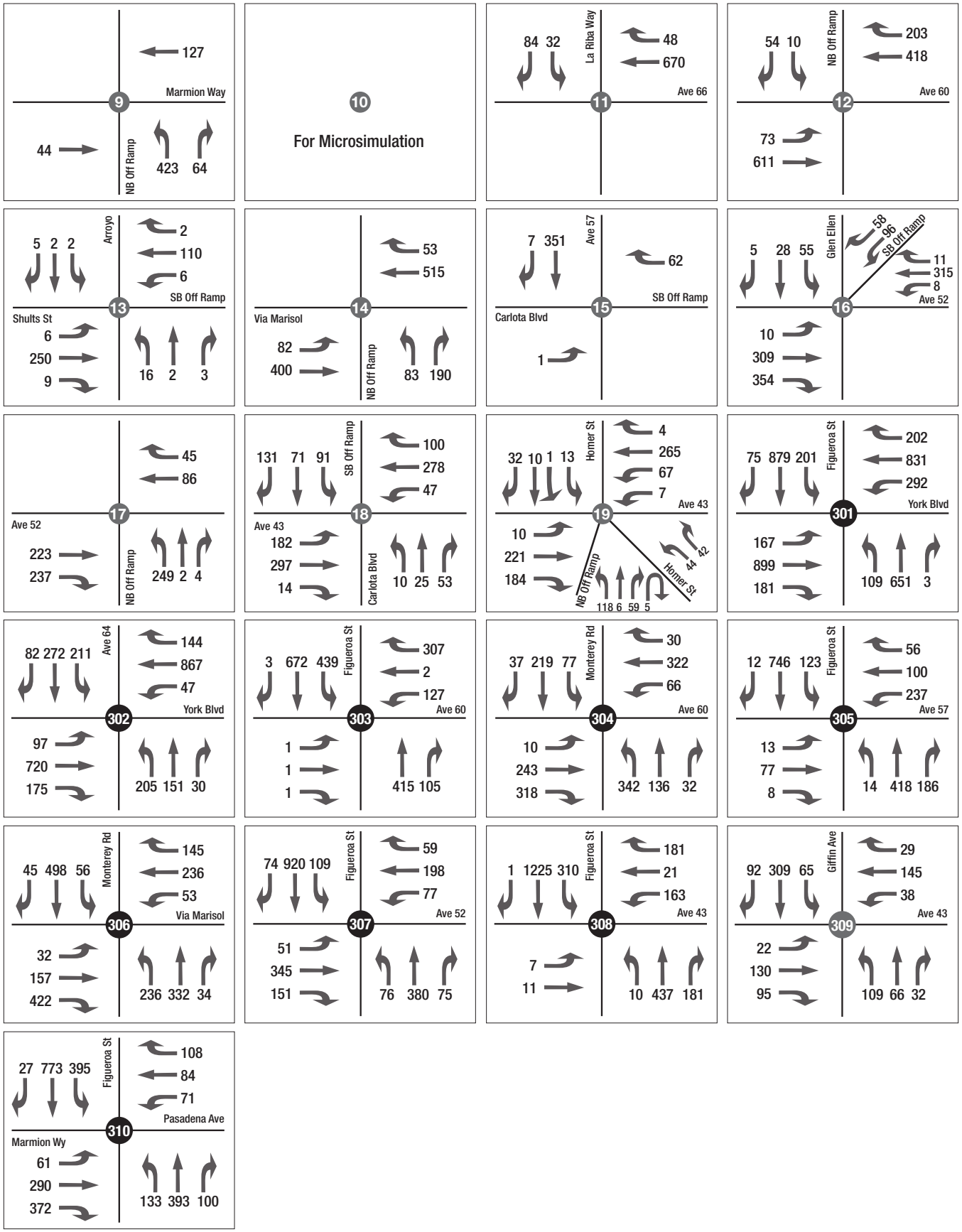


FIGURE 4.1C: YEAR 2035 WITHOUT PROJECT VOLUMES - AM PEAK HOUR

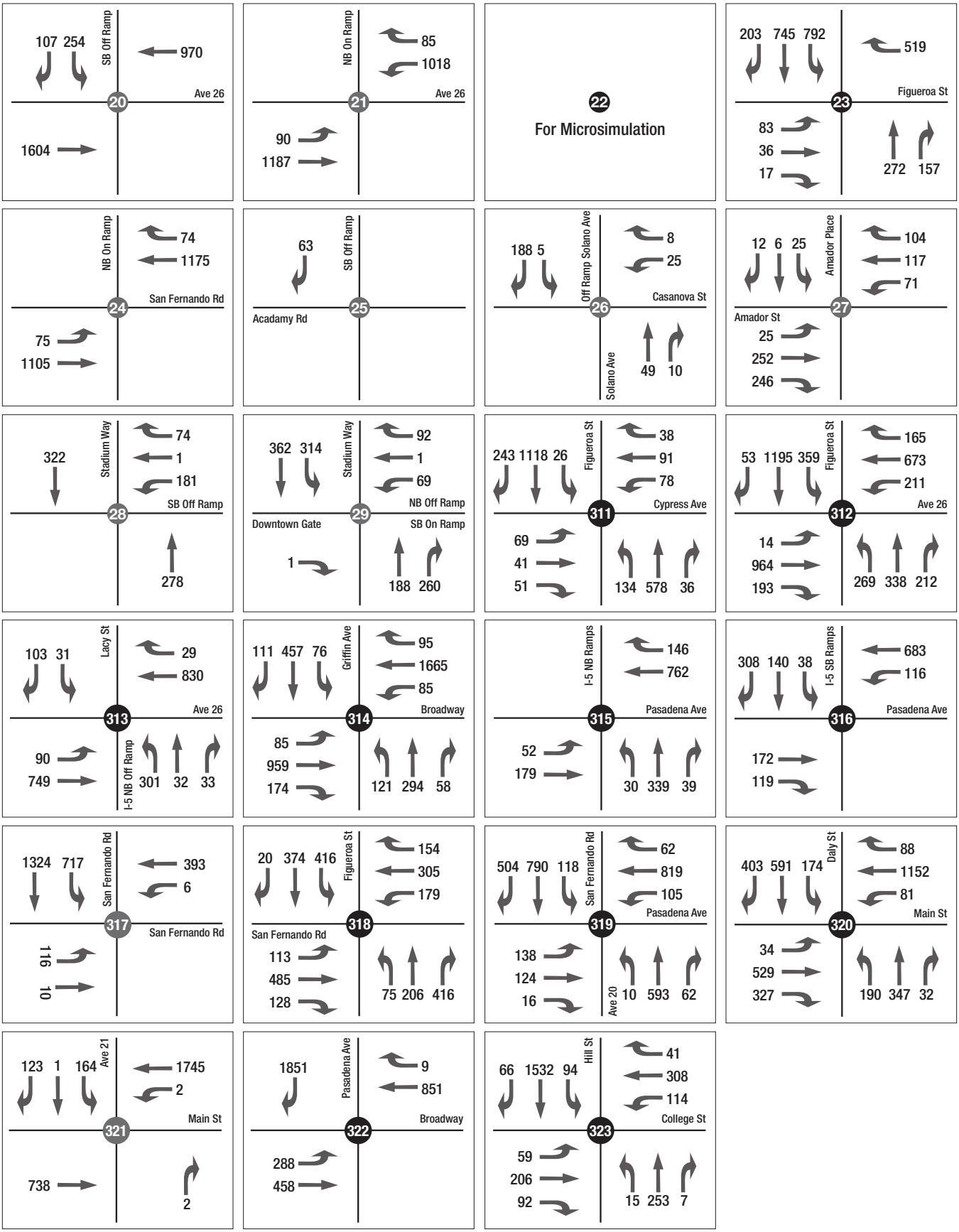


FIGURE 4.2A: YEAR 2035 WITHOUT PROJECT VOLUMES - PM PEAK HOUR

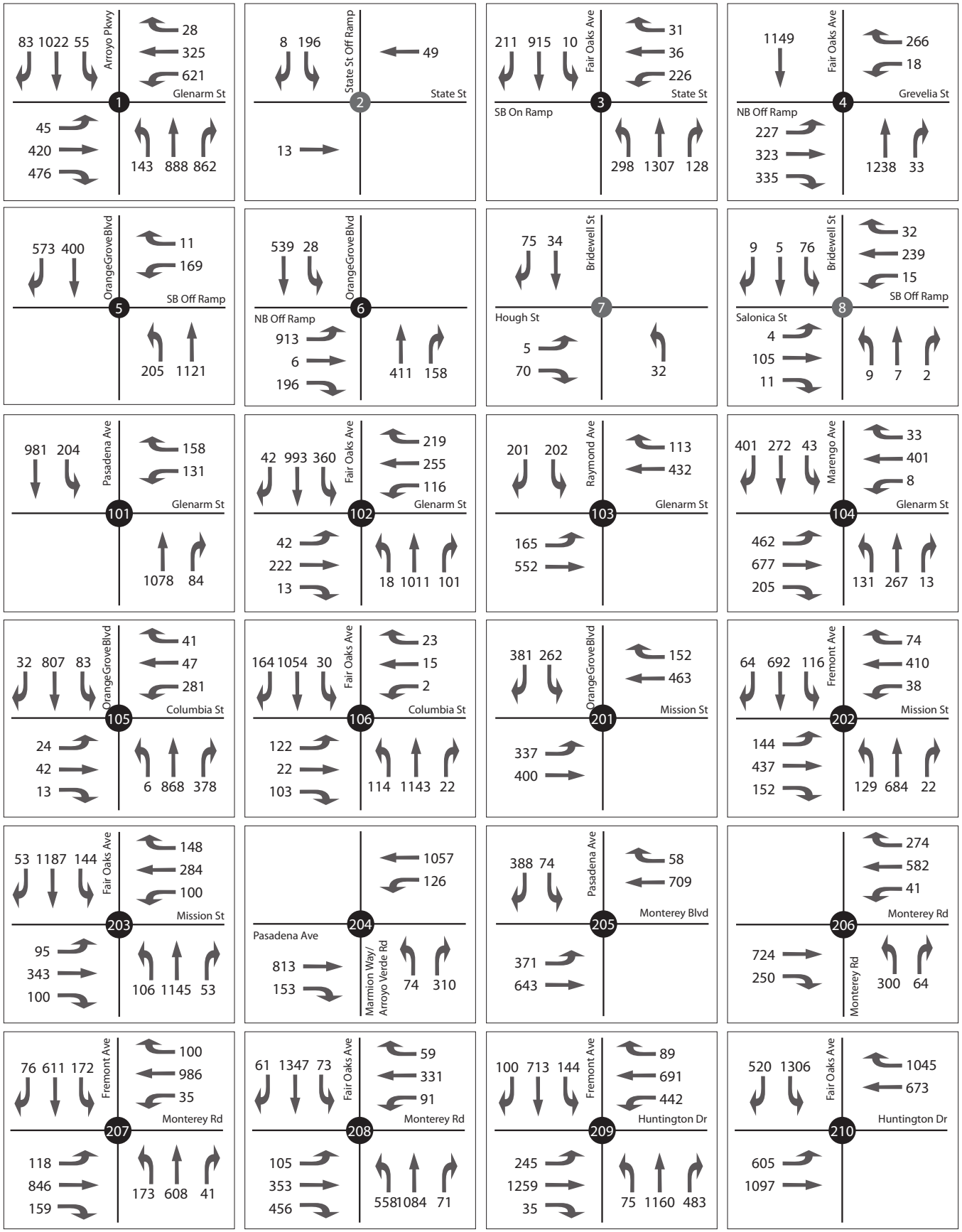


FIGURE 4.2B: YEAR 2035 WITHOUT PROJECT VOLUMES - PM PEAK HOUR

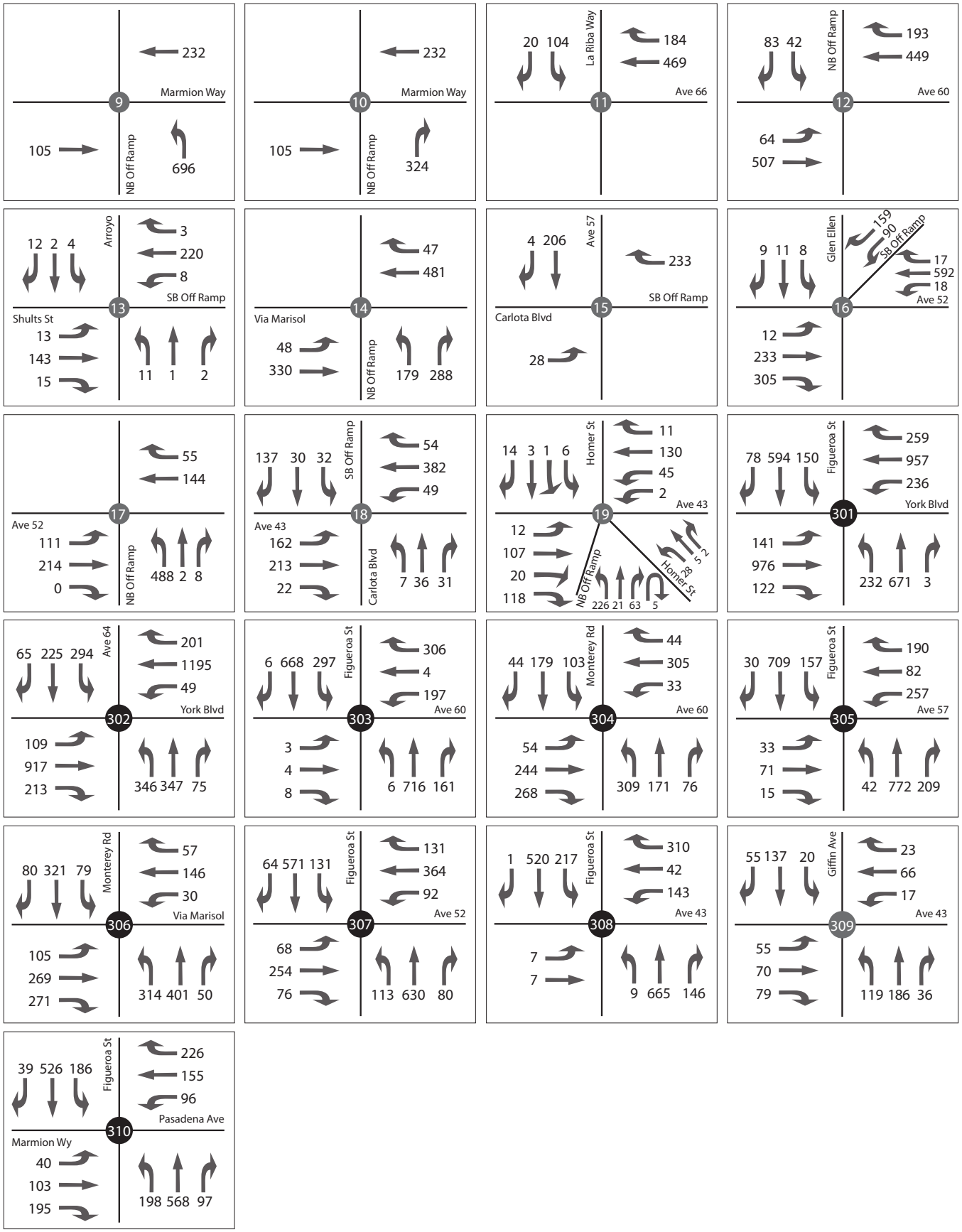


FIGURE 4.2C: YEAR 2035 WITHOUT PROJECT VOLUMES - PM PEAK HOUR

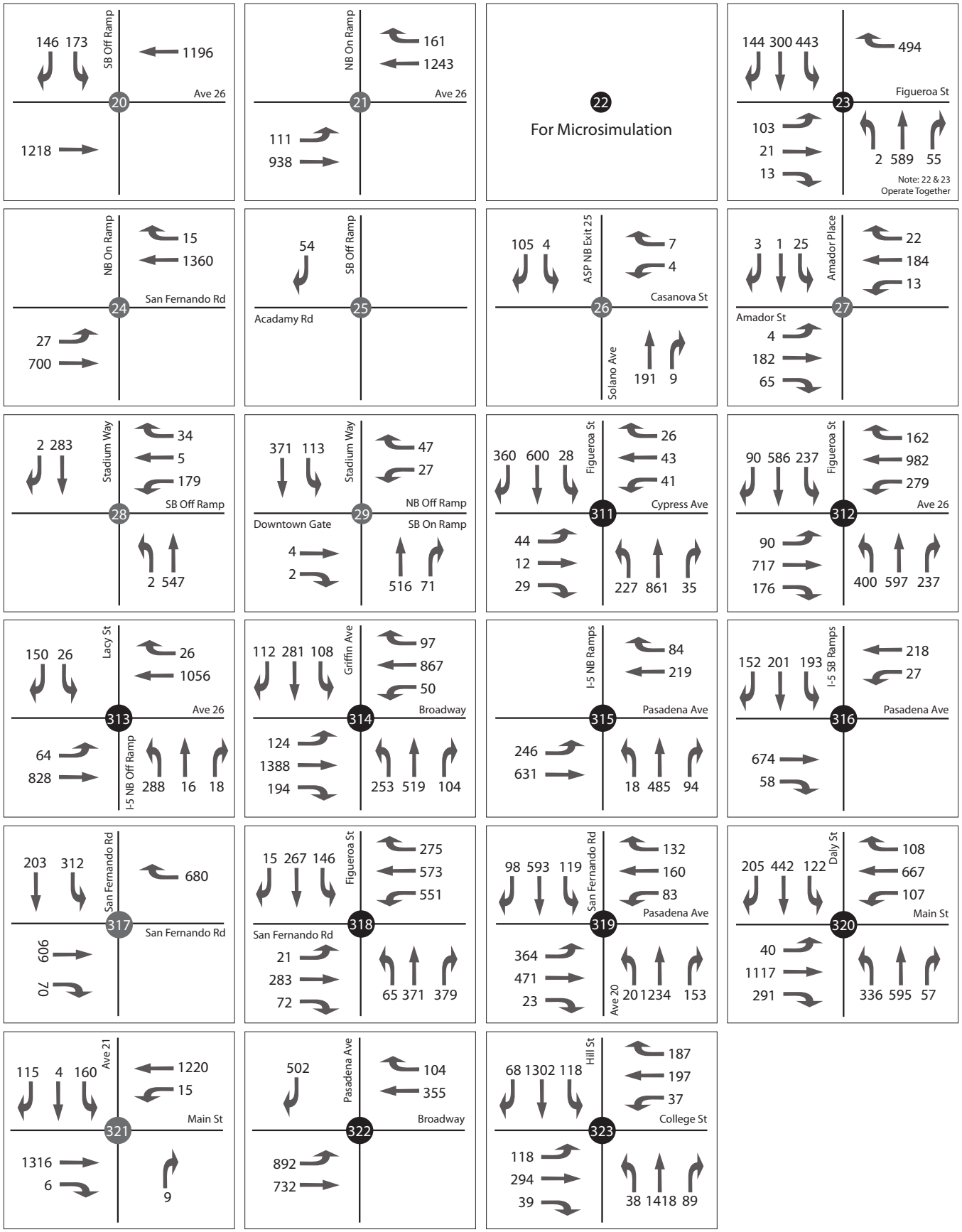


FIGURE 4.3A: YEAR 2035 WITHOUT PROJECT VOLUMES (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

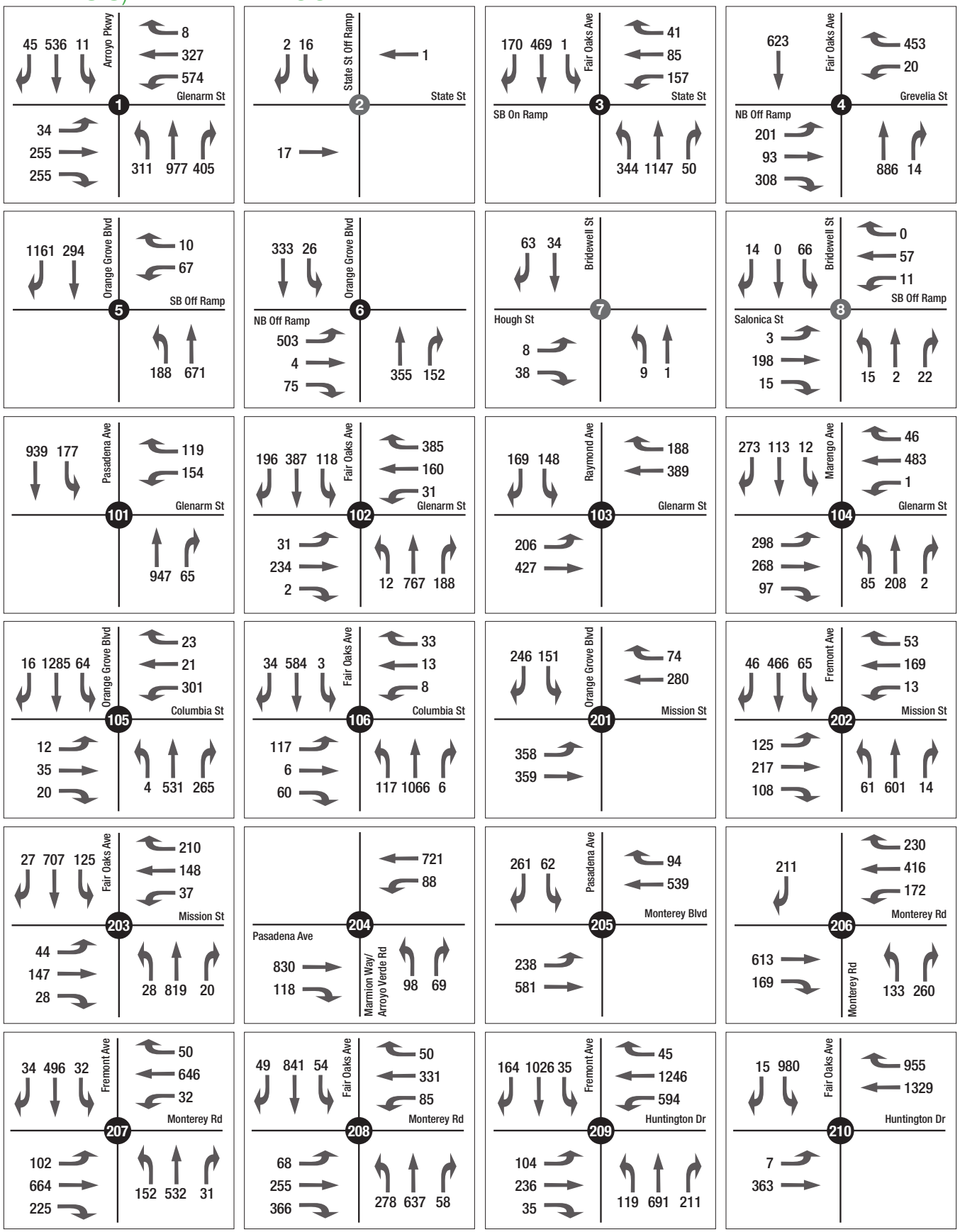


FIGURE 4.3B: YEAR 2035 WITHOUT PROJECT VOLUMES (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

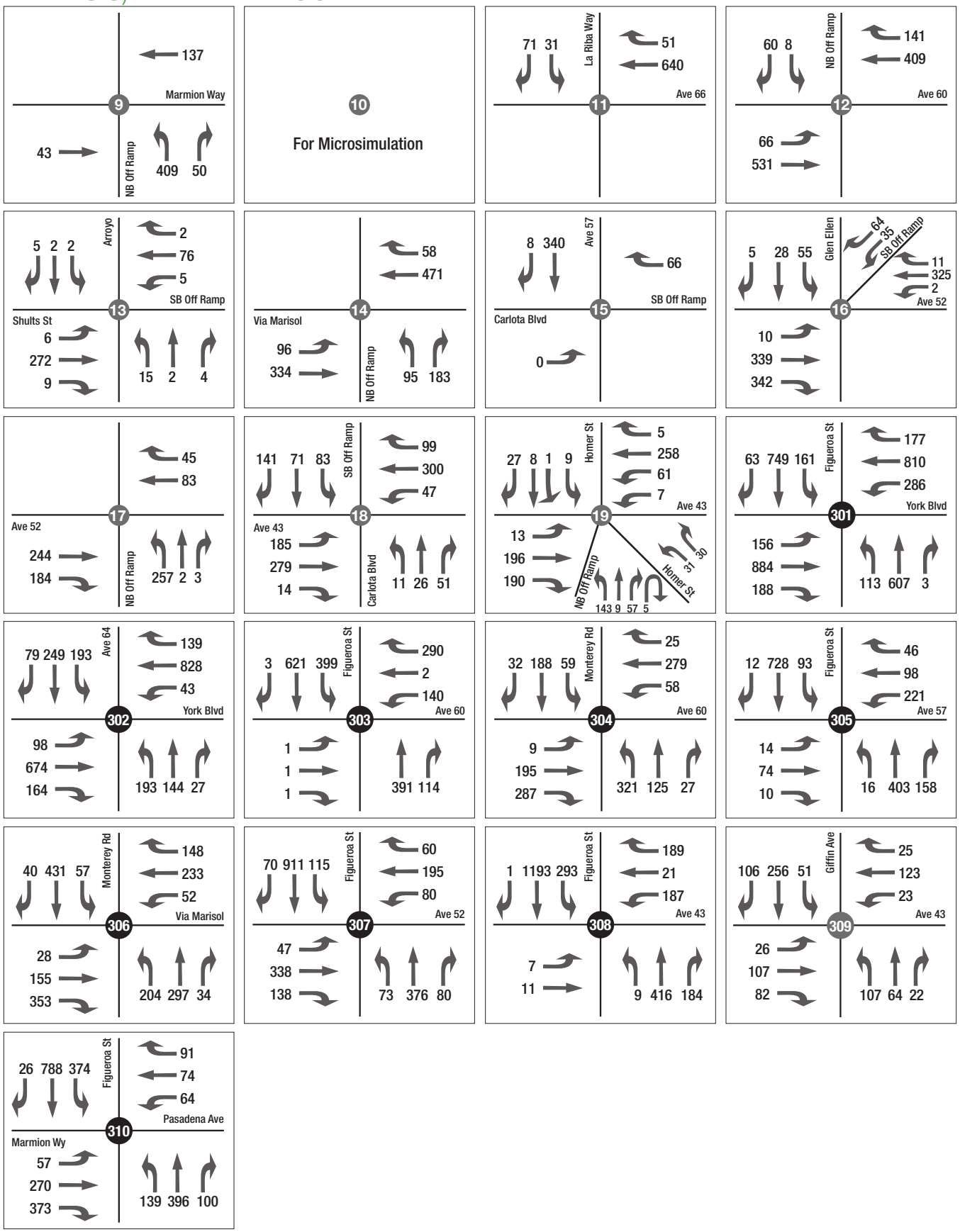


FIGURE 4.3C: YEAR 2035 WITHOUT PROJECT VOLUMES (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

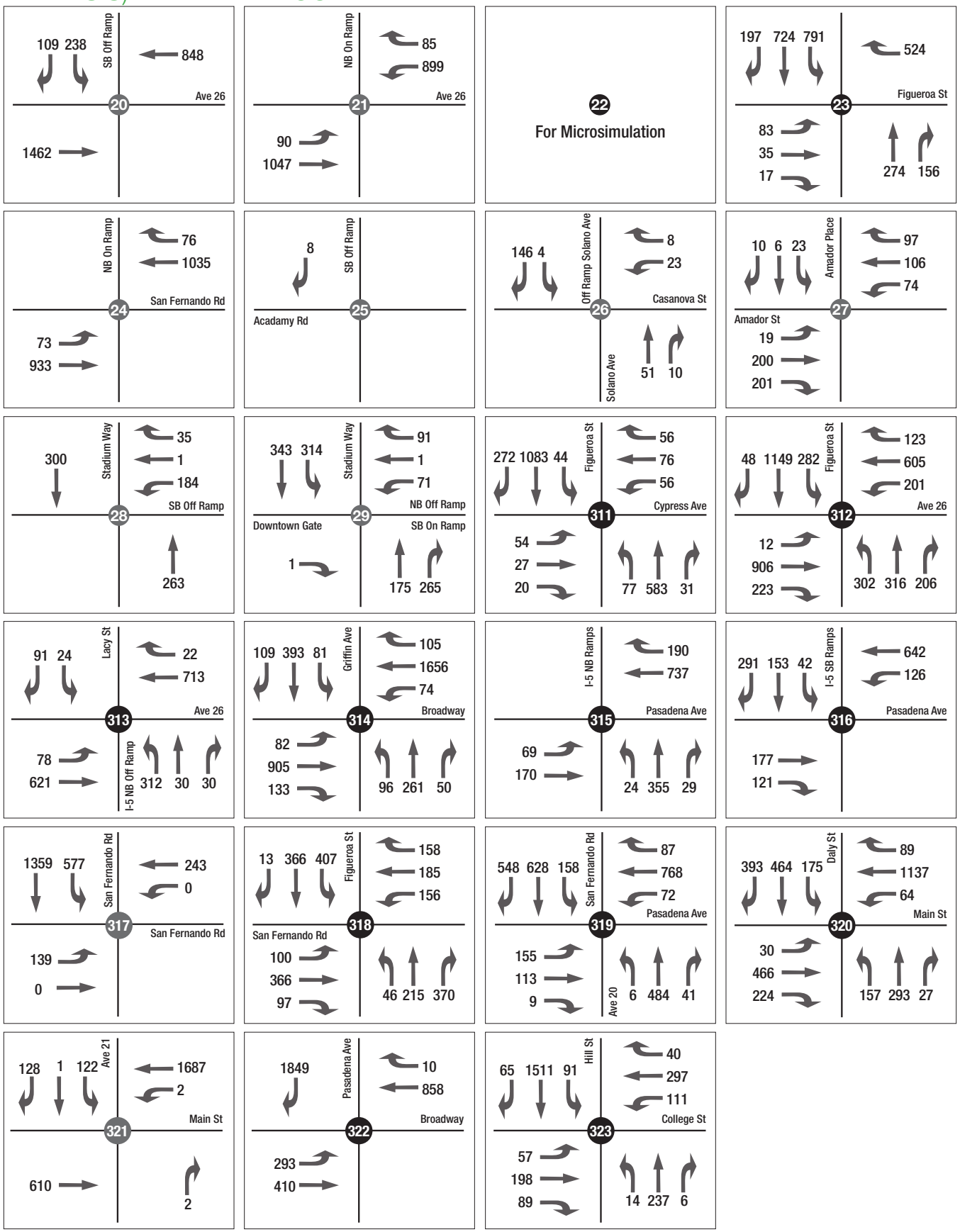


FIGURE 4.4A: YEAR 2035 WITHOUT PROJECT VOLUMES (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR

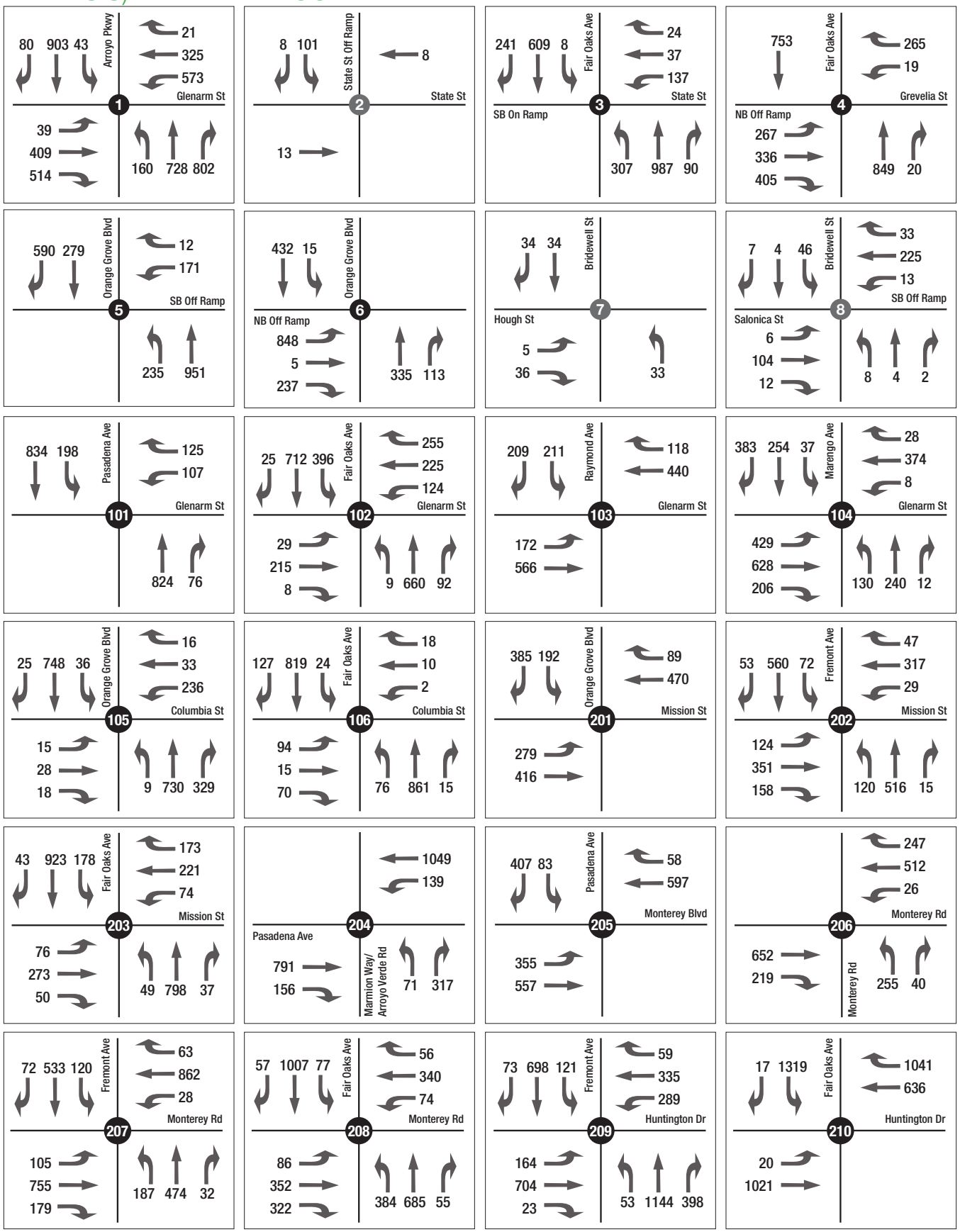


FIGURE 4.4B: YEAR 2035 WITHOUT PROJECT VOLUMES (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR

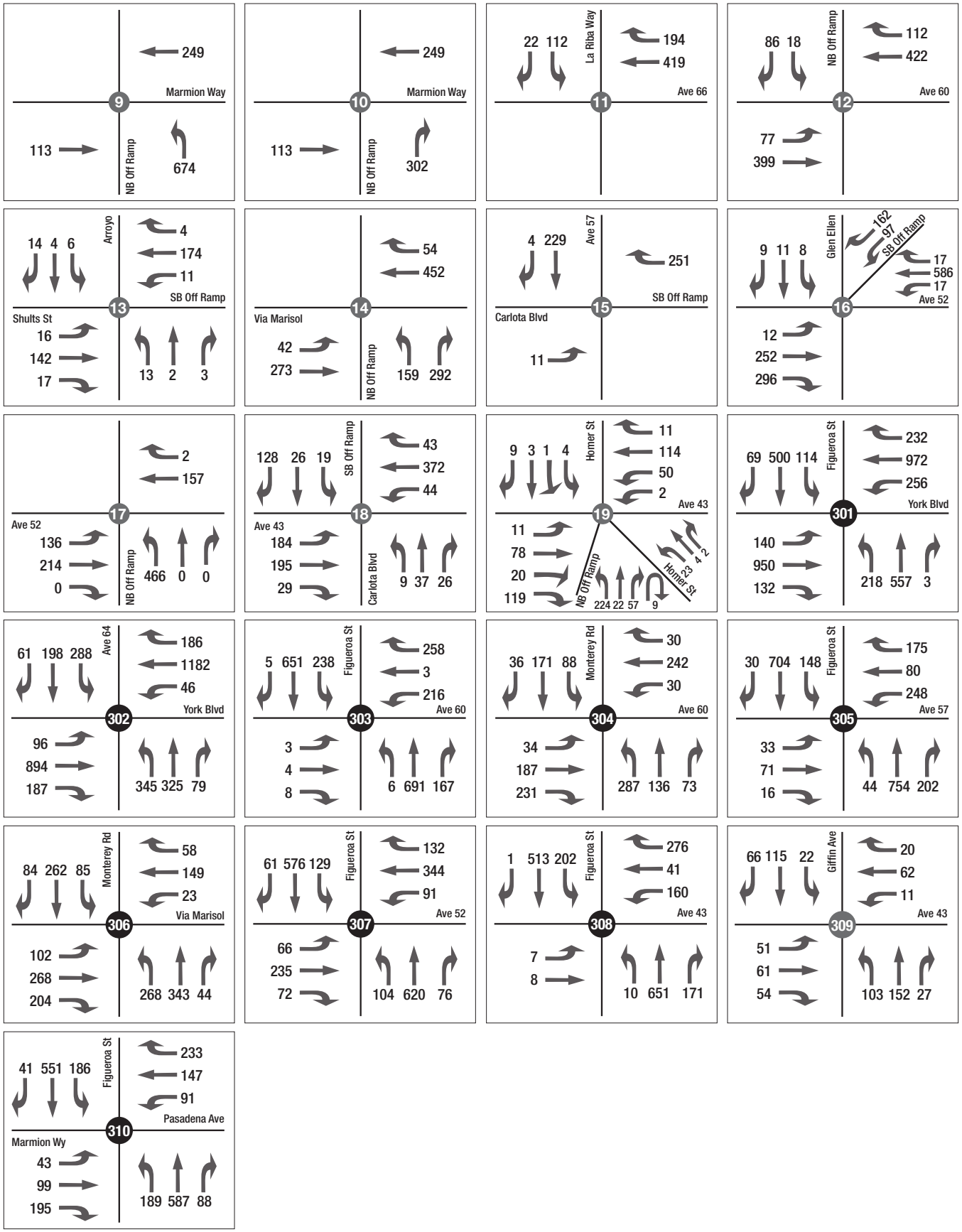
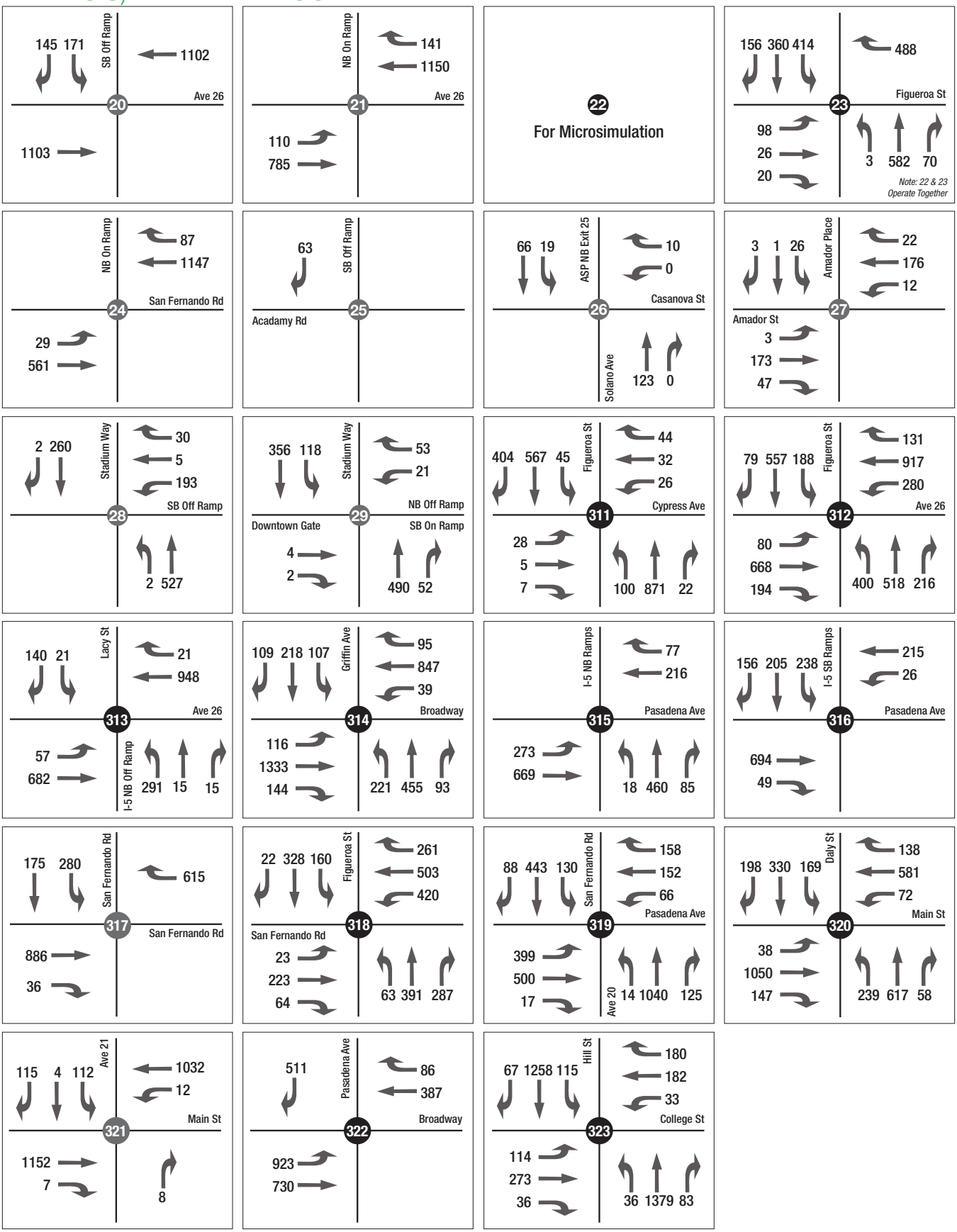


FIGURE 4.4C: YEAR 2035 WITHOUT PROJECT VOLUMES (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR



4.4 Intersection Level of Service Analysis

4.4.1 INTERSECTION LEVEL OF SERVICE ANALYSIS RESULTS

A summary of the AM and PM peak hour level of service analysis results for the Year 2035 Without Project scenario is presented in Tables 4-1 and 4-2.

Table 4-1: Year 2035 Without Project LOS Results – AM Peak Hour

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
1	Arroyo Pkwy & Glenarm St	SIG		30.6 s	C	0.802	D
2	ASP SB Exit 31B & State St	2WS		8.9 s	A		
3	Fair Oaks Av & State St	SIG		12.4 s	B	0.544	A
4	Fair Oaks Av & Grevelia St	SIG		22.9 s	C	0.630	B
5	Orange Grove Bl & ASP SB Exit 31A	SIG		9.9 s	A	0.373	A
6	Orange Grove Bl & ASP NB Exit 31A	SIG		23.4 s	C	0.433	A
7	Bridewell St & Hough St	2WS		9.0 s	A		
8	Bridewell St & ASP SB Exit 30	2WS		11.7 s	B		
9	ASP NB Exit 30A & Marmion Wy	2WS		40.4 s	E		
11	La Riba Wy & Ave 66	AS		22.0 s	C		
12	ASP NB Exit 29 & Ave 60	2WS		15.2 s	C		
14	ASP NB Exit 28B & Via Marisol	2WS		24.2 s	C		
15	Ave 57 & ASP SB Exit 28B	2WS		11.3 s	B		
16	ASP SB Exit 28A & Ave 52	AS		12.4 s	B		
17	ASP NB Exit 28A & Ave 52	AS		13.4 s	B		
18	ASP SB Exit 27 & Ave 43	AS	X	22.1 s	C		
19	Homer St & Ave 43	AS		13.7 s	B		
20	ASP SB Exit 26A & Ave 26	2WS	X	828.7 s	F		
21	ASP NB on-ramp & Ave 26	2WS		11.5 s	B		
23	ASP NB Exit 26B & Figueroa St	SIG		15.7 s	B	0.761	C
24	ASP NB on-ramp & San Fernando	2WS		12.4 s	B		
26	ASP NB Exit 25 & Casanova St	2WS		9.7 s	A		
27	Amador Pl & Amador St	2WS		14.8 s	B		
28	Stadium Wy & ASP SB Exit 24D	AS		12.8 s	B		
29	Stadium Wy & ASP NB Exit 24B	2WS		13.0 s	B		
101	Pasadena Av & Glenarm St	SIG		7.8 s	A	0.609	B
102	Fair Oaks Av & Glenarm St	SIG		17.4 s	B	0.765	C
103	Raymond Av & Glenarm St	SIG		9.3 s	A	0.469	A
104	Marengo Av & Glenarm St	SIG		16.6 s	B	0.781	C
105	Orange Grove Bl & Columbia St	SIG		16.6 s	B	0.720	C
106	Fair Oaks Av & Columbia St	SIG		9.2 s	A	0.558	A

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
201	Orange Grove Bl & Mission St	SIG		12.5 s	B	0.479	A
202	Fremont Av & Mission St	SIG		14.8 s	B	0.704	C
203	Fair Oaks Av & Mission St	SIG		22.5 s	C	0.683	B
204	Arroyo Verde Rd & Pasadena Av	SIG		7.1 s	A	0.464	A
205	Pasadena Av & Monterey Rd	SIG		20.1 s	C	0.582	A
206	Monterey Rd & Monterey Rd	SIG		28.2 s	C	0.686	B
207	Fremont Av & Monterey Rd	SIG		18.6 s	B	0.801	D
208	Fair Oaks Av & Monterey Rd	SIG		28.9 s	C	1.026	F
209	Fremont Av & Huntington Dr	SIG		95.5 s	F	1.311	F
210	Fair Oaks Av & Huntington Dr	SIG		45.6 s	D	1.096	F
301	Figueroa St & York Bl	SIG		28.5 s	C	0.995	E
302	Ave 64 & York Bl	SIG		20.3 s	C	0.815	D
303	Figueroa St & Ave 60	SIG		18.7 s	B	0.603	B
304	Monterey Rd & Ave 60	SIG		28.6 s	C	0.864	D
305	Figueroa St & Ave 57	SIG		18.2 s	B	0.554	B
306	Monterey Rd & Via Marisol	SIG		16.4 s	B	0.727	C
307	Figueroa St & Ave 52	SIG		22.7 s	C	0.840	D
308	Figueroa St & Ave 43	SIG		13.0 s	B	0.663	B
309	Griffin Av & Ave 43	AS		14.9 s	B		
310	Figueroa St & Marmion Wy	SIG		24.2 s	C	0.715	C
311	Figueroa St & Cypress Av	SIG		7.5 s	A	0.657	B
312	Figueroa St & Ave 26	SIG		36.5 s	D	1.205	F
313	Lacy St & Ave 26	SIG		16.7 s	B	0.534	B
314	Griffin Av & Broadway	SIG		13.8 s	B	0.718	C
315	I-5 NB ramps & Pasadena Av	SIG		11.8 s	B	0.473	A
316	I-5 SB ramps & Pasadena Av	SIG		12.3 s	B	0.336	A
317	Ave 19 & San Fernando Rd	2WS	X	OVERFL	F		
318	Figueroa St & San Fernando Rd	SIG		26.2 s	C	0.862	D
319	San Fernando Rd & Pasadena Av	SIG		26.0 s	C	0.954	E
320	Daly St & Main St	SIG		36.8 s	D	1.002	F
321	Ave 21 & Main St	2WS	X	OVERFL	F		
322	Pasadena Av & Broadway	SIG		798.0 s	F	0.963	E
323	Hill St & College St	SIG		14.4 s	B	0.757	C

AS – all-way stop control; 2WS – 2-way stop control; SIG – signalized.

Table 4-2: Year 2035 Without Project LOS Results – PM Peak Hour

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
1	Arroyo Pkwy & Glenarm St	SIG		44.6 s	D	1.093	F
2	ASP SB Exit 31B & State St	2WS		9.8 s	A		
3	Fair Oaks Av & State St	SIG		11.5 s	B	0.537	A
4	Fair Oaks Av & Grevelia St	SIG		23.5 s	C	0.724	C
5	Orange Grove Bl & ASP SB Exit 31A	SIG		13.7 s	B	0.491	A
6	Orange Grove Bl & ASP NB Exit 31A	SIG		28.2 s	C	0.685	B
7	Bridewell St & Hough St	2WS		9.0 s	A		
8	Bridewell St & ASP SB Exit 30	2WS		12.6 s	B		
9	ASP NB Exit 30A & Marmion Wy	2WS		929.8 s	F		
11	La Riba Wy & Ave 66	AS		16.7 s	C		
12	ASP NB Exit 29 & Ave 60	2WS		21.2 s	C		
14	ASP NB Exit 28B & Via Marisol	2WS	X	57.3 s	F		
15	Ave 57 & ASP SB Exit 28B	2WS		11.4 s	B		
16	ASP SB Exit 28A & Ave 52	AS	X	14.0 s	B		
17	ASP NB Exit 28A & Ave 52	AS	X	18.1 s	C		
18	ASP SB Exit 27 & Ave 43	AS		16.5 s	C		
19	Homer St & Ave 43	AS		11.1 s	B		
20	ASP SB Exit 26A & Ave 26	2WS	X	420.0 s	F		
21	ASP NB on-ramp & Ave 26	2WS		14.4 s	B		
23	ASP NB Exit 26B & Figueroa St	SIG		12.2 s	B	0.513	A
24	ASP NB on-ramp & San Fernando	2WS		12.5 s	B		
26	ASP NB Exit 25 & Casanova St	2WS		9.7 s	A		
27	Amador Pl & Amador St	2WS		11.5 s	B		
28	Stadium Wy & ASP SB Exit 24D	AS		22.9 s	C		
29	Stadium Wy & ASP NB Exit 24B	2WS		16.4 s	C		
101	Pasadena Av & Glenarm St	SIG		7.0 s	A	0.589	A
102	Fair Oaks Av & Glenarm St	SIG		36.5 s	D	0.895	D
103	Raymond Av & Glenarm St	SIG		11.1 s	B	0.499	A
104	Marengo Av & Glenarm St	SIG		26.2 s	C	0.893	D
105	Orange Grove Bl & Columbia St	SIG		14.7 s	B	0.550	A
106	Fair Oaks Av & Columbia St	SIG		6.8 s	A	0.553	A
201	Orange Grove Bl & Mission St	SIG		13.9 s	B	0.537	A
202	Fremont Av & Mission St	SIG		16.7 s	B	0.754	C
203	Fair Oaks Av & Mission St	SIG		27.4 s	C	0.804	D

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
204	Arroyo Verde Rd & Pasadena Av	SIG		14.7 s	B	0.621	B
205	Pasadena Av & Monterey Rd	SIG		23.9 s	C	0.714	C
206	Monterey Rd & Monterey Rd	SIG		10.6 s	B	0.356	A
207	Fremont Av & Monterey Rd	SIG		24.7 s	C	0.903	E
208	Fair Oaks Av & Monterey Rd	SIG		44.9 s	D	1.131	F
209	Fremont Av & Huntington Dr	SIG		106.7 s	F	1.361	F
210	Fair Oaks Av & Huntington Dr	SIG		84.6 s	F	1.317	F
301	Figueroa St & York Bl	SIG		29.5 s	C	0.968	E
302	Ave 64 & York Bl	SIG		27.4 s	C	1.069	F
303	Figueroa St & Ave 60	SIG		18.6 s	B	0.689	B
304	Monterey Rd & Ave 60	SIG		25.5 s	C	0.751	C
305	Figueroa St & Ave 57	SIG		19.3 s	B	0.807	D
306	Monterey Rd & Via Marisol	SIG		15.0 s	B	0.623	B
307	Figueroa St & Ave 52	SIG		24.5 s	C	0.801	D
308	Figueroa St & Ave 43	SIG		17.0 s	B	0.750	C
309	Griffin Av & Ave 43	AS		10.4 s	B		
310	Figueroa St & Marmion Wy	SIG		23.2 s	C	0.504	A
311	Figueroa St & Cypress Av	SIG		4.4 s	A	0.526	A
312	Figueroa St & Ave 26	SIG		32.0 s	C	1.032	F
313	Lacy St & Ave 26	SIG		15.7 s	B	0.620	B
314	Griffin Av & Broadway	SIG		16.8 s	B	0.685	B
315	I-5 NB ramps & Pasadena Av	SIG		13.9 s	B	0.465	A
316	I-5 SB ramps & Pasadena Av	SIG		13.4 s	B	0.391	A
317	Ave 19 & San Fernando Rd	2WS	X	OVERFL	F		
318	Figueroa St & San Fernando Rd	SIG		25.1 s	C	0.874	D
319	San Fernando Rd & Pasadena Av	SIG		79.3 s	E	1.399	F
320	Daly St & Main St	SIG		43.7 s	D	1.034	F
321	Ave 21 & Main St	2WS	X	885.8 s	F		
322	Pasadena Av & Broadway	SIG		9.1 s	A	0.479	A
323	Hill St & College St	SIG		12.9 s	B	0.813	D

AS – all-way stop control; 2WS – 2-way stop control; SIG – signalized.

The following signalized intersections are forecast to operate at LOS E or LOS F during one or both peak periods in the Year 2035 No Project condition:

- Arroyo Parkway & Glenarm Street (#1)
- Fremont Avenue & Monterey Road (#207)
- Fair Oaks Avenue & Monterey Road (#208)
- Fremont Avenue & Huntington Drive (#209)
- Fair Oaks Avenue & Huntington Drive (#210)
- Figueroa Street & York Boulevard (#301)
- Avenue 64 & York Boulevard (#302)
- Figueroa Street & Avenue 26 (#312)
- San Fernando Road & Pasadena Avenue (#319)
- Daly Street & Main Street (#320)
- Pasadena Avenue & Broadway (#322)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop-controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy MUTCD Signal Warrant 3 based on peak hour volume in this scenario.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay, but may not have sufficient storage capacity on the Arroyo Seco Parkway off-ramp to be appropriate for signal control:

- Arroyo Seco Parkway Northbound Exit 28B & Via Marisol (#14)
- Arroyo Seco Parkway Southbound Exit 28A & Avenue 52 (#16)
- Arroyo Seco Parkway Northbound Exit 28A & Avenue 52 (#17)
- Arroyo Seco Parkway Southbound Exit 27 & Avenue 43 (#18)
- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)

The following unsignalized non-ramp intersections also satisfy MUTCD Signal Warrant 3 in the Year 2035 Without Project scenario:

- Avenue 19 & San Fernando Road (#317)
- Avenue 21 & Main Street (#321)

4.4.2 SR-710 SENSITIVITY ANALYSIS

The AM and PM peak hour level of service analysis results for the Year 2035 Without Project (SR-710 Sensitivity Analysis) scenario are included in Tables 4-3 and 4-4.

Table 4-3: Year 2035 Without Project (SR-710 Sensitivity) LOS Results – AM Peak Hour

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
1	Arroyo Pkwy & Glenarm St	SIG		29.5 s	C	0.754	C
2	ASP SB Exit 31B & State St	2WS		8.6 s	A		
3	Fair Oaks Av & State St	SIG		12.8 s	B	0.450	A
4	Fair Oaks Av & Grevelia St	SIG		26.8 s	C	0.535	A
5	Orange Grove Bl & ASP SB Exit 31A	SIG		10.7 s	B	0.349	A
6	Orange Grove Bl & ASP NB Exit 31A	SIG		22.7 s	C	0.390	A
7	Bridewell St & Hough St	2WS		8.8 s	A		
8	Bridewell St & ASP SB Exit 30	2WS		11.0 s	B		
9	ASP NB Exit 30A & Marmion Wy	2WS		39.8 s	E		
11	La Riba Wy & Ave 66	AS		19.4 s	C		
12	ASP NB Exit 29 & Ave 60	2WS		13.6 s	B		
14	ASP NB Exit 28B & Via Marisol	2WS		23.6 s	C		
15	Ave 57 & ASP SB Exit 28B	2WS		8.5 s	A		
16	ASP SB Exit 28A & Ave 52	AS		11.8 s	B		
17	ASP NB Exit 28A & Ave 52	AS		12.8 s	B		
18	ASP SB Exit 27 & Ave 43	AS	X	22.1 s	C		
19	Homer St & Ave 43	AS		13.2 s	B		
20	ASP SB Exit 26A & Ave 26	2WS	X	482.1 s	F		
21	ASP NB on-ramp & Ave 26	2WS		10.8 s	B		
23	ASP NB Exit 26B & Figueroa St	SIG		15.3 s	B	0.741	C
24	ASP NB on-ramp & San Fernando	2WS		11.4 s	B		
26	ASP NB Exit 25 & Casanova St	2WS		9.5 s	A		
27	Amador Pl & Amador St	2WS		13.6 s	B		
28	Stadium Wy & ASP SB Exit 24D	AS		12.3 s	B		
29	Stadium Wy & ASP NB Exit 24B	2WS		12.7 s	B		
101	Pasadena Av & Glenarm St	SIG		6.6 s	A	0.523	A
102	Fair Oaks Av & Glenarm St	SIG		17.4 s	B	0.732	C
103	Raymond Av & Glenarm St	SIG		9.4 s	A	0.478	A
104	Marengo Av & Glenarm St	SIG		15.5 s	B	0.741	C
105	Orange Grove Bl & Columbia St	SIG		14.0 s	B	0.659	B
106	Fair Oaks Av & Columbia St	SIG		6.9 s	A	0.444	A
201	Orange Grove Bl & Mission St	SIG		11.4 s	B	0.417	A
202	Fremont Av & Mission St	SIG		13.7 s	B	0.564	A

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
203	Fair Oaks Av & Mission St	SIG		21.5 s	C	0.592	A
204	Arroyo Verde Rd & Pasadena Av	SIG		7.7 s	A	0.456	A
205	Pasadena Av & Monterey Rd	SIG		19.5 s	B	0.510	A
206	Monterey Rd & Monterey Rd	SIG		26.8 s	C	0.593	A
207	Fremont Av & Monterey Rd	SIG		17.1 s	B	0.703	C
208	Fair Oaks Av & Monterey Rd	SIG		20.9 s	C	0.734	C
209	Fremont Av & Huntington Dr	SIG		32.8 s	C	1.143	F
210	Fair Oaks Av & Huntington Dr	SIG		19.9 s	B	0.940	E
301	Figueroa St & York Bl	SIG		26.1 s	C	0.941	E
302	Ave 64 & York Bl	SIG		19.7 s	B	0.774	C
303	Figueroa St & Ave 60	SIG		18.3 s	B	0.578	A
304	Monterey Rd & Ave 60	SIG		26.8 s	C	0.763	C
305	Figueroa St & Ave 57	SIG		17.5 s	B	0.510	A
306	Monterey Rd & Via Marisol	SIG		15.4 s	B	0.625	B
307	Figueroa St & Ave 52	SIG		22.3 s	C	0.819	D
308	Figueroa St & Ave 43	SIG		14.3 s	B	0.673	B
309	Griffin Av & Ave 43	AS		12.5 s	B		
310	Figueroa St & Marmion Wy	SIG		24.3 s	C	0.695	B
311	Figueroa St & Cypress Av	SIG		6.0 s	A	0.572	A
312	Figueroa St & Ave 26	SIG		36.2 s	D	1.195	F
313	Lacy St & Ave 26	SIG		17.4 s	B	0.480	A
314	Griffin Av & Broadway	SIG		12.4 s	B	0.677	B
315	I-5 NB ramps & Pasadena Av	SIG		11.7 s	B	0.491	A
316	I-5 SB ramps & Pasadena Av	SIG		12.4 s	B	0.322	A
317	Ave 19 & San Fernando Rd	2WS		OVERFL	F		
318	Figueroa St & San Fernando Rd	SIG		23.3 s	C	0.763	C
319	San Fernando Rd & Pasadena Av	SIG		25.1 s	C	0.868	D
320	Daly St & Main St	SIG		20.3 s	C	0.905	E
321	Ave 21 & Main St	2WS	X	642.4 s	F		
322	Pasadena Av & Broadway	SIG		865.8 s	F	0.964	E
323	Hill St & College St	SIG		14.1 s	B	0.743	C

AS – all-way stop control; 2WS – 2-way stop control; SIG – signalized.

Table 4-4: Year 2035 Without Project (SR-710 Sensitivity) LOS Results – PM Peak Hour

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
1	Arroyo Pkwy & Glenarm St	SIG		37.2 s	D	1.014	F
2	ASP SB Exit 31B & State St	2WS		9.0 s	A		
3	Fair Oaks Av & State St	SIG		11.6 s	B	0.396	A
4	Fair Oaks Av & Grevelia St	SIG		25.3 s	C	0.639	B
5	Orange Grove Bl & ASP SB Exit 31A	SIG		15.0 s	B	0.436	A
6	Orange Grove Bl & ASP NB Exit 31A	SIG		24.2 s	C	0.611	B
7	Bridewell St & Hough St	2WS		8.7 s	A		
8	Bridewell St & ASP SB Exit 30	2WS		11.9 s	B		
9	ASP NB Exit 30A & Marmion Wy	2WS		905.0 s	F		
11	La Riba Wy & Ave 66	AS		15.0 s	B		
12	ASP NB Exit 29 & Ave 60	2WS		14.7 s	B		
14	ASP NB Exit 28B & Via Marisol	2WS	X	32.2 s	D		
15	Ave 57 & ASP SB Exit 28B	2WS		11.5 s	B		
16	ASP SB Exit 28A & Ave 52	AS		14.2 s	B		
17	ASP NB Exit 28A & Ave 52	AS		16.7 s	C		
18	ASP SB Exit 27 & Ave 43	AS		15.3 s	C		
19	Homer St & Ave 43	AS		10.6 s	B		
20	ASP SB Exit 26A & Ave 26	2WS	X	284.0 s	F		
21	ASP NB on-ramp & Ave 26	2WS		13.3 s	B		
23	ASP NB Exit 26B & Figueroa St	SIG		15.7 s	B	0.518	A
24	ASP NB on-ramp & San Fernando	2WS		11.6 s	B		
26	ASP NB Exit 25 & Casanova St	2WS		8.9 s	A		
27	Amador Pl & Amador St	2WS		11.2 s	B		
28	Stadium Wy & ASP SB Exit 24D	AS		21.1 s	C		
29	Stadium Wy & ASP NB Exit 24B	2WS		15.2 s	C		
101	Pasadena Av & Glenarm St	SIG		6.0 s	A	0.483	A
102	Fair Oaks Av & Glenarm St	SIG		23.1 s	C	0.801	D
103	Raymond Av & Glenarm St	SIG		11.2 s	B	0.513	A
104	Marengo Av & Glenarm St	SIG		20.6 s	C	0.840	D
105	Orange Grove Bl & Columbia St	SIG		13.8 s	B	0.444	A
106	Fair Oaks Av & Columbia St	SIG		6.2 s	A	0.421	A
201	Orange Grove Bl & Mission St	SIG		12.9 s	B	0.469	A
202	Fremont Av & Mission St	SIG		15.5 s	B	0.616	B
203	Fair Oaks Av & Mission St	SIG		24.6 s	C	0.666	B

No.	Intersection	Control	Warrant Met?	HCM		CMA	
				Delay	LOS	V/C	LOS
204	Arroyo Verde Rd & Pasadena Av	SIG		14.4 s	B	0.625	B
205	Pasadena Av & Monterey Rd	SIG		24.2 s	C	0.681	B
206	Monterey Rd & Monterey Rd	SIG		9.5 s	A	0.309	A
207	Fremont Av & Monterey Rd	SIG		17.9 s	B	0.805	D
208	Fair Oaks Av & Monterey Rd	SIG		24.6 s	C	0.829	D
209	Fremont Av & Huntington Dr	SIG		29.8 s	C	1.123	F
210	Fair Oaks Av & Huntington Dr	SIG		337.3 s	F	0.671	B
301	Figueroa St & York Bl	SIG		26.3 s	C	0.912	E
302	Ave 64 & York Bl	SIG		24.2 s	C	1.033	F
303	Figueroa St & Ave 60	SIG		17.0 s	B	0.653	B
304	Monterey Rd & Ave 60	SIG		25.1 s	C	0.659	B
305	Figueroa St & Ave 57	SIG		18.3 s	B	0.775	C
306	Monterey Rd & Via Marisol	SIG		14.6 s	B	0.526	A
307	Figueroa St & Ave 52	SIG		24.1 s	C	0.779	C
308	Figueroa St & Ave 43	SIG		16.5 s	B	0.731	C
309	Griffin Av & Ave 43	AS		9.6 s	A		
310	Figueroa St & Marmion Wy	SIG		22.9 s	C	0.502	A
311	Figueroa St & Cypress Av	SIG		3.4 s	A	0.424	A
312	Figueroa St & Ave 26	SIG		31.0 s	C	1.011	F
313	Lacy St & Ave 26	SIG		16.2 s	B	0.572	A
314	Griffin Av & Broadway	SIG		15.3 s	B	0.611	B
315	I-5 NB ramps & Pasadena Av	SIG		13.4 s	B	0.468	A
316	I-5 SB ramps & Pasadena Av	SIG		14.0 s	B	0.424	A
317	Ave 19 & San Fernando Rd	2WS	X	OVERFL	F		
318	Figueroa St & San Fernando Rd	SIG		21.4 s	C	0.746	C
319	San Fernando Rd & Pasadena Av	SIG		80.9 s	F	1.277	F
320	Daly St & Main St	SIG		19.5 s	B	0.836	D
321	Ave 21 & Main St	2WS	X	237.8 s	F		
322	Pasadena Av & Broadway	SIG		9.4 s	A	0.497	A
323	Hill St & College St	SIG		12.2 s	B	0.783	C

AS – all-way stop control; 2WS – 2-way stop control; SIG – signalized.

The following signalized intersections are forecast to operate at LOS E or LOS F during one or both peak periods in the Year 2035 Without Project in the SR-710 sensitivity analysis:

- Arroyo Parkway & Glenarm Street (#1)
- Fremont Avenue & Huntington Drive (#209)
- Fair Oaks Avenue & Huntington Drive (#210)
- Figueroa Street & York Boulevard (#301)
- Avenue 64 & York Boulevard (#302)
- Figueroa Street & Avenue 26 (#312)
- San Fernando Road & Pasadena Avenue (#319)
- Daly Street & Main Street (#320)
- Pasadena Avenue & Broadway (#322)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop-controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy MUTCD Signal Warrant 3 based on peak hour volume in this scenario.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay, but may not have sufficient storage capacity on the Arroyo Seco Parkway off-ramp to be appropriate for signal control:

- Arroyo Seco Parkway Northbound Exit 28B & Via Marisol (#14)
- Arroyo Seco Parkway Southbound Exit 27 & Avenue 43 (#18)
- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)

The following unsignalized non-ramp intersections also satisfy MUTCD Signal Warrant 3 in the Year 2035 Without Project (SR-710 Sensitivity Analysis) scenario:

- Avenue 19 & San Fernando Road (#317)
- Avenue 21 & Main Street (#321)

4.4.3 VARIATION BETWEEN BASELINE AND SR-710 SENSITIVITY ANALYSIS

The following intersections are impacted or satisfy a signal warrant in the baseline condition for this scenario, but are not forecast to experience impacts in the SR-710 sensitivity analysis:

- Arroyo Seco Parkway Southbound Exit 28A & Avenue 52 (#16)
- Arroyo Seco Parkway Northbound Exit 28A & Avenue 52 (#17)
- Fremont Avenue & Monterey Road (#207)
- Fair Oaks Avenue & Monterey Road (#208)

4.5 Mainline Analysis

4.5.1 MAINLINE ANALYSIS RESULTS FOR YEAR 2035 WITHOUT PROJECT

The results of the mainline analysis for the basic northbound and southbound segments of Arroyo Seco Parkway in the Year 2035 Without Project condition are presented in Tables 4-5 and 4-6.

Table 4-5 Year 2035 Without Project Segment LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	0	AM	6,106	30.2	D
			PM	9,703	69.9	F
Between Solano Ave and NB I-5 / Riverside Dr	4	0	AM	5,985	29.6	D
			PM	9,695	69.7	F
Between NB I-5 / Riverside Dr and Figueroa St	3	0	AM	3,647	24.0	C
			PM	5,758	40.6	E
Between Figueroa St and San Fernando Rd	3	0	AM	3,123	20.6	C
			PM	4,910	33.3	D
Between San Fernando Rd and Ave 26	3	0	AM	3,198	21.1	C
			PM	4,967	33.8	D
Between Ave 26 and Ave 43	3	0	AM	4,343	28.9	D
			PM	6,884	> 45.0	F
Between Ave 43 off-ramp and Ave 43 on-ramp	3	0	AM	4,050	26.8	D
			PM	6,464	> 45.0	F
Between Ave 43 and Ave 52	3	0	AM	4,174	27.7	D
			PM	6,581	> 45.0	F
Between Ave 52 off-ramp and Ave 52 on-ramp	3	0	AM	3,764	24.8	C
			PM	5,920	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	3	0	AM	3,893	25.6	C
			PM	6,034	> 45.0	F
Between Ave 57 off-ramp and Ave 57 on-ramp	3	0	AM	3,511	23.1	C
			PM	5,470	38.1	E
Between Ave 57 / Via Marisol and Ave 60	3	0	AM	3,596	23.7	C
			PM	5,545	38.7	E
Between Ave 60 off-ramp and Ave 60 on-ramp	3	0	AM	3,490	23.0	C
			PM	5,382	37.3	E
Between Ave 60 and Ave 64 / Marmion Way	3	0	AM	3,619	23.8	C
			PM	5,586	39.1	E
Between Ave 64 / Marmion Way and Bridewell St	3	0	AM	3,076	20.3	C
			PM	4,646	31.3	D
Between Bridewell St and Orange Grove Ave	3	0	AM	2,985	19.7	C
			PM	4,531	30.4	D
Between Orange Grove Ave and Fair Oaks Ave	3	0	AM	2,442	16.1	B
			PM	3,609	23.8	C
Downstream of Fair Oaks Ave	3	0	AM	1,840	12.1	B
			PM	2,672	17.6	B

Table 4-6 Year 2035 Without Project Segment LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,637	8.1	A
			PM	1,360	6.7	A
Upstream of Fair Oaks Ave	2	1	AM	1,507	9.9	A
			PM	1,273	8.4	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	2,381	15.7	B
			PM	1,983	13.1	B
Between Orange Grove Ave and York Blvd	3	0	AM	3,469	22.8	C
			PM	2,791	18.4	C
Between York Blvd and Ave 64 / Marmion Wy	3	0	AM	3,683	24.3	C
			PM	2,863	18.9	C
Between Ave 64 / Marmion Wy and Ave 60	3	0	AM	4,508	30.2	D
			PM	3,440	22.7	C
Between Ave 60 off-ramp and Ave 60 on-ramp	3	0	AM	4,352	29.0	D
			PM	3,207	21.1	C
Between Ave 60 and Ave 57 / Via Marisol	3	0	AM	4,472	29.9	D
			PM	3,352	22.1	C
Between Ave 57 off-ramp and Ave 57 on-ramp	3	0	AM	4,396	29.3	D
			PM	3,292	21.7	C
Between Ave 57 / Via Marisol and Ave 52	3	0	AM	4,662	31.4	D
			PM	3,585	23.6	C
Between Ave 52 off-ramp and Ave 52 on-ramp	3	0	AM	4,620	31.0	D
			PM	3,432	22.6	C
Between Ave 52 and Ave 43	3	0	AM	5,260	36.3	E
			PM	3,929	25.9	C
Between Ave 43 off-ramp and Ave 43 on-ramp	3	0	AM	5,073	34.7	D
			PM	3,808	25.1	C
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	5,509	38.4	E
			PM	4,152	27.5	D
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,852	25.4	C
			PM	3,082	20.3	C
Between Ave 26 and Figueroa St	3	0	AM	3,631	23.9	C
			PM	2,920	19.2	C
Between Figueroa St and SB I-5	3	0	AM	4,567	30.6	D
			PM	3,611	23.8	C
Between SB I-5 and Academy Rd	3	2	AM	8,716	34.6	D
			PM	6,483	25.6	C
Between Academy Rd and Amador St	3	2	AM	8,619	34.2	D
			PM	6,419	25.4	C
Downstream of Amador	3	2	AM	8,826	35.1	E
			PM	6,563	25.9	C

By the year 2035, mainline level of service is forecast to degrade to LOS F during the PM peak hour on northbound Arroyo Seco Parkway south of Riverside Drive and between Avenue 26 and Avenue 57.

4.5.2 SR-710 SENSITIVITY ANALYSIS RESULTS FOR YEAR 2035 WITHOUT PROJECT – MAINLINE

The results of the SR-710 sensitivity analysis for the basic northbound and southbound mainline segments of Arroyo Seco Parkway in the Year 2035 Without Project condition are presented in Tables 4-7 and 4-8.

Table 4-7 Year 2035 Without Project (SR-710 Sensitivity) Segment LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	0	AM	6,158	30.4	D
			PM	9,731	70.7	F
Between Solano Ave and NB I-5 / Riverside Dr	4	0	AM	6,083	30.1	D
			PM	9,713	70.1	F
Between NB I-5 / Riverside Dr and Figueroa St	3	0	AM	3,717	24.5	C
			PM	5,723	40.3	E
Between Figueroa St and San Fernando Rd	3	0	AM	3,189	21.0	C
			PM	4,881	33.1	D
Between San Fernando Rd and Ave 26	3	0	AM	3,263	21.5	C
			PM	5,011	34.2	D
Between Ave 26 and Ave 43	3	0	AM	4,359	29.0	D
			PM	6,791	> 45.0	F
Between Ave 43 off-ramp and Ave 43 on-ramp	3	0	AM	4,040	26.7	D
			PM	6,377	> 45.0	F
Between Ave 43 and Ave 52	3	0	AM	4,162	27.6	D
			PM	6,502	> 45.0	F
Between Ave 52 off-ramp and Ave 52 on-ramp	3	0	AM	3,745	24.7	C
			PM	5,873	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	3	0	AM	3,896	25.7	C
			PM	5,956	> 45.0	F
Between Ave 57 off-ramp and Ave 57 on-ramp	3	0	AM	3,510	23.1	C
			PM	5,408	37.5	E
Between Ave 57 / Via Marisol and Ave 60	3	0	AM	3,614	23.8	C
			PM	5,484	38.2	E
Between Ave 60 off-ramp and Ave 60 on-ramp	3	0	AM	3,504	23.1	C
			PM	5,343	37.0	E
Between Ave 60 and Ave 64 / Marmion Way	3	0	AM	3,564	23.5	C
			PM	5,478	38.1	E
Between Ave 64 / Marmion Way and Bridewell St	3	0	AM	3,035	20.0	C
			PM	4,560	30.6	D
Between Bridewell St and Orange Grove Ave	3	0	AM	2,954	19.5	C
			PM	4,485	30.0	D
Between Orange Grove Ave and Fair Oaks Ave	3	0	AM	2,403	15.8	B
			PM	3,529	23.2	C
Downstream of Fair Oaks Ave	3	0	AM	1,711	11.3	B
			PM	2,469	16.3	B

Table 4-8 Year 2035 Without Project (SR-710 Sensitivity) Segment LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,431	7.1	A
			PM	1,245	6.1	A
Upstream of Fair Oaks Ave	2	1	AM	1,363	9.0	A
			PM	1,240	8.2	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	2,273	15.0	B
			PM	1,991	13.1	B
Between Orange Grove Ave and York Blvd	3	0	AM	3,378	22.2	C
			PM	2,844	18.7	C
Between York Blvd and Ave 64 / Marmion Wy	3	0	AM	3,538	23.3	C
			PM	2,900	19.1	C
Between Ave 64 / Marmion Wy and Ave 60	3	0	AM	4,320	28.8	D
			PM	3,428	22.6	C
Between Ave 60 off-ramp and Ave 60 on-ramp	3	0	AM	4,199	27.8	D
			PM	3,236	21.3	C
Between Ave 60 and Ave 57 / Via Marisol	3	0	AM	4,342	28.9	D
			PM	3,386	22.3	C
Between Ave 57 off-ramp and Ave 57 on-ramp	3	0	AM	4,262	28.3	D
			PM	3,308	21.8	C
Between Ave 57 / Via Marisol and Ave 52	3	0	AM	4,517	30.2	D
			PM	3,624	23.9	C
Between Ave 52 off-ramp and Ave 52 on-ramp	3	0	AM	4,529	30.3	D
			PM	3,462	22.8	C
Between Ave 52 and Ave 43	3	0	AM	5,152	35.4	E
			PM	3,948	26.0	D
Between Ave 43 off-ramp and Ave 43 on-ramp	3	0	AM	4,963	33.8	D
			PM	3,853	25.4	C
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	5,403	37.5	E
			PM	4,208	27.9	D
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,830	25.2	C
			PM	3,129	20.6	C
Between Ave 26 and Figueroa St	3	0	AM	3,622	23.9	C
			PM	2,971	19.6	C
Between Figueroa St and SB I-5	3	0	AM	4,554	30.5	D
			PM	3,670	24.2	C
Between SB I-5 and Academy Rd	3	2	AM	8,627	34.2	D
			PM	6,519	25.8	C
Between Academy Rd and Amador St	3	2	AM	8,585	34.0	D
			PM	6,446	25.5	C
Downstream of Amador	3	2	AM	8,745	34.7	D
			PM	6,571	26.0	C

By the year 2035, mainline level of service is forecast to degrade to LOS F during the PM peak hour on northbound Arroyo Seco Parkway south of I-5 and between Avenue 26 and Avenue 57.

4.1 Ramp Merge and Diverge Analysis

The Highway Capacity Manual (HCM 2000) ramp merge and diverge analysis methodology was developed to measure the density (vehicles per hour per lane) of freeway and multilane highway facilities in the vicinity of on- and off-ramps. It is assumed that the facilities have been designed according to current engineering standards. The impacts to operations that result from on-ramps with stop control and no acceleration length may not be adequately reflected in these results.

4.1.1 RAMP ANALYSIS RESULTS FOR YEAR 2035 WITHOUT PROJECT

The results of the ramp analysis for the northbound merge and diverge segments of Arroyo Seco Parkway in the Future Year 2035 Without Project condition are presented in Table 4-9. The southbound merge and diverge segment analysis results are summarized in Table 4-10.

Table 4-9: Year 2035 Without Project Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	6,106	1	15	160	181	28.7	D
			PM	9,703				162	47.1	F
ON	Solano Ave	4	AM	5,925	1	15	50	60	25.7	C
			PM	9,541				154	38.7	F
OFF	NB I-5	4	AM	5,985	1	35	1,525	2,338	31.1	F
			PM	9,695	2			3,937	19.6	F
OFF	Figueroa St	3	AM	3,647	1	35	800	524	21.6	C
			PM	5,758				848	32.4	D
ON	San Fernando Rd	3	AM	3,123	1	15	25	75	21.2	C
			PM	4,910				57	29.8	D
ON	I-5/Avenue 26	3	AM	3,198	1	35	1,930	1,145	22.0	C
			PM	4,967				1,917	37.5	F
OFF	Avenue 43	3	AM	4,343	1	35	300	293	28.0	D
			PM	6,884				420	42.7	F
ON	Avenue 43	3	AM	4,050	1	15	50	124	26.0	C
			PM	6,464				117	39.8	F
OFF	Avenue 52	3	AM	4,174	1	35	325	410	27.2	C
			PM	6,581				661	39.5	F
ON	Avenue 52	3	AM	3,764	1	15	25	129	26.8	C
			PM	5,920				114	40.6	E
OFF	Avenue 57	3	AM	3,893	1	35	425	382	24.8	C
			PM	6,034				564	34.7	D
ON	Avenue 57	3	AM	3,511	1	15	25	85	23.2	C
			PM	5,470				75	32.7	D

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 60	3	AM	3,596	1	35	730	106	20.1	C
			PM	5,545				163	29.5	D
ON	Avenue 60	3	AM	3,490	1	15	50	129	23.3	C
			PM	5,382				204	33.2	D
OFF	Avenue 64	3	AM	3,619	1	35	600	543	22.2	C
			PM	5,586				940	32.0	D
OFF	Bridewell	3	AM	3,076	1	35	1,740	91	10.4	B
			PM	4,646				115	18.4	B
OFF	Orange Grove	3	AM	2,985	1	35	500	710	20.1	C
			PM	4,531				1,114	28.7	D
ON	Orange Grove	3	AM	2,275	1	15	50	167	17.7	B
			PM	3,417				192	23.5	C
OFF	Fair Oaks	3	AM	2,442	1	35	430	601	17.4	B
			PM	3,609				937	24.5	C

Table 4-10: Year 2035 Without Project Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,637	1	35	425	130	11.6	B
			PM	1,360				87	9.8	A
ON	Fair Oaks	2	AM	1,507	1	35	600	874	21.5	C
			PM	1,273				710	18.2	B
OFF	Orange Grove	2	AM	2,381	1	35	800	92	19.3	B
			PM	1,983				143	15.6	B
ON	Orange Grove	2	AM	2,289	1	35	760	1,180	29.5	D
			PM	1,840				951	23.9	C
OFF	York Blvd	3	AM	3,469	1	15	80	73	25.2	C
			PM	2,791				186	21.7	C
ON	York Blvd	3	AM	3,396	1	15	70	287	24.0	C
			PM	2,605				258	19.9	B
ON	Avenue 64	3	AM	3,683	1	35	100	825	29.6	D
			PM	2,863				577	23.5	C
OFF	Avenue 60	3	AM	4,508	1	15	50	156	35.2	E
			PM	3,440				233	27.5	C
ON	Avenue 60	3	AM	4,352	1	35	50	120	27.2	C
			PM	3,207				145	21.9	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 57	3	AM	4,472	1	35	200	76	29.2	D
			PM	3,352				60	23.5	C
ON	Avenue 57	3	AM	4,396	1	15	25	266	29.0	D
			PM	3,292				293	23.8	C
OFF	Avenue 52	3	AM	4,662	1	35	350	42	31.6	D
			PM	3,585				153	27.4	C
ON	Avenue 52	3	AM	4,620	1	15	50	640	32.9	D
			PM	3,432				497	26.0	C
OFF	Avenue 43	3	AM	5,260	1	35	380	187	31.4	D
			PM	3,929				121	25.0	C
ON	Avenue 43	3	AM	5,073	1	15	80	436	33.4	D
			PM	3,808				344	24.6	C
OFF	I-5	3	AM	5,509	2	35	3,500	1,657	-4.6	A
			PM	4,152				1,070	-13.3	A
OFF	Avenue 26	3	AM	3,852	1	35	800	221	21.0	C
			PM	3,082				162	16.8	B
ON	Figueroa St	3	AM	3,631	1	35	550	936	27.7	C
			PM	2,920				691	22.2	C
ON	I-5	3	AM	4,567	2	35	4,500	4,149	32.5	F
			PM	3,611				2,872	17.7	F
OFF	Academy Rd	3	AM	8,716	1	35	300	97	30.5	D
			PM	6,483				64	23.0	C
ON	Amador Pl	3	AM	8,619	1	35	250	207	27.0	C
			PM	6,419				144	20.9	C

Locations where the ramp or mainline volumes exceed capacity during one or both peak time periods in the Year 2035 Without Project scenario include:

- Northbound off-ramp to Solano Avenue
- Northbound on-ramp from Solano Avenue
- Northbound off-ramp to Northbound I-5
- Northbound on-ramp from I-5/Avenue 26
- Northbound off-ramp to Avenue 43
- Northbound on-ramp from Avenue 43
- Northbound off-ramp to Avenue 52
- Southbound on-ramp (major merge) from I-5

In the northbound direction, volume is generally forecast to exceed capacity from the south study area limit to Avenue 52.

4.1.2 SR-710 SENSITIVITY ANALYSIS RESULTS FOR YEAR 2035 WITHOUT PROJECT - RAMPS

The results of the SR-710 sensitivity analysis for the northbound merge and diverge segments of Arroyo Seco Parkway in the Year 2035 Without Project condition are presented in Table 4-11. The southbound merge and diverge segment analysis results are summarized in Table 4-12.

Table 4-11: Year 2035 Without Project (SR-710 Sensitivity) Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	6,158	1	15	160	138	28.6	D
			PM	9,731				137	47.3	F
ON	Solano Ave	4	AM	6,020	1	15	50	63	26.1	C
			PM	9,594				119	38.6	F
OFF	NB I-5	4	AM	6,083	1	35	1,525	2,366	31.7	F
			PM	9,713	2			3,990	20.1	F
OFF	Figueroa St	3	AM	3,717	1	35	800	528	20.8	C
			PM	5,723				842	32.3	D
ON	San Fernando Rd	3	AM	3,189	1	15	25	74	21.5	C
			PM	4,881				130	30.3	D
ON	I-5/Avenue 26	3	AM	3,263	1	35	1,930	1,096	21.9	C
			PM	5,011				1,780	36.6	F
OFF	Avenue 43	3	AM	4,359	1	35	300	319	28.2	D
			PM	6,791				414	41.8	F
ON	Avenue 43	3	AM	4,040	1	15	50	122	27.5	C
			PM	6,377				125	39.2	F
OFF	Avenue 52	3	AM	4,162	1	35	325	417	27.1	C
			PM	6,502				629	38.9	F
ON	Avenue 52	3	AM	3,745	1	15	25	151	26.9	C
			PM	5,873				83	39.9	E
OFF	Avenue 57	3	AM	3,896	1	35	425	386	24.9	C
			PM	5,956				548	34.4	D
ON	Avenue 57	3	AM	3,510	1	15	25	104	23.4	C
			PM	5,408				76	32.4	D
OFF	Avenue 60	3	AM	3,614	1	35	730	110	20.2	C
			PM	5,484				141	29.2	D
ON	Avenue 60	3	AM	3,504	1	15	50	60	23.9	C
			PM	5,343				135	36.4	E
OFF	Avenue 64	3	AM	3,564	1	35	600	529	21.9	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
			PM	5,478				918	31.5	D
OFF	Bridewell	3	AM	3,035	1	35	1,740	81	10.1	B
			PM	4,560				75	18.0	B
OFF	Orange Grove	3	AM	2,954	1	35	500	708	19.9	B
			PM	4,485				1,089	28.5	D
ON	Orange Grove	3	AM	2,246	1	15	50	157	18.4	B
			PM	3,396				133	25.5	C
OFF	Fair Oaks	3	AM	2,403	1	35	430	692	17.4	B
			PM	3,529				1,060	24.4	C

Table 4-12: Year 2035 Without Project (SR-710 Sensitivity) Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,431	1	35	425	68	10.2	B
			PM	1,233				5	8.8	A
ON	Fair Oaks	2	AM	1,363	1	35	600	910	20.5	C
			PM	1,240				751	18.2	B
OFF	Orange Grove	2	AM	2,273	1	35	800	86	18.3	B
			PM	1,991				146	15.7	B
ON	Orange Grove	2	AM	2,187	1	35	760	1,191	28.8	D
			PM	1,845				999	24.3	C
OFF	York Blvd	3	AM	3,378	1	15	80	77	24.8	C
			PM	2,844				171	22.0	C
ON	York Blvd	3	AM	3,301	1	15	70	237	23.1	C
			PM	2,673				227	20.0	B
ON	Avenue 64	3	AM	3,538	1	35	100	782	28.5	D
			PM	2,900				528	23.3	C
OFF	Avenue 60	3	AM	4,320	1	15	50	121	33.7	D
			PM	3,428				192	27.0	C
ON	Avenue 60	3	AM	4,199	1	35	50	143	26.9	C
			PM	3,236				150	22.2	C
OFF	Avenue 57	3	AM	4,342	1	35	200	80	28.6	D
			PM	3,386				78	23.7	C
ON	Avenue 57	3	AM	4,262	1	15	25	255	28.2	D
			PM	3,308				316	24.1	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 52	3	AM	4,517	1	35	350	5	30.5	D
			PM	3,624				162	27.7	C
ON	Avenue 52	3	AM	4,512	1	15	50	623	32.3	D
			PM	3,462				486	26.0	C
OFF	Avenue 43	3	AM	5,152	1	35	380	189	30.9	D
			PM	3,948				95	25.1	C
ON	Avenue 43	3	AM	4,964	1	15	80	440	32.9	D
			PM	3,853				355	26.7	C
OFF	I-5	3	AM	5,403	2	35	3,500	1,573	-5.4	A
			PM	4,208				1,079	-13.0	A
OFF	Avenue 26	3	AM	3,830	1	35	800	208	20.8	C
			PM	3,129				158	17.1	B
ON	Figueroa St	3	AM	3,622	1	35	550	932	27.7	C
			PM	2,971				699	22.5	C
ON	I-5	3	AM	4,554	2	35	4,500	4,073	31.8	F
			PM	3,670				2,849	17.9	F
OFF	Academy Rd	3	AM	8,627	1	35	300	42	29.9	D
			PM	6,519				73	23.2	C
ON	Amador Pl	3	AM	8,585	1	35	250	160	26.5	C
			PM	6,446				125	20.9	C

Locations where the ramp or mainline volumes exceed capacity during one or both peak time periods in the SR-710 sensitivity analysis for the Year 2035 Without Project scenario are the same as in the baseline analysis. These locations include:

- Northbound off-ramp to Solano Avenue
- Northbound on-ramp from Solano Avenue
- Northbound off-ramp to Northbound I-5
- Northbound on-ramp from I-5/Avenue 26
- Northbound off-ramp to Avenue 43
- Northbound on-ramp from Avenue 43
- Northbound off-ramp to Avenue 52
- Southbound on-ramp (major merge) from I-5

4.2 Weaving Analysis

There are no valid weave segments within the study area in the Year 2035 Without Project condition. The corridor has been analyzed as a series of basic segments utilizing the methodology from Chapter 23 of the HCM 2000 and ramp merge and diverge segments using the methodology from Chapter 25.

4.3 Queuing Analysis

The queuing analysis results for the Year 2035 Without Project condition are shown in Table 4-13. The queuing results for the SR-710 sensitivity analysis are presented in Table 4-14. All ramps have sufficient capacity to accommodate existing demand in both scenarios.

Table 4-13: Year 2035 Without Project Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks Ave (State St)	425	80	0		204	0	
4	NB Exit 31B: Fair Oaks Ave	750	512	200		885	325	
5	SB Exit 31A: Orange Grove Ave	800	83	75		180	125	
6	NB Exit 31A: Orange Grove Ave	875	583	225		1115	525	
12	NB Exit 29: Ave 60	730	64	0		125	0	
14	NB Exit 28B: Via Marisol	425	273	0		467	0	
16	SB Exit 28A: Ave 52	350	242	25		277	25	
17	NB Exit 28A: Ave 52	325	255	25		498	75	
18	SB Exit 27: Ave 43	380	293	25		199	25	
19	NB Exit 27: Ave 43	300	269	25		345	25	
20	SB Exit 26A: Ave 26	1,240	361	0		319	0	
23	NB Exit 26 B: Figueroa St	800	519	50		494	75	
28	SB Exit 24D: Stadium Way	1,560	256	25		218	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

Table 4-14: Year 2035 Without Project (SR-710 Sensitivity) Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks Ave (State St)	425	18	0		109	0	
4	NB Exit 31B: Fair Oaks Ave	750	602	200		1008	300	
5	SB Exit 31A: Orange Grove Ave	800	77	50		183	125	
6	NB Exit 31A: Orange Grove Ave	875	582	200		1090	450	
12	NB Exit 29: Ave 60	730	68	0		104	0	
14	NB Exit 28B: Via Marisol	425	278	0		451	0	
16	SB Exit 28A: Ave 52	350	187	25		287	25	
17	NB Exit 28A: Ave 52	325	262	25		466	75	
18	SB Exit 27: Ave 43	380	295	25		173	25	
19	NB Exit 27: Ave 43	300	45	25		332	25	
20	SB Exit 26A: Ave 26	1,240	347	0		316	0	
23	NB Exit 26 B: Figueroa St	800	524	50		488	75	
28	SB Exit 24D: Stadium Way	1,560	220	25		228	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

5. CONCEPT 1

5.1 Project Description

In Concept 1, selected segments of Arroyo Seco Parkway would be converted from three through lanes (in a given direction) to two through lanes with an auxiliary lane between ramps. The main benefit this provides is to eliminate locations where a stop sign precedes entry onto the parkway without an acceleration lane. In Concept 1, these on-ramps would have an exclusive lane on entry and a weave segment to merge into adjacent through lanes.

Due to the high traffic volumes on Arroyo Seco Parkway at the south end of the study corridor, auxiliary lanes are not proposed south of Interstate 5 (I-5). Removal of a through lane south of I-5 is expected to result in insufficient capacity on the main line. The segments in each direction between Avenue 52 and Avenue 57/Via Marisol would operate as weaving segments based on the interchange spacing. In all other modified locations, the auxiliary lane would provide acceleration and deceleration length for the ramps and provide additional capacity along the mainline between on- and off-ramp pairs.

The proposed locations for auxiliary lanes on northbound Arroyo Seco Parkway are noted in Table 5-1. The lane configuration on southbound Arroyo Seco Parkway is provided in Table 5-2.

Table 5-1: Northbound Arroyo Seco Parkway – Proposed Auxiliary Lane Locations

Segment	Length (ft)	Existing Condition			Concept 1 Proposed Condition		
		Main line Lanes	Aux Lanes	Shoulder	Main line Lanes	Aux Lanes	Shoulder
I-5 on to Ave 43	4,680	3	--		2	1	
Btwn Ave 43 off and Ave 43 on	50	3	--		2	--	
Btwn Ave 43 on and Ave 52 off	4,940	3	--		2	1	
Btwn Ave 52 off and Ave 52 on	460	3	--		2	--	X
Btwn Ave 52 on and Ave 57 off	1,180	3	--		2	1	
Btwn Ave 57 off and Ave 57 on	600	3	--		2	--	X
Btwn Ave 57 on and Ave 60 off	2,080	3	--		2	1	
Btwn Ave 60 off and Ave 60 on	50	3	--		2	--	
Btwn Ave 60 on and Ave 64 off		3	--		2	1	
South of Bridewell off		3	--		3	--	
Btwn Bridewell off and OG off		3	--		3	--	
Btwn OG off and OG on	925	3	--		2	--	X
Btwn OG on and Fair Oaks off	2,490	3	--		3	--	

Table 5-2: Southbound Arroyo Seco Parkway – Proposed Auxiliary Lane Locations

Segment	Length (ft)	Existing Condition			Concept 1 Proposed Condition		
		Main line Lanes	Aux Lanes	Shoul der	Main line Lanes	Aux Lanes	Shoul der
North of State/Fair Oaks exit		3	1		3	1	
Btwn Fair Oaks off and on	1,500	2	--	X	2	--	X
Btwn Fair Oaks on and OG off		2	1		2	1	
Btwn OG off and OG on	1,250	2	--	X	2	--	X
Btwn OG on and York off	4,990	3	--		2	1	
York on	500	3	--		2	1	
South of York on to Ave 64 on	100	3	--		2	--	X
Btwn Ave 64 on and Ave 60 off	2,570	3	--		2	1	
Btwn Ave 60 off and Ave 60 on	50	3	--		2	--	
Btwn Ave 60 on and Ave 57 off	2,080	3	--		2	1	
Btwn Ave 57 off and Ave 57 on	100	3	--		2	--	
Btwn Ave 57 on and Ave 52 off	980	3	--		2	1	
Btwn Ave 52 off and Ave 52 on	525	3	--		2	--	X
Btwn Ave 52 on and Ave 43 off	4,200	3	--		2	1	
Btwn Ave 43 off and Ave 43 on	100	3	--		2	--	

5.1.1 INTERSECTION LANE GEOMETRY AND CONTROL

The proposed modifications to Arroyo Seco Parkway in Concept 1 would not result in any changes to study intersection lane geometry. Lane geometry and control at all study intersections in Concept 1 would remain the same as in the Future Without Project condition.

5.1.2 TRAFFIC VOLUMES

Forecast AM peak hour turning movement volumes for Concept 1 are shown in Figures 5.1A, 5.1B and 5.1C. The PM peak hour volumes are shown in Figures 5.2A, 5.2B and 5.2C. The Concept 1 (SR-710 Sensitivity) forecast AM peak hour turning movement volumes are shown in Figures 5.3A, 5.3B and 5.3C. The Concept 1 (SR-710 Sensitivity) PM peak hour volumes are shown in Figures 5.4A, 5.4B and 5.4C.

FIGURE 5.1A: INTERSECTION VOLUMES: CONCEPT 1 - AM PEAK HOUR

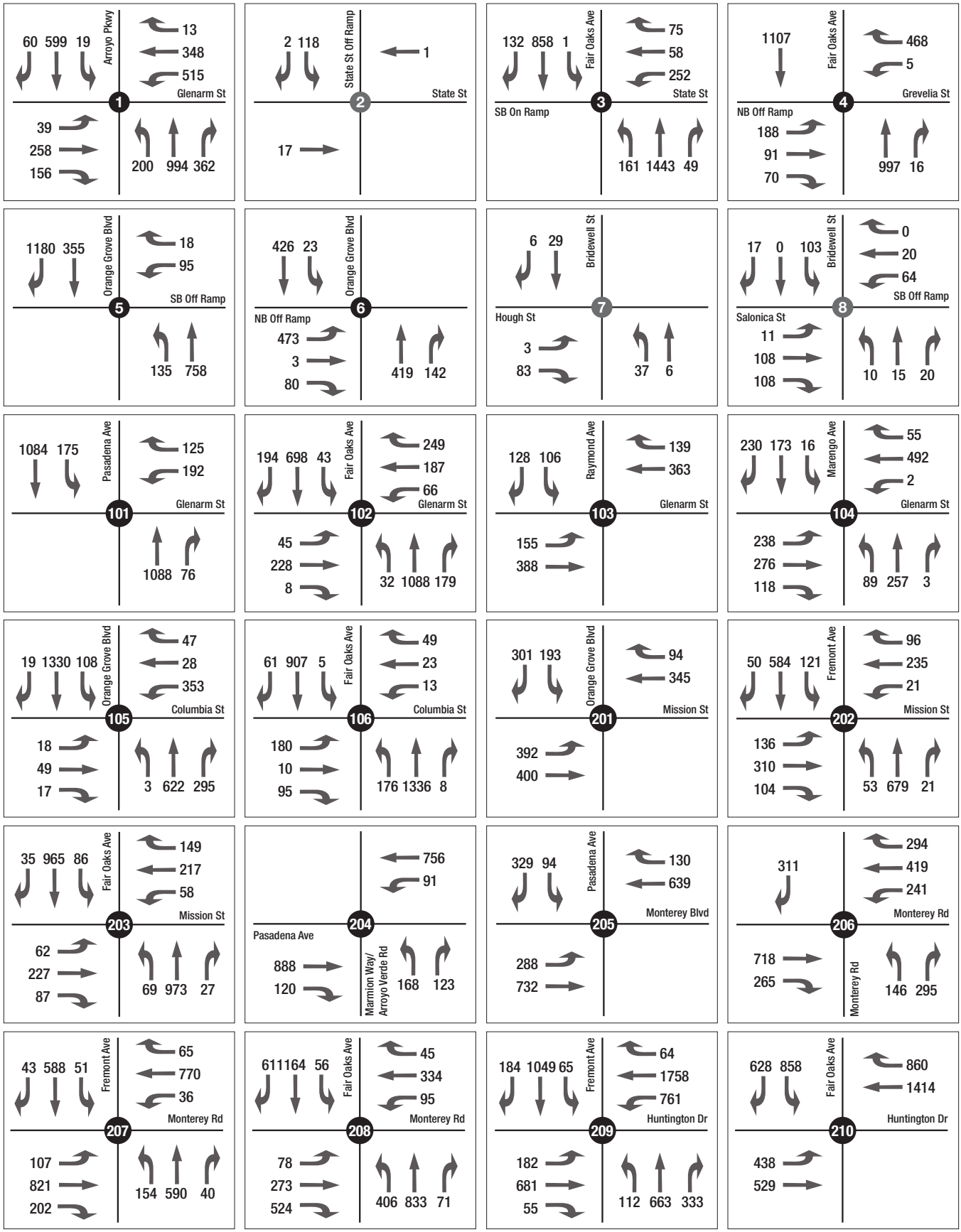


FIGURE 5.1B: INTERSECTION VOLUMES: CONCEPT 1 - AM PEAK HOUR

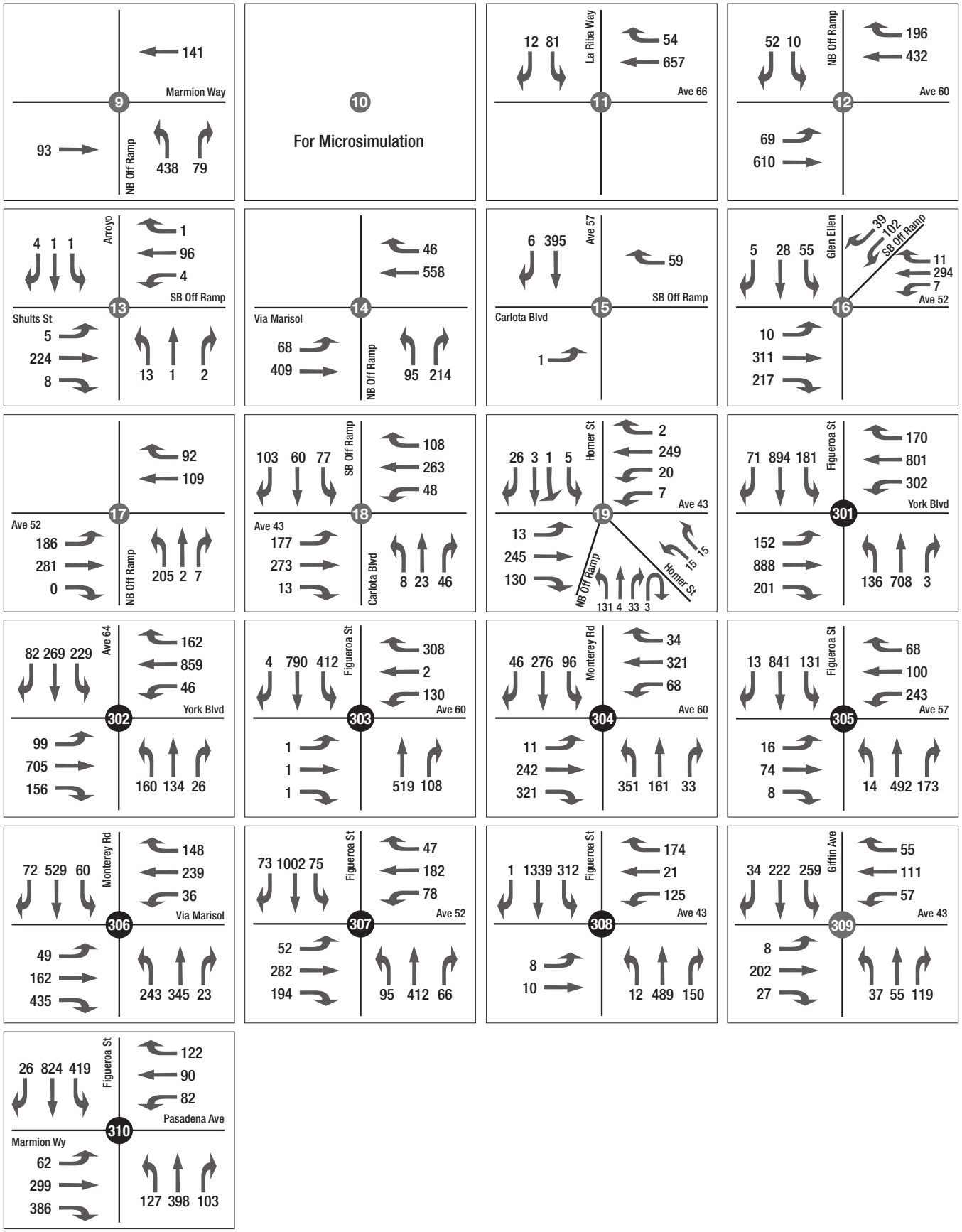


FIGURE 5.1C: INTERSECTION VOLUMES: CONCEPT 1 - AM PEAK HOUR

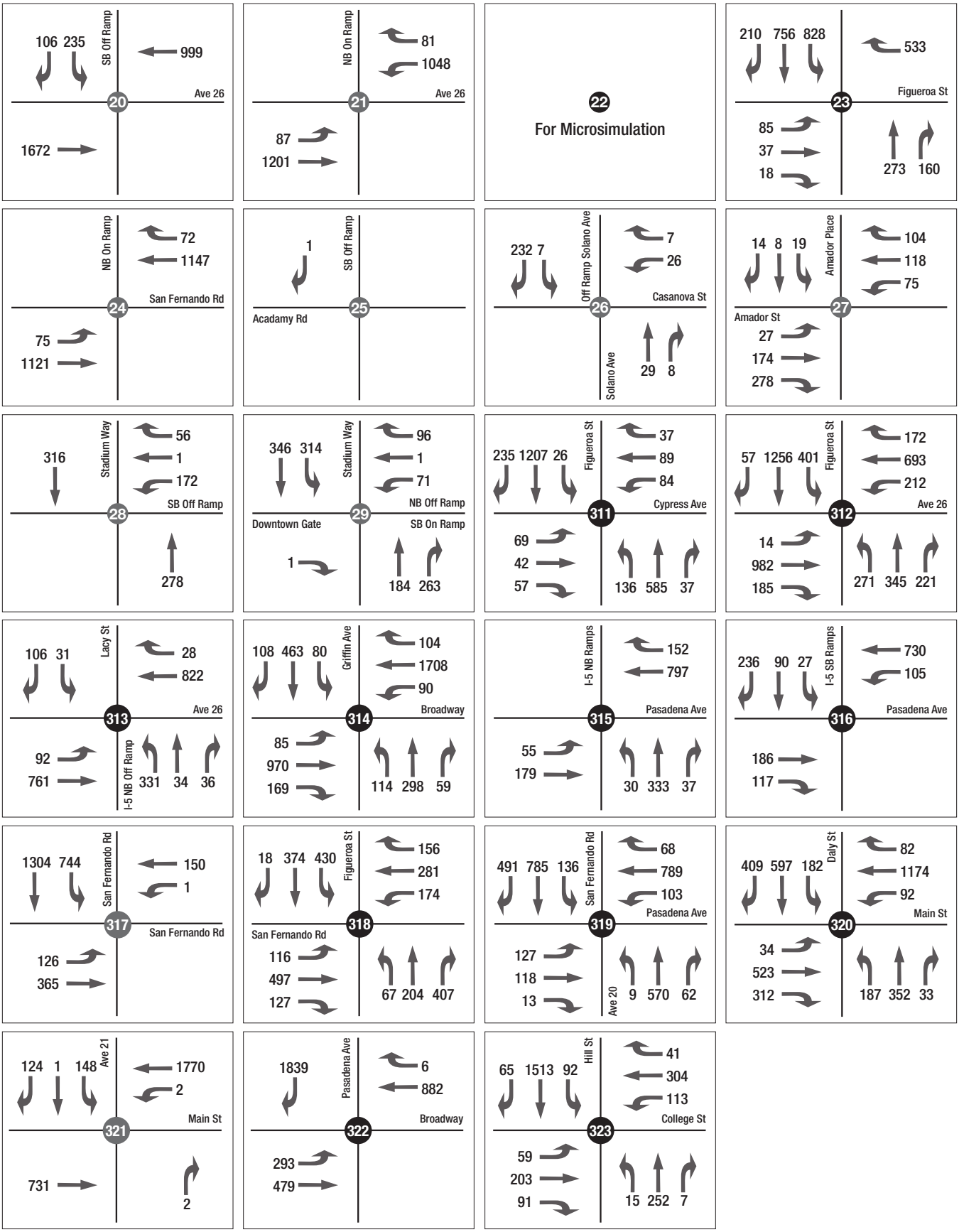


FIGURE 5.2A: INTERSECTION VOLUMES: CONCEPT 1 - PM PEAK HOUR

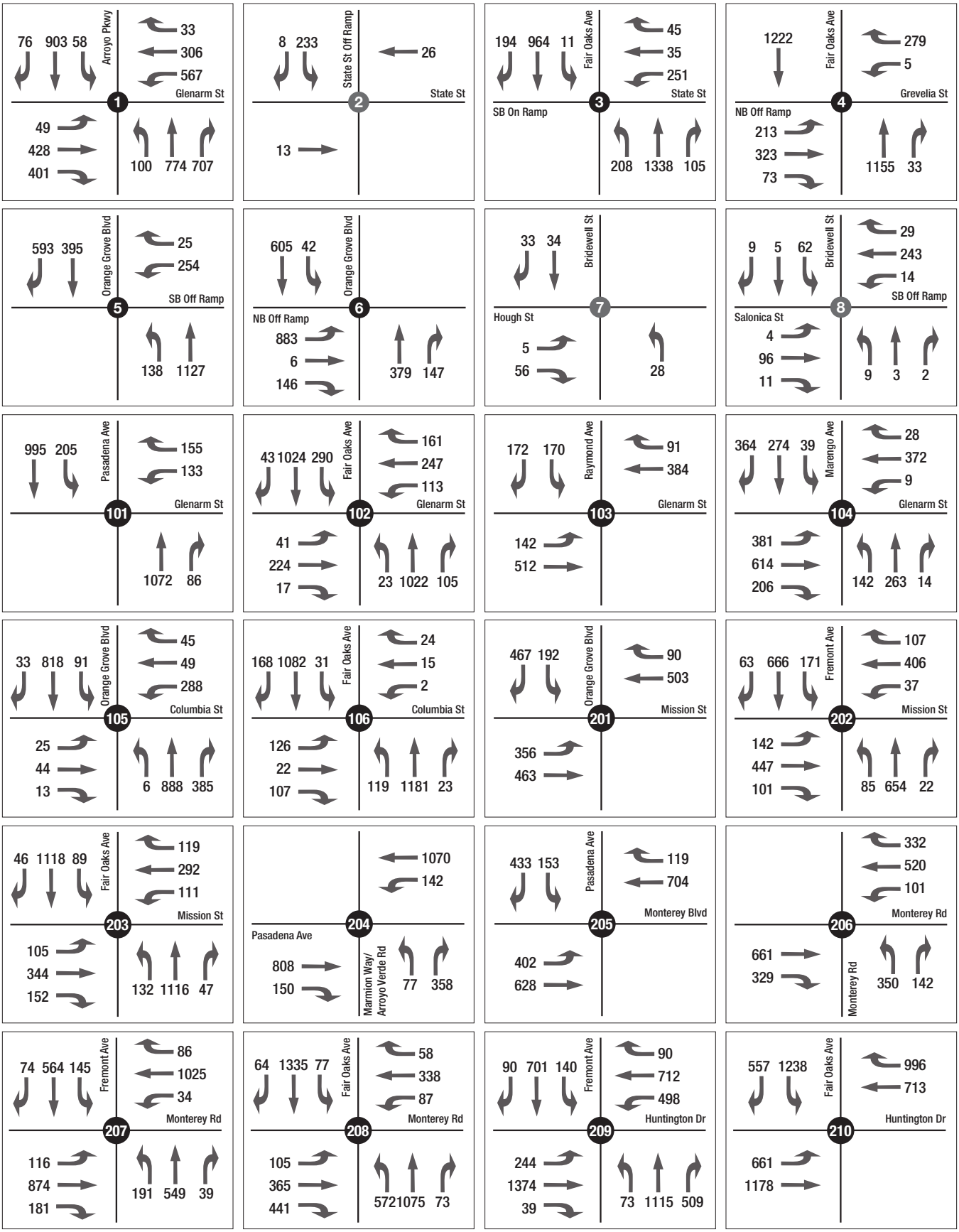


FIGURE 5.2B: INTERSECTION VOLUMES: CONCEPT 1 - PM PEAK HOUR

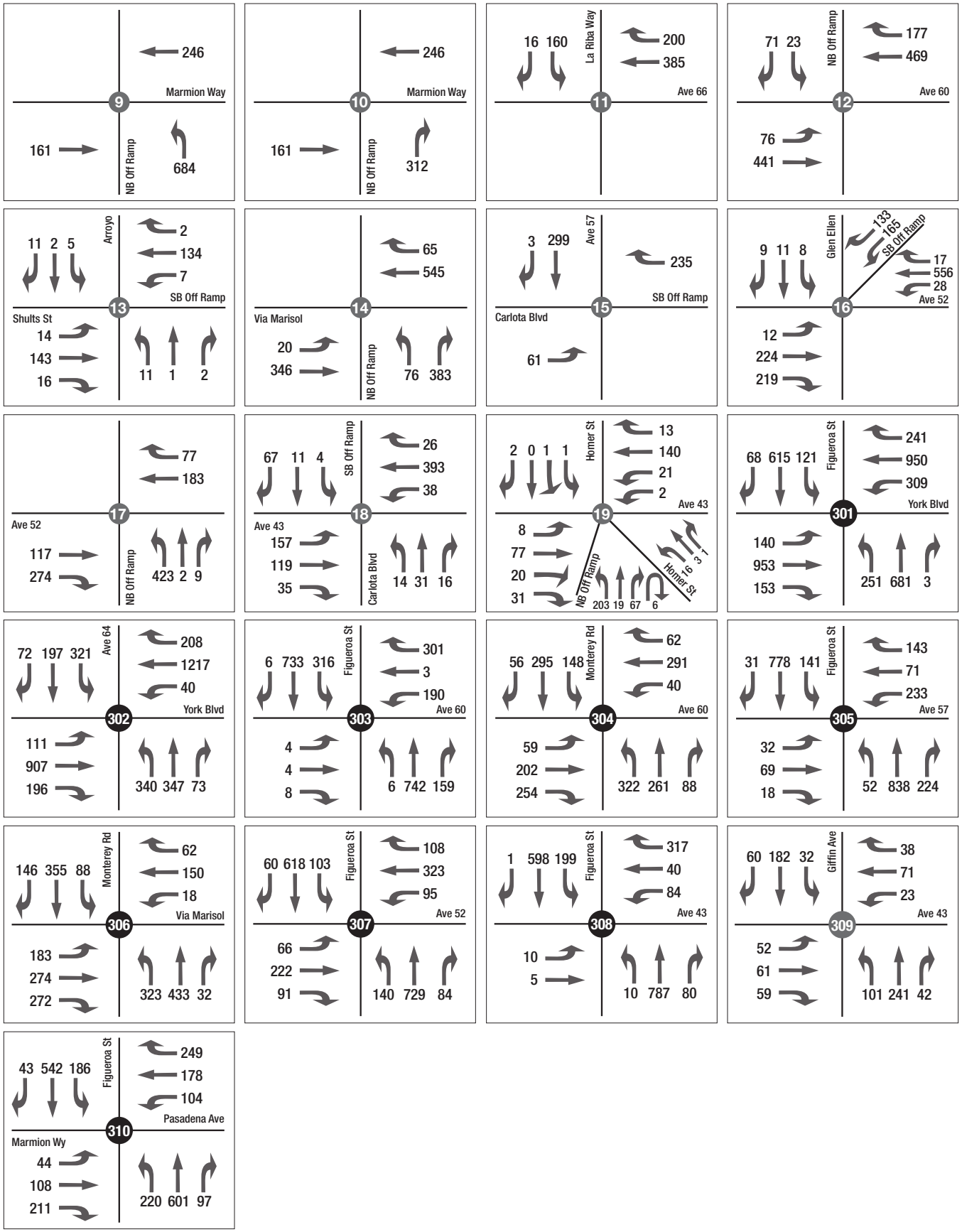


FIGURE 5.2C: INTERSECTION VOLUMES: CONCEPT 1 - PM PEAK HOUR

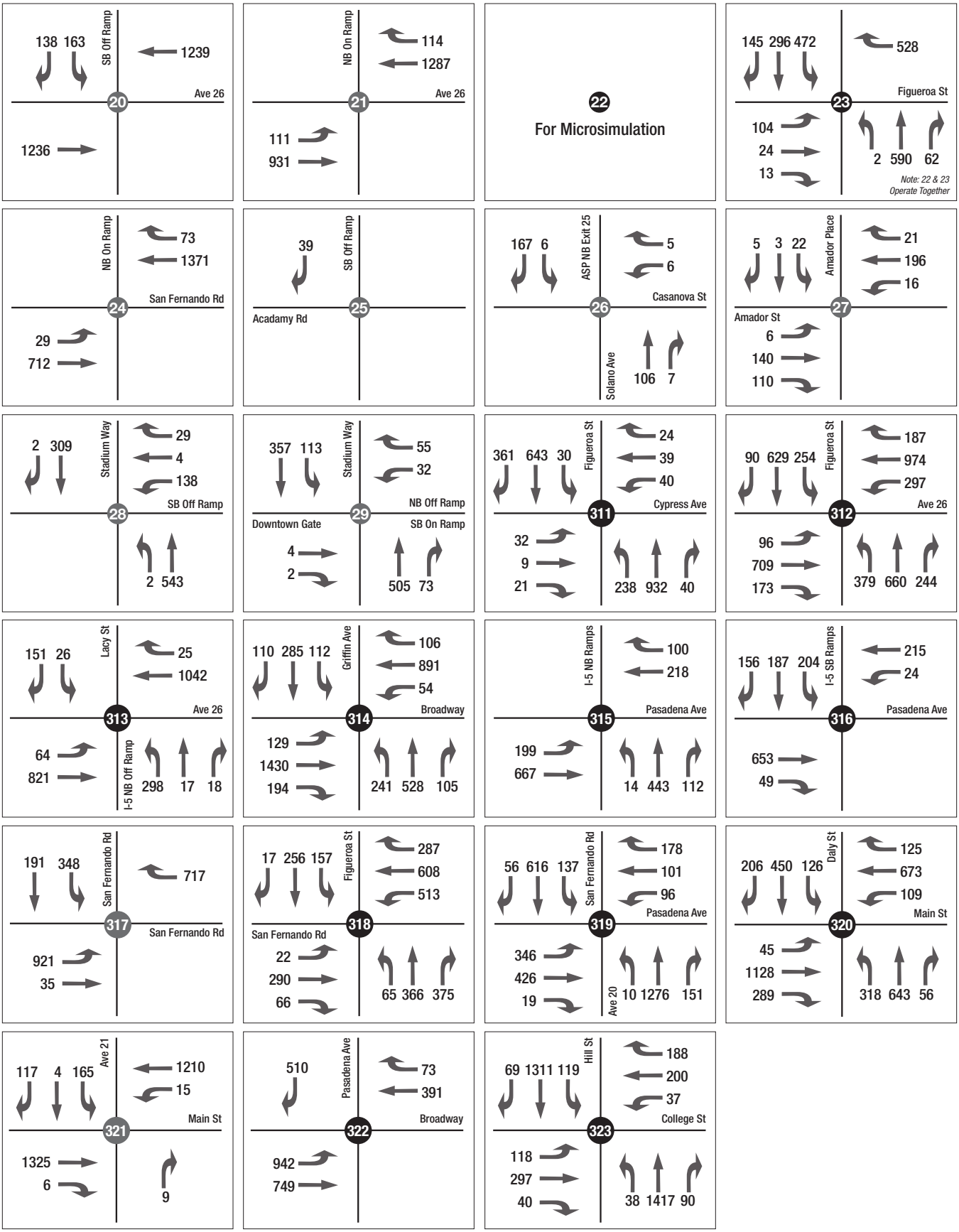


FIGURE 5.3A: INTERSECTION VOLUMES: CONCEPT 1 (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

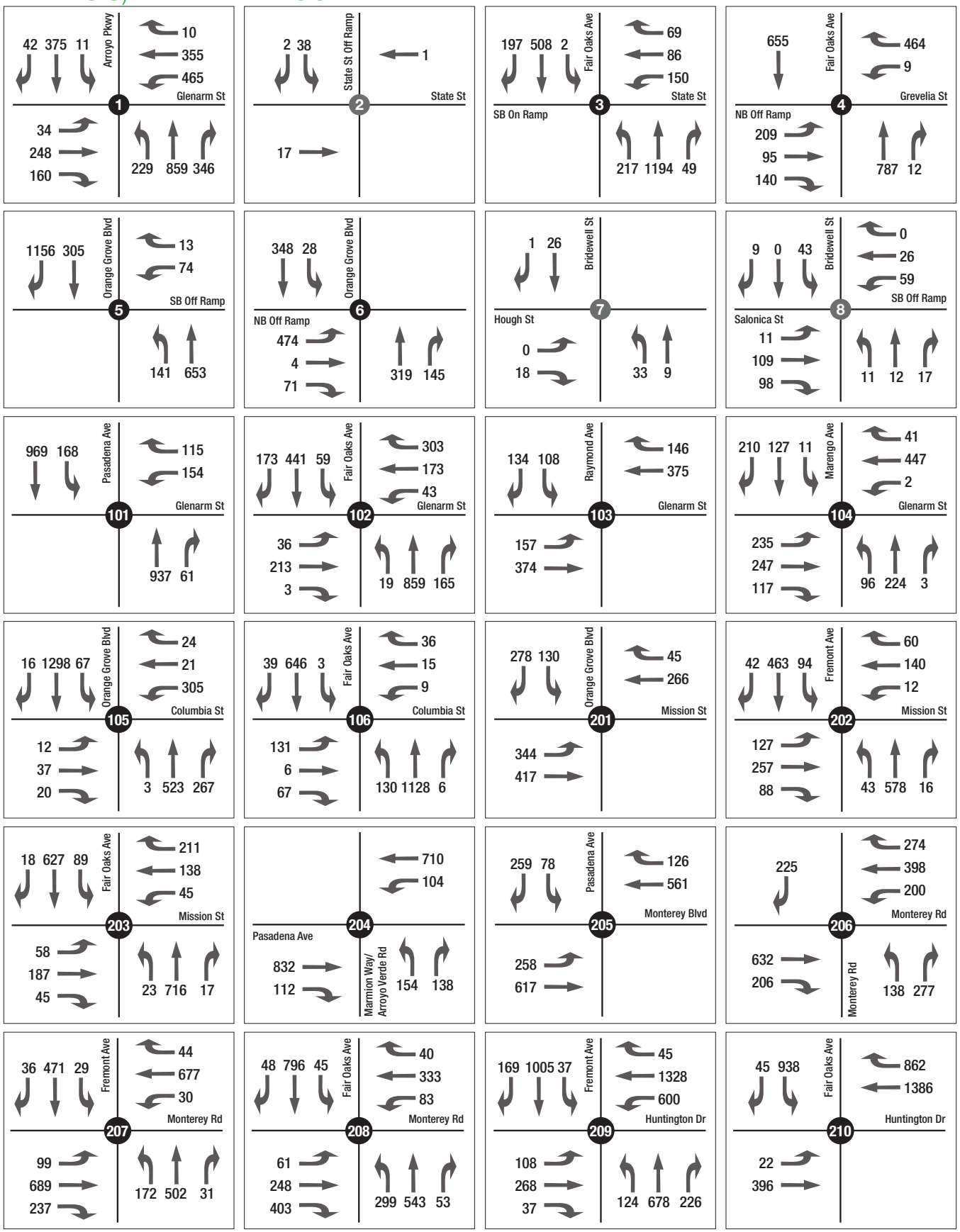


FIGURE 5.3B: INTERSECTION VOLUMES: CONCEPT 1 (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

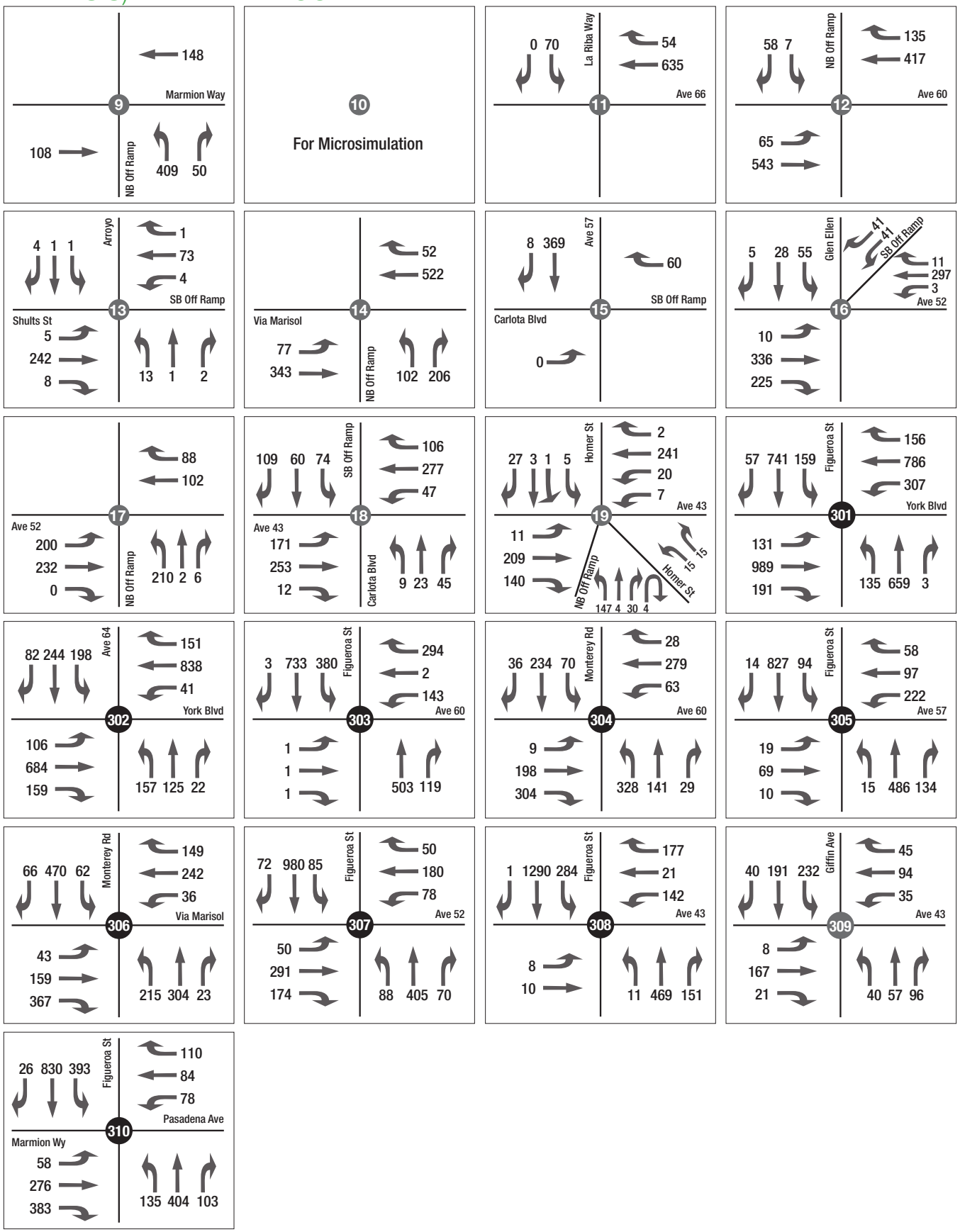


FIGURE 5.3C: INTERSECTION VOLUMES: CONCEPT 1 (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

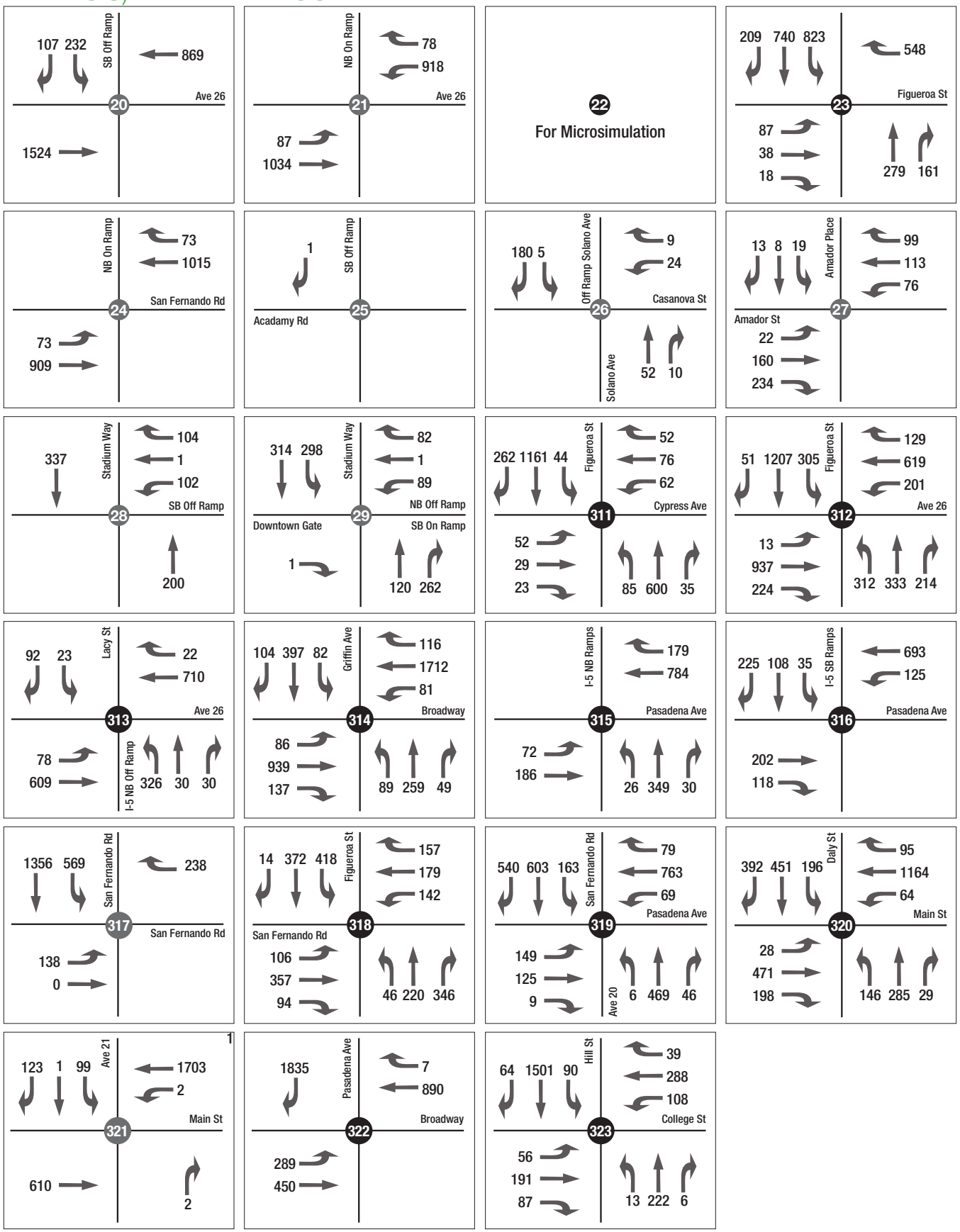


FIGURE 5.4A: INTERSECTION VOLUMES: CONCEPT 1 (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR

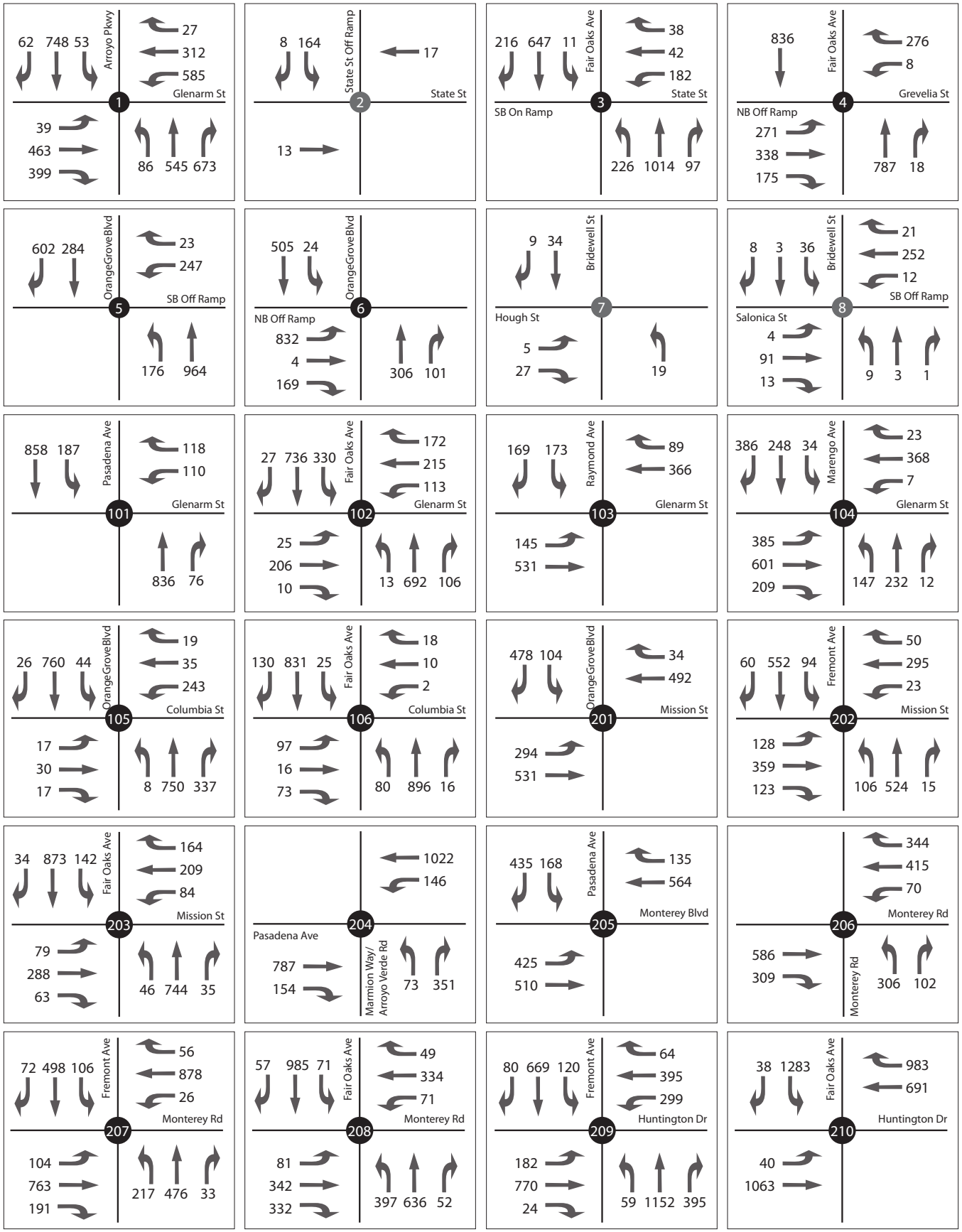


FIGURE 5.4B: INTERSECTION VOLUMES: CONCEPT 1 (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR

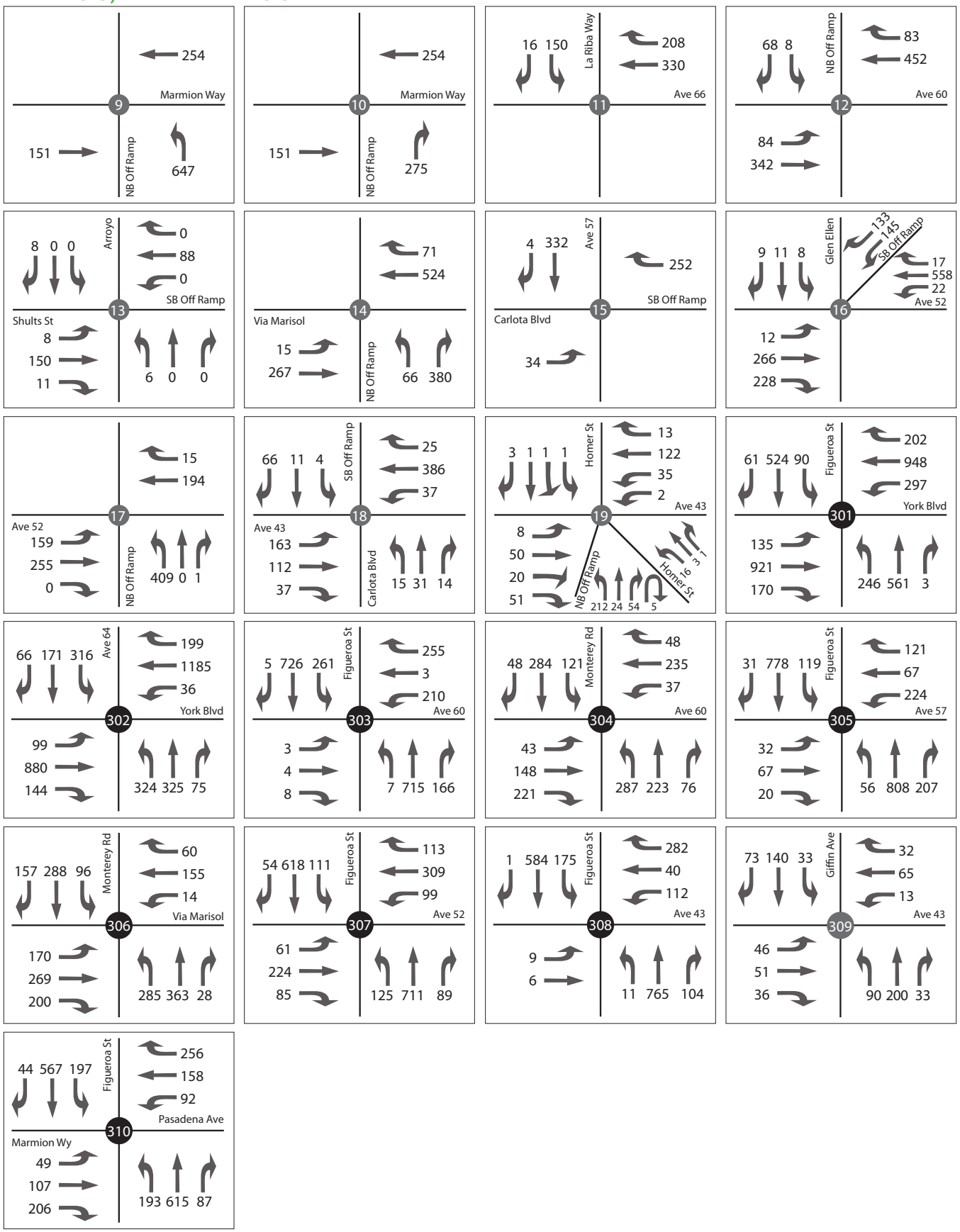
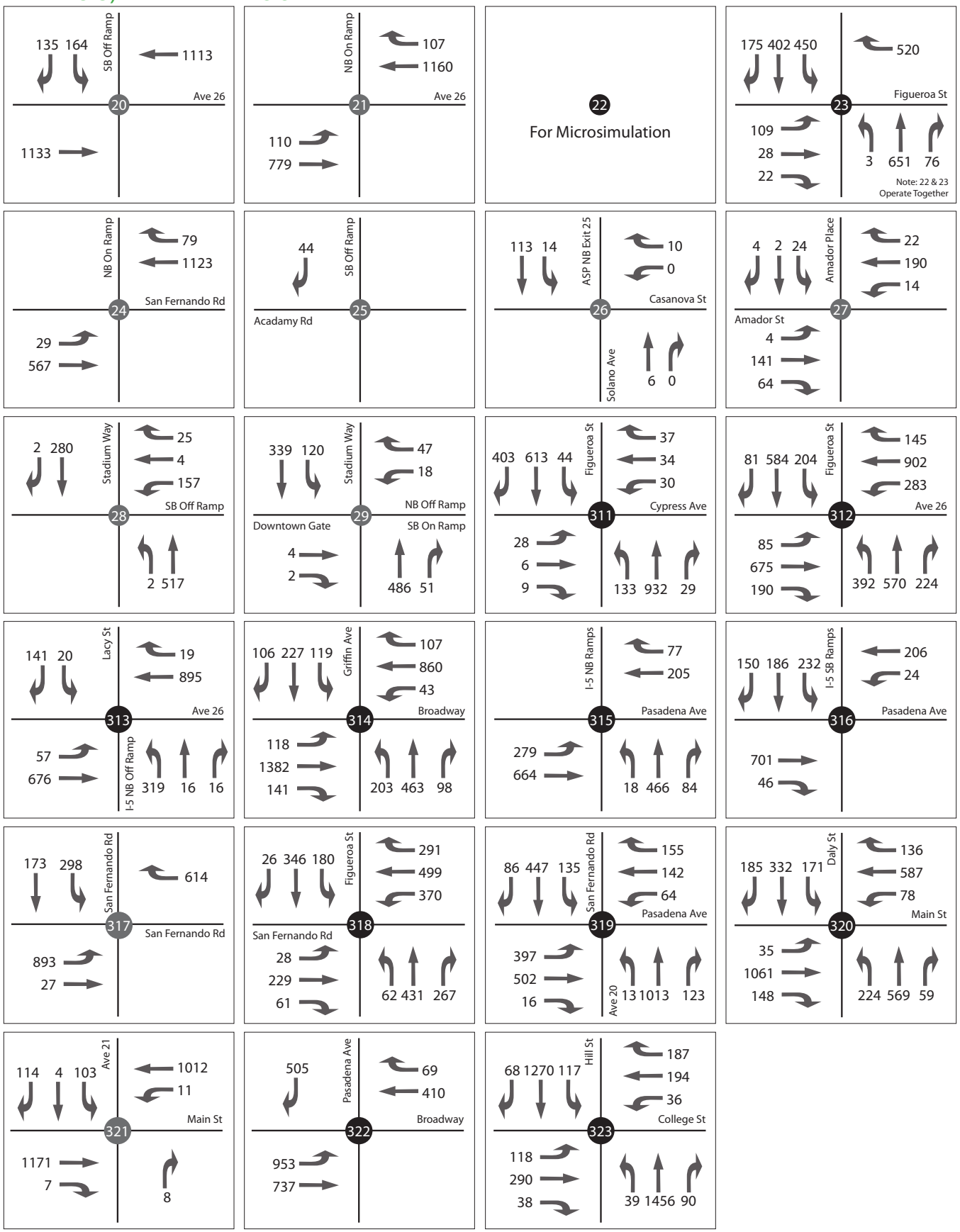


FIGURE 5.4C: INTERSECTION VOLUMES: CONCEPT 1 (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR



5.2 Intersection Level of Service

5.2.1 INTERSECTION LEVEL OF SERVICE ANALYSIS RESULTS FOR CONCEPT 1

A summary of the AM and PM peak hour level of service analysis results for Concept 1 and the changes compared to the No Build scenario are included in Table 5-3.

Table 5-3: Concept 1 LOS Results

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
1	Arroyo Pkwy & Glenarm St	X	AM	0.802	D	0.697	B	-0.105	
			PM	1.093	F	0.966	E	-0.127	
2	ASP SB Exit 31B & State St		AM	8.9 s	A	9.1 s	A	0.2 s	
			PM	9.8 s	A	9.9 s	A	0.1 s	
3	Fair Oaks Av & State St	X	AM	0.544	A	0.564	A	0.020	
			PM	0.537	A	0.547	A	0.010	
4	Fair Oaks Av & Grevelia St	X	AM	0.630	B	0.611	B	-0.019	
			PM	0.724	C	0.661	B	-0.063	
5	Orange Grove Bl & ASP SB Exit 31A	X	AM	0.373	A	0.377	A	0.004	
			PM	0.491	A	0.527	A	0.036	
6	Orange Grove Bl & ASP NB Exit 31A	X	AM	0.433	A	0.440	A	0.007	
			PM	0.685	B	0.702	C	0.017	
7	Bridewell St & Hough St		AM	9.0 s	A	8.8 s	A	-0.2 s	
			PM	9.0 s	A	8.8 s	A	-0.2 s	
8	Bridewell St & ASP SB Exit 30		AM	11.7 s	B	12.5 s	B	0.8 s	
			PM	12.6 s	B	12.2 s	B	-0.4 s	
9	ASP NB Exit 30A & Marmion Wy		AM	40.4 s	E	50.3 s	F	9.9 s	
			PM	929.8 s	F	941.0 s	F	11.2 s	
11	La Riba Wy & Ave 66		AM	22.0 s	C	21.3 s	C	-0.7 s	
			PM	16.7 s	C	14.8 s	B	-1.9 s	
12	ASP NB Exit 29 & Ave 60		AM	15.2 s	C	15.3 s	C	0.1 s	
			PM	21.2 s	C	17.3 s	C	-3.9 s	
14	ASP NB Exit 28B & Via Marisol		AM	24.2 s	C	29.5 s	D	5.3 s	
			PM	57.3 s	F	22.8 s	C	-34.5 s	
15	Ave 57 & ASP SB Exit 28B		AM	11.3 s	B	11.7 s	B	0.4 s	
			PM	11.4 s	B	12.9 s	B	1.5 s	
16	ASP SB Exit 28A & Ave 52		AM	12.4 s	B	11.5 s	B	-0.9 s	
			PM	14.0 s	B	14.2 s	B	0.2 s	**Warrant**
17	ASP NB Exit 28A & Ave 52		AM	13.4 s	B	13.2 s	B	-0.2 s	
			PM	18.1 s	C	17.4 s	C	-0.7 s	**Warrant**
18	ASP SB Exit 27 & Ave 43		AM	22.1 s	C	17.6 s	C	-4.5 s	
			PM	16.5 s	C	12.3 s	B	-4.2 s	
19	Homer St & Ave 43		AM	13.7 s	B	11.7 s	B	-2.0 s	
			PM	11.1 s	B	9.8 s	A	-1.3 s	

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
20	ASP SB Exit 26A & Ave 26		AM	828.7 s	F	839.3 s	F	10.6 s	Warrant
			PM	420.0 s	F	436.5 s	F	16.5 s	Warrant
21	ASP NB on-ramp & Ave 26		AM	11.5 s	B	11.7 s	B	0.2 s	
			PM	14.4 s	B	14.4 s	B	0.0 s	
23	ASP NB Exit 26B & Figueroa St	X	AM	0.761	C	0.777	C	0.016	
			PM	0.513	A	0.532	A	0.019	
24	ASP NB on-ramp & San Fernando		AM	12.4 s	B	12.1 s	B	-.3 s	
			PM	12.5 s	B	13.1 s	B	.6 s	
26	ASP NB Exit 25 & Casanova St		AM	9.7 s	A	9.9 s	A	.2 s	
			PM	9.7 s	A	9.6 s	A	-.1 s	
27	Amador Pl & Amador St		AM	14.8 s	B	14.0 s	B	-.8 s	
			PM	11.5 s	B	11.5 s	B	.0 s	
28	Stadium Wy & ASP SB Exit 24D		AM	12.8 s	B	12.6 s	B	-.2 s	
			PM	22.9 s	C	21.0 s	C	-1.9 s	
29	Stadium Wy & ASP NB Exit 24B		AM	13.0 s	B	12.8 s	B	-.2 s	
			PM	16.4 s	C	16.0 s	C	-.4 s	
101	Pasadena Av & Glenarm St	X	AM	0.609	B	0.593	A	-0.016	
			PM	0.589	A	0.587	A	-0.002	
102	Fair Oaks Av & Glenarm St	X	AM	0.765	C	0.723	C	-0.042	
			PM	0.895	D	0.814	D	-0.081	
103	Raymond Av & Glenarm St	X	AM	0.469	A	0.404	A	-0.065	
			PM	0.499	A	0.436	A	-0.063	
104	Marengo Av & Glenarm St	X	AM	0.781	C	0.719	C	-0.062	
			PM	0.893	D	0.804	D	-0.089	
105	Orange Grove Bl & Columbia St	X	AM	0.720	C	0.730	C	0.010	
			PM	0.550	A	0.567	A	0.017	
106	Fair Oaks Av & Columbia St	X	AM	0.558	A	0.589	A	0.031	
			PM	0.553	A	0.569	A	0.016	
201	Orange Grove Bl & Mission St	X	AM	0.479	A	0.485	A	0.006	
			PM	0.537	A	0.554	A	0.017	
202	Fremont Av & Mission St	X	AM	0.704	C	0.688	B	-0.016	
			PM	0.754	C	0.765	C	0.011	
203	Fair Oaks Av & Mission St	X	AM	0.683	B	0.634	B	-0.049	
			PM	0.804	D	0.826	D	0.022	
204	Arroyo Verde Rd & Pasadena Av	X	AM	0.464	A	0.554	A	0.090	
			PM	0.621	B	0.660	B	0.039	
205	Pasadena Av & Monterey Rd	X	AM	0.582	A	0.626	B	0.044	
			PM	0.714	C	0.779	C	0.065	
206	Monterey Rd & Monterey Rd	X	AM	0.686	B	0.754	C	0.068	
			PM	0.356	A	0.391	A	0.035	
207	Fremont Av &	X	AM	0.801	D	0.806	D	0.005	

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
	Monterey Rd		PM	0.903	E	0.892	D	-0.011	
208	Fair Oaks Av & Monterey Rd	X	AM	1.026	F	1.023	F	-0.003	
			PM	1.131	F	1.125	F	-0.006	
209	Fremont Av & Huntington Dr	X	AM	1.311	F	1.355	F	0.044	Impact
			PM	1.361	F	1.390	F	0.029	Impact
210	Fair Oaks Av & Huntington Dr	X	AM	1.096	F	1.082	F	-0.014	
			PM	1.317	F	1.282	F	-0.035	
301	Figueroa St & York Bl	X	AM	0.995	E	1.027	F	0.032	Impact
			PM	0.968	E	1.022	F	0.054	Impact
302	Ave 64 & York Bl	X	AM	0.815	D	0.788	C	-0.027	
			PM	1.069	F	1.099	F	0.030	Impact
303	Figueroa St & Ave 60	X	AM	0.603	B	0.624	B	0.021	
			PM	0.689	B	0.705	C	0.016	
304	Monterey Rd & Ave 60	X	AM	0.864	D	0.915	E	0.051	Impact
			PM	0.751	C	0.809	D	0.057	Impact
305	Figueroa St & Ave 57	X	AM	0.554	A	0.554	A	0.040	
			PM	0.807	D	0.767	C	-0.040	
306	Monterey Rd & Via Marisol	X	AM	0.727	C	0.747	C	0.020	
			PM	0.623	B	0.673	B	0.051	
307	Figueroa St & Ave 52	X	AM	0.840	D	0.869	D	0.029	Impact
			PM	0.801	D	0.772	C	-0.029	
308	Figueroa St & Ave 43	X	AM	0.663	B	0.673	B	0.010	
			PM	0.750	C	0.722	C	-0.028	
309	Griffin Av & Ave 43		AM	14.9 s	B	13.3 s	B	-1.6 s	
			PM	10.4 s	B	11.3 s	B	0.9 s	
310	Figueroa St & Marmion Wy	X	AM	0.715	C	0.754	C	0.039	
			PM	0.504	A	0.532	A	0.028	
311	Figueroa St & Cypress Av	X	AM	0.657	B	0.694	B	0.037	
			PM	0.526	A	0.541	A	0.015	
312	Figueroa St & Ave 26	X	AM	1.205	F	1.233	F	0.028	Impact
			PM	1.032	F	1.042	F	0.010	Impact
313	Lacy St & Ave 26	X	AM	0.534	A	0.546	A	0.012	
			PM	0.620	B	0.619	B	-0.001	
314	Griffin Av & Broadway	X	AM	0.718	C	0.727	C	0.009	
			PM	0.685	B	0.689	B	0.005	
315	I-5 NB ramps & Pasadena Av	X	AM	0.473	A	0.487	A	0.014	
			PM	0.465	A	0.429	A	-0.035	
316	I-5 SB ramps & Pasadena Av	X	AM	0.336	A	0.330	A	-0.006	
			PM	0.391	A	0.386	A	-0.005	
317	Ave 19 & San Fernando Rd		AM	OVERFL	F	OVERFL	F	#VALUE	
			PM	OVERFL	F	OVERFL	F	#VALUE	Warrant

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
318	Figueroa St & San Fernando Rd	X	AM	0.862	D	0.867	D	0.005	
			PM	0.874	D	0.852	D	-0.022	
319	San Fernando Rd & Pasadena Av	X	AM	0.954	E	0.933	E	-0.021	
			PM	1.399	F	1.431	F	0.031	Impact
320	Daly St & Main St	X	AM	1.002	F	1.013	F	0.011	Impact
			PM	1.034	F	1.037	F	0.003	
321	Ave 21 & Main St		AM	OVERFL	F	OVERFL	F	#VALUE	Warrant
			PM	885.8 s	F	911.8 s	F	26.0s	Warrant
322	Pasadena Av & Broadway	X	AM	0.963	E	0.968	E	0.005	
			PM	0.479	A	0.507	A	0.027	
323	Hill St & College St	X	AM	0.757	C	0.748	C	-0.009	
			PM	0.813	D	0.815	D	0.003	

Concept 1 results in impacts during one or both peak periods at the following signalized intersections:

- Fremont Avenue & Huntington Drive (#209)
- Figueroa Street & York Boulevard (#301)
- Avenue 64 & York Boulevard (#302)
- Monterey Road & Avenue 60 (#304)
- Figueroa Street & Avenue 52 (#307)
- Figueroa Street & Avenue 26 (#312)
- San Fernando Road & Pasadena Avenue (#319)
- Daly Street & Main Street (#320)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop-controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy any MUTCD Signal Warrants based on peak hour volume in this (or any) project scenarios.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay, but may not have sufficient storage capacity on the Arroyo Seco Parkway off-ramp to be appropriate for signal control:

- Arroyo Seco Parkway Southbound Exit 28A & Avenue 52 (#16)
- Arroyo Seco Parkway Northbound Exit 28A & Avenue 52 (#17)
- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)

The following unsignalized non-ramp intersections also satisfy MUTCD Signal Warrant 3 in the Concept 1 scenario:

- Avenue 19 & San Fernando Road (#317)
- Avenue 21 & Main Street (#321)

5.2.2 SR-710 SENSITIVITY ANALYSIS FOR CONCEPT 1 – INTERSECTION LOS

The SR-710 sensitivity analysis results for Concept 1 peak hour intersection level of service are included in Table 5-4.

Table 5-4: Concept 1 (SR-710 Sensitivity) LOS Results

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
1	Arroyo Pkwy & Glenarm St	X	AM	0.754	C	0.626	B	-0.128	
			PM	1.014	F	0.964	E	-0.050	
2	ASP SB Exit 31B & State St		AM	8.6 s	A	8.7 s	A	0.1 s	
			PM	9.0 s	A	9.4 s	A	0.4 s	
3	Fair Oaks Av & State St	X	AM	0.450	A	0.463	A	0.013	
			PM	0.396	A	0.424	A	0.028	
4	Fair Oaks Av & Grevelia St	X	AM	0.535	A	0.491	A	-0.044	
			PM	0.639	B	0.595	A	-0.044	
5	Orange Grove Bl & ASP SB Exit 31A	X	AM	0.349	A	0.333	A	-0.016	
			PM	0.436	A	0.470	A	0.034	
6	Orange Grove Bl & ASP NB Exit 31A	X	AM	0.390	A	0.389	A	-0.001	
			PM	0.611	B	0.630	B	0.019	
7	Bridewell St & Hough St		AM	8.8 s	A	8.5 s	A	-0.3 s	
			PM	8.7 s	A	8.6 s	A	-0.1 s	
8	Bridewell St & ASP SB Exit 30		AM	11.0 s	B	11.3 s	B	0.3 s	
			PM	11.9 s	B	11.7 s	B	-0.2 s	
9	ASP NB Exit 30A & Marmion Wy		AM	39.8 s	E	43.4 s	E	3.6 s	
			PM	905.0 s	F	798.8 s	F	-106.2 s	
11	La Riba Wy & Ave 66		AM	19.4 s	C	19.0 s	C	-0.4 s	
			PM	15.0 s	B	13.0 s	B	-2.0 s	
12	ASP NB Exit 29 & Ave 60		AM	13.6 s	B	13.5 s	B	-0.1 s	
			PM	14.7 s	B	13.3 s	B	-1.4 s	
14	ASP NB Exit 28B & Via Marisol		AM	23.6 s	C	26.4 s	D	2.8 s	
			PM	32.2 s	D	17.5 s	C	-14.7 s	
15	Ave 57 & ASP SB Exit 28B		AM	8.5 s	A	8.5 s	A	0.0 s	
			PM	11.5 s	B	13.1 s	B	1.6 s	
16	ASP SB Exit 28A & Ave 52		AM	11.8 s	B	11.1 s	B	-0.7 s	
			PM	14.2 s	B	14.2 s	B	0.0 s	**Warrant**
17	ASP NB Exit 28A & Ave 52		AM	12.8 s	B	12.3 s	B	-0.5 s	
			PM	16.7 s	C	16.6 s	C	-0.1 s	**Warrant**
18	ASP SB Exit 27 &		AM	22.1 s	C	16.9 s	C	-5.2 s	

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
	Ave 43		PM	15.3 s	C	12.1 s	B	-3.2 s	
19	Homer St & Ave 43		AM	13.2 s	B	11.4 s	B	-1.8 s	
			PM	10.6 s	B	9.9 s	A	-0.7 s	
20	ASP SB Exit 26A & Ave 26		AM	482.1 s	F	524.6 s	F	42.5 s	**Warrant**
			PM	284.0 s	F	289.0 s	F	5.0 s	**Warrant**
21	ASP NB on-ramp & Ave 26		AM	10.8 s	B	10.8 s	B	0.0 s	
			PM	13.3 s	B	13.1 s	B	-0.2 s	
23	ASP NB Exit 26B & Figueroa St	X	AM	0.741	C	0.767	C	0.026	
			PM	0.518	A	0.567	A	0.049	
24	ASP NB on-ramp & San Fernando		AM	11.4 s	B	11.3 s	B	-.1 s	
			PM	11.6 s	B	11.4 s	B	-.2 s	
26	ASP NB Exit 25 & Casanova St		AM	9.5 s	A	9.7 s	A	.2 s	
			PM	8.9 s	A	8.4 s	A	-.5 s	
27	Amador Pl & Amador St		AM	13.6 s	B	13.4 s	B	-.2 s	
			PM	11.2 s	B	11.2 s	B	.0 s	
28	Stadium Wy & ASP SB Exit 24D		AM	12.3 s	B	11.6 s	B	-.7 s	
			PM	21.1 s	C	19.1 s	C	-2.0 s	
29	Stadium Wy & ASP NB Exit 24B		AM	12.7 s	B	12.1 s	B	-.6 s	
			PM	15.2 s	C	14.6 s	B	-.6 s	
101	Pasadena Av & Glenarm St	X	AM	0.523	A	0.513	A	-0.010	
			PM	0.483	A	0.471	A	-0.012	
102	Fair Oaks Av & Glenarm St	X	AM	0.732	C	0.677	B	-0.055	
			PM	0.801	D	0.713	C	-0.088	
103	Raymond Av & Glenarm St	X	AM	0.478	A	0.416	A	-0.062	
			PM	0.513	A	0.425	A	-0.088	
104	Marengo Av & Glenarm St	X	AM	0.741	C	0.661	B	-0.080	
			PM	0.840	D	0.818	D	-0.022	
105	Orange Grove Bl & Columbia St	X	AM	0.659	B	0.667	B	0.008	
			PM	0.444	A	0.456	A	0.012	
106	Fair Oaks Av & Columbia St	X	AM	0.444	A	0.476	A	0.032	
			PM	0.421	A	0.430	A	0.009	
201	Orange Grove Bl & Mission St	X	AM	0.417	A	0.399	A	-0.018	
			PM	0.469	A	0.498	A	0.029	
202	Fremont Av & Mission St	X	AM	0.564	A	0.562	A	-0.002	
			PM	0.616	B	0.599	A	-0.017	
203	Fair Oaks Av & Mission St	X	AM	0.592	A	0.539	A	-0.053	
			PM	0.666	B	0.615	B	-0.051	

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
204	Arroyo Verde Rd & Pasadena Av	X	AM	0.456	A	0.543	A	0.087	
			PM	0.625	B	0.650	B	0.025	
205	Pasadena Av & Monterey Rd	X	AM	0.510	A	0.538	A	0.028	
			PM	0.681	B	0.756	C	0.075	
206	Monterey Rd & Monterey Rd	X	AM	0.593	A	0.636	B	0.043	
			PM	0.309	A	0.343	A	0.034	
207	Fremont Av & Monterey Rd	X	AM	0.703	C	0.710	C	0.007	
			PM	0.805	D	0.804	D	-0.001	
208	Fair Oaks Av & Monterey Rd	X	AM	0.734	C	0.754	C	0.020	
			PM	0.829	D	0.829	D	0.000	
209	Fremont Av & Huntington Dr	X	AM	1.143	F	1.144	F	0.001	
			PM	1.123	F	1.147	F	0.024	Impact
210	Fair Oaks Av & Huntington Dr	X	AM	0.940	E	0.872	D	-0.068	
			PM	0.671	B	0.667	B	-0.004	
301	Figueroa St & York Bl	X	AM	0.941	E	0.973	E	0.032	Impact
			PM	0.912	E	0.971	E	0.058	Impact
302	Ave 64 & York Bl	X	AM	0.774	C	0.760	C	-0.014	
			PM	1.033	F	1.058	F	0.025	Impact
303	Figueroa St & Ave 60	X	AM	0.578	A	0.609	B	0.031	
			PM	0.653	B	0.674	B	0.021	
304	Monterey Rd & Ave 60	X	AM	0.763	C	0.819	D	0.056	Impact
			PM	0.659	B	0.710	C	0.051	Impact
305	Figueroa St & Ave 57	X	AM	0.510	A	0.556	A	0.046	
			PM	0.775	C	0.715	C	-0.059	
306	Monterey Rd & Via Marisol	X	AM	0.625	B	0.654	B	0.029	
			PM	0.526	A	0.598	A	0.072	
307	Figueroa St & Ave 52	X	AM	0.819	D	0.846	D	0.027	Impact
			PM	0.779	C	0.767	C	-0.012	
308	Figueroa St & Ave 43	X	AM	0.673	B	0.669	B	-0.004	
			PM	0.731	C	0.703	C	-0.029	
309	Griffin Av & Ave 43		AM	12.5 s	B	11.5 s	B	-1.0 s	
			PM	9.6 s	A	10.1 s	B	0.5 s	
310	Figueroa St & Marmion Wy	X	AM	0.695	B	0.731	C	0.036	
			PM	0.502	A	0.531	A	0.028	
311	Figueroa St & Cypress Av	X	AM	0.572	A	0.607	B	0.035	
			PM	0.424	A	0.457	A	0.033	
312	Figueroa St & Ave	X	AM	1.195	F	1.234	F	0.039	Impact

No.	Intersection	Signal	Peak	No Project		Concept 1		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
	26		PM	1.011	F	1.019	F	0.008	
313	Lacy St & Ave 26	X	AM	0.480	A	0.485	A	0.005	
			PM	0.572	A	0.564	A	-0.008	
314	Griffin Av & Broadway	X	AM	0.677	B	0.690	B	0.013	
			PM	0.611	B	0.632	B	0.021	
315	I-5 NB ramps & Pasadena Av	X	AM	0.491	A	0.505	A	0.013	
			PM	0.468	A	0.469	A	0.001	
316	I-5 SB ramps & Pasadena Av	X	AM	0.322	A	0.313	A	-0.009	
			PM	0.424	A	0.419	A	-0.005	
317	Ave 19 & San Fernando Rd		AM	OVERFL	F	OVERFL	F		
			PM	OVERFL	F	OVERFL	F		**Warrant**
318	Figueroa St & San Fernando Rd	X	AM	0.763	C	0.744	C	-0.019	
			PM	0.746	C	0.733	C	-0.013	
319	San Fernando Rd & Pasadena Av	X	AM	0.868	D	0.855	D	-0.013	
			PM	1.277	F	1.253	F	-0.023	
320	Daly St & Main St	X	AM	0.905	E	0.903	E	-0.002	
			PM	0.836	D	0.825	D	-0.011	
321	Ave 21 & Main St		AM	642.4 s	F	483.3 s	F	-159.1 s	**Warrant**
			PM	237.8 s	F	195.8 s	F	-42.0 s	**Warrant**
322	Pasadena Av & Broadway	X	AM	0.964	E	0.969	E	0.005	
			PM	0.497	A	0.513	A	0.016	
323	Hill St & College St	X	AM	0.743	C	0.733	C	-0.009	
			PM	0.783	C	0.823	D	0.040	**Impact**

In the SR-710 sensitivity analysis, Concept 1 results in impacts during one or both peak periods at the following signalized intersections:

- Fremont Avenue & Huntington Drive (#209)
- Figueroa Street & York Boulevard (#301)
- Avenue 64 & York Boulevard (#302)
- Monterey Road & Avenue 60 (#304)
- Figueroa Street & Avenue 52 (#307)
- Figueroa Street & Avenue 26 (#312)
- Hill Street & College Street (#323)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop-controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy any MUTCD Signal Warrants based on peak hour volume in this (or any) project scenarios.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay, but may not have sufficient storage capacity on the Arroyo Seco Parkway off-ramp to be appropriate for signal control:

- Arroyo Seco Parkway Southbound Exit 28A & Avenue 52 (#16)
- Arroyo Seco Parkway Northbound Exit 28A & Avenue 52 (#17)
- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)

The following unsignalized non-ramp intersections also satisfy MUTCD Signal Warrant 3 in the Concept 1 (SR-710 Sensitivity Analysis) scenario:

- Avenue 19 & San Fernando Road (#317)
- Avenue 21 & Main Street (#321)

5.2.3 VARIATION BETWEEN BASELINE AND SR-710 SENSITIVITY ANALYSIS

The intersection of Daly Street & Main Street (#320) is impacted in the baseline condition for Concept 1 but is not forecast to experience impacts in the SR-710 sensitivity analysis.

The following intersections are not impacted in the baseline condition for this scenario but experience impacts in the SR-710 sensitivity analysis:

- Hill Street & College Street (#323)

5.3 Mainline Analysis

5.3.1 MAINLINE ANALYSIS RESULTS FOR CONCEPT 1

The results of the mainline analysis for the northbound basic segments of Arroyo Seco Parkway in Concept 1 are presented in Table 5-5. The results for the southbound basic segments are presented in Table 5-6. The changes in density and LOS associated with Concept 1 are summarized in Tables 5-7 and 5-8.

Table 5-5 Concept 1 Arroyo Seco Parkway Segment LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	--	AM	6,010	29.7	D
			PM	9,620	67.6	F
Between Solano Ave and NB I-5 / Riverside Dr	4	--	AM	5,821	28.8	D
			PM	9,463	63.8	F
Between NB I-5 / Riverside Dr and Figueroa St	3	--	AM	3,435	27.6	D
			PM	5,396	> 45.0	F
Between Figueroa St and San Fernando Rd	3	--	AM	2,897	23.3	C
			PM	4,514	37.2	E
Between San Fernando Rd and Ave 26	3	--	AM	2,969	24.5	C
			PM	4,631	38.4	E
Between Ave 26 and Ave 43	2	1	AM	3,962	31.9	D
			PM	6,135	> 45.0	F
Between Ave 43 off and Ave 43 on	2	--	AM	3,684	> 45.0	F
			PM	5,736	> 45.0	F
Between Ave 43 and Ave 52	2	1	AM	3,699	29.8	D
			PM	5,741	> 45.0	F
Between Ave 52 off and Ave 52 on	2	--	AM	3,329	42.2	E
			PM	5,144	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	2	1	AM	3,469	27.9	D
			PM	5,286	> 45.0	F
Between Ave 57 off and Ave 57 on	2	--	AM	3,052	37.8	E
			PM	4,729	> 45.0	F
Between Ave 57 / Via Marisol and Ave 60	2	1	AM	3,117	25.1	C
			PM	4,794	40.1	E
Between Ave 60 off and Ave 60 on	2	--	AM	3,014	37.3	E
			PM	4,663	> 45.0	F
Between Ave 60 and Ave 64 / Marmion Way	2	1	AM	3,131	25.2	C
			PM	4,862	40.8	E
Between Ave 64 / Marmion Way and Bridewell St	3	--	AM	2,572	20.7	C
			PM	3,934	31.7	D

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Between Bridewell St and Orange Grove Ave	2	1	AM	2,553	20.5	C
			PM	3,860	31.1	D
Between Orange Grove Ave off and Orange Grove Ave on	2	--	AM	1,871	22.6	C
			PM	2,826	34.5	D
Between Orange Grove Ave and Fair Oaks Ave	2	1	AM	2,014	16.2	B
			PM	3,020	24.3	C
Downstream of Fair Oaks Ave	3	--	AM	1,575	12.7	B
			PM	2,360	19.0	C

Table 5-6 Concept 1 Arroyo Seco Parkway Segment LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,336	6.6	A
			PM	1,114	5.5	A
Upstream of Fair Oaks Ave	2	1	AM	1,166	9.4	A
			PM	988	7.9	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	1,829	14.7	B
			PM	1,590	12.8	B
Between Orange Grove Ave off and Orange Grove Ave on	2	--	AM	1,707	20.6	C
			PM	1,348	16.3	B
Between Orange Grove Ave and York Blvd	2	1	AM	2,863	23.0	C
			PM	2,252	18.1	C
Between York Ave off and York Ave on	2	--	AM	2,771	33.7	D
			PM	2,065	24.9	C
Between York Blvd and Ave 64 / Marmion Wy	2	0	AM	3,059	37.9	E
			PM	2,301	27.8	D
Between Ave 64 / Marmion Wy and Ave 60	2	1	AM	3,799	30.6	D
			PM	2,791	22.5	C
Between Ave 60 off and Ave 60 on	2	--	AM	3,660	> 45.0	F
			PM	2,645	32.0	D
Between Ave 60 and Ave 57 / Via Marisol	2	1	AM	3,752	30.2	D
			PM	2,793	22.5	C
Between Ave 57 off and Ave 57 on	2	--	AM	3,678	> 45.0	F
			PM	2,731	33.2	D
Between Ave 57 / Via Marisol and Ave 52	2	1	AM	3,988	32.2	D
			PM	3,116	25.1	C
Between Ave 52 off and Ave 52 on	2	--	AM	3,959	> 45.0	F
			PM	2,916	35.8	E

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Between Ave 52 and Ave 43	2	1	AM	4,462	36.7	E
			PM	3,336	26.8	D
Between Ave 43 off and Ave 43 on	2	--	AM	4,328	> 45.0	F
			PM	3,331	42.2	E
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	4,764	39.8	E
			PM	3,638	29.3	D
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,498	28.9	D
			PM	2,770	22.3	C
Between Ave 26 and Figueroa St	3	0	AM	3,296	26.5	D
			PM	2,627	21.1	C
Between Figueroa St and SB I-5	3	0	AM	4,275	34.8	D
			PM	3,365	27.1	D
Between SB I-5 and Academy Rd	3	2	AM	8,457	33.4	D
			PM	6,274	24.8	C
Between Academy Rd and Amador St	3	2	AM	8,440	33.4	D
			PM	6,224	24.6	C
Downstream of Amador	3	2	AM	8,686	34.4	D
			PM	6,418	25.4	C

Table 5-7 Changes to Segment LOS in Concept 1 – Northbound

Segment of Northbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	AM	30.2	D	29.7	D	-0.5	
	PM	69.9	F	67.6	F	-2.3	
Between Solano Ave and NB I-5 / Riverside Dr	AM	29.6	D	28.8	D	-0.8	
	PM	69.7	F	63.8	F	-5.9	
Between NB I-5 / Riverside Dr and Figueroa St	AM	24.0	C	27.6	D	3.6	YES
	PM	40.6	E	> 45.0	F	N/A	YES
Between Figueroa St and San Fernando Rd	AM	20.6	C	23.3	C	2.7	
	PM	33.3	D	37.2	E	3.9	YES
Between San Fernando Rd and Ave 26	AM	21.1	C	24.5	C	3.4	
	PM	33.8	D	38.4	E	4.6	YES
Between Ave 26 and Ave 43	AM	28.9	D	31.9	D	3.0	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 43 off and Ave 43 on	AM	26.8	D	> 45.0	F	N/A	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 43 and Ave 52	AM	27.7	D	29.8	D	2.1	
	PM	> 45.0	F	> 45.0	F	N/A	

Segment of Northbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Between Ave 52 off and Ave 52 on	AM	24.8	C	42.2	E	17.4	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 52 and Ave 57 / Via Marisol	AM	25.6	C	27.9	D	2.3	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 57 off and Ave 57 on	AM	23.1	C	37.8	E	14.7	YES
	PM	38.1	E	> 45.0	F	N/A	YES
Between Ave 57 / Via Marisol and Ave 60	AM	23.7	C	25.1	C	1.4	
	PM	38.7	E	40.1	E	1.4	
Between Ave 60 off and Ave 60 on	AM	23.0	C	37.3	E	14.3	YES
	PM	37.3	E	> 45.0	F	N/A	YES
Between Ave 60 and Ave 64 / Marmion Way	AM	23.8	C	25.2	C	1.4	
	PM	39.1	E	40.8	E	1.7	
Between Ave 64 / Marmion Way and Bridewell St	AM	20.3	C	20.7	C	0.4	
	PM	31.3	D	31.7	D	0.4	
Between Bridewell St and Orange Grove Ave	AM	19.7	C	20.5	C	0.8	
	PM	30.4	D	31.1	D	0.7	
Between Orange Grove Ave off and Orange Grove Ave on	AM	15.0	B	22.6	C	7.6	YES
	PM	22.5	C	34.5	D	12.0	YES
Between Orange Grove Ave and Fair Oaks Ave	AM	16.1	B	16.2	B	0.1	
	PM	23.8	C	24.3	C	0.5	
Downstream of Fair Oaks Ave	AM	12.1	B	12.7	B	0.6	
	PM	17.6	B	19.0	C	1.4	YES

Table 5-8 Changes to Segment LOS in Concept 1 – Southbound

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of State St	AM	8.1	A	6.6	A	-1.5	
	PM	6.7	A	5.5	A	-1.2	
Upstream of Fair Oaks Ave	AM	9.9	A	9.4	A	-0.5	
	PM	8.4	A	7.9	A	-0.5	
Between Fair Oaks Ave and Orange Grove Ave	AM	15.7	B	14.7	B	-1.0	
	PM	13.1	B	12.8	B	-0.3	
Between Orange Grove Ave off and Orange Grove Ave on	AM	22.6	C	20.6	C	-2.0	
	PM	18.2	C	16.3	B	-1.9	
Between Orange Grove Ave and York Blvd	AM	22.8	C	23.0	C	0.2	
	PM	18.4	C	18.1	C	-0.3	

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Between York Ave off and York Ave on	AM	22.4	C	33.7	D	11.3	YES
	PM	17.1	B	24.9	C	7.8	YES
Between York Blvd and Ave 64 / Marmion Wy	AM	24.3	C	37.9	E	13.6	YES
	PM	18.9	C	27.8	D	8.9	YES
Between Ave 64 / Marmion Wy and Ave 60	AM	30.2	D	30.6	D	0.4	
	PM	22.7	C	22.5	C	-0.2	
Between Ave 60 off and Ave 60 on	AM	29.0	D	> 45.0	F	N/A	YES
	PM	21.1	C	32.0	D	10.9	YES
Between Ave 60 and Ave 57 / Via Marisol	AM	29.9	D	30.2	D	0.3	
	PM	22.1	C	22.5	C	0.4	
Between Ave 57 off and Ave 57 on	AM	29.3	D	> 45.0	F	N/A	YES
	PM	21.7	C	33.2	D	11.5	YES
Between Ave 57 / Via Marisol and Ave 52	AM	31.4	D	32.2	D	0.8	
	PM	23.6	C	25.1	C	1.5	
Between Ave 52 off and Ave 52 on	AM	31.0	D	> 45.0	F	N/A	YES
	PM	22.6	C	35.8	E	13.2	YES
Between Ave 52 and Ave 43	AM	36.3	E	36.7	E	0.4	
	PM	25.9	C	26.8	D	0.9	YES
Between Ave 43 off and Ave 43 on	AM	34.7	D	> 45.0	F	N/A	YES
	PM	25.1	C	42.2	E	17.1	YES
Between Ave 43 and I-5 / Pasadena Ave	AM	38.4	E	39.8	E	1.4	
	PM	27.5	D	29.3	D	1.8	
Between I-5 / Pasadena Ave and Ave 26	AM	25.4	C	28.9	D	3.5	YES
	PM	20.3	C	22.3	C	2.0	
Between Ave 26 and Figueroa St	AM	23.9	C	26.5	D	2.6	YES
	PM	19.2	C	21.1	C	1.9	
Between Figueroa St and SB I-5	AM	30.6	D	34.8	D	4.2	
	PM	23.8	C	27.1	D	3.3	YES
Between SB I-5 and Academy Rd	AM	34.6	D	33.4	D	-1.2	
	PM	25.6	C	24.8	C	-0.8	
Between Academy Rd and Amador St	AM	34.2	D	33.4	D	-0.8	
	PM	25.4	C	24.6	C	-0.8	
Downstream of Amador	AM	35.1	E	34.4	D	-0.7	
	PM	25.9	C	25.4	C	-0.5	

In Concept 1, the forecast peak hour mainline volumes on Arroyo Seco Parkway exceed the capacity during one or both peak periods at the following locations:

- Northbound between Stadium Way and Figueroa Street
- Northbound between Avenue 26 and Avenue 57
- Northbound between the Avenue 60 off-ramp and the Avenue 60 on-ramp
- Southbound between the Avenue 60 off-ramp and the Avenue 60 on-ramp
- Southbound between the Avenue 57 off-ramp and the Avenue 57 on-ramp
- Southbound between the Avenue 52 off-ramp and the Avenue 52 on-ramp
- Southbound between the Avenue 43 off-ramp and the Avenue 43 on-ramp

5.3.2 SR-710 SENSITIVITY ANALYSIS FOR CONCEPT 1 - MAINLINE

The results of the mainline analysis for the basic northbound and southbound segments of Arroyo Seco Parkway in the SR-710 sensitivity analysis with Concept 1 are presented in Tables 5-9 and 5-10. The changes in density and LOS are summarized in Tables 5-11 and 5-12.

Table 5-9 Concept 1 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	0	AM	6,008	29.7	D
			PM	9,653	68.5	F
Between Solano Ave and NB I-5 / Riverside Dr	4	0	AM	5,898	29.1	D
			PM	9,465	63.8	F
Between NB I-5 / Riverside Dr and Figueroa St	3	0	AM	3,478	28.0	D
			PM	5,390	> 45.0	F
Between Figueroa St and San Fernando Rd	3	0	AM	2,926	23.6	C
			PM	4,516	37.2	E
Between San Fernando Rd and Ave 26	3	0	AM	2,998	24.7	C
			PM	4,638	38.4	E
Between Ave 26 and Ave 43	2	1	AM	3,930	31.7	D
			PM	6,022	> 45.0	F
Between Ave 43 off and Ave 43 on	2	--	AM	3,640	> 45.0	F
			PM	5,622	> 45.0	F
Between Ave 43 and Ave 52	2	1	AM	3,665	29.5	D
			PM	5,660	> 45.0	F
Between Ave 52 off and Ave 52 on	2	--	AM	3,292	41.6	E
			PM	5,087	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	2	1	AM	3,443	27.7	D
			PM	5,207	44.6	E
Between Ave 57 off and	2	--	AM	3,026	37.4	E

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Ave 57 on			PM	4,664	> 45.0	F
Between Ave 57 / Via Marisol and Ave 60	2	1	AM	3,105	25.0	C
			PM	4,730	39.4	E
Between Ave 60 off and Ave 60 on	2	--	AM	2,998	37.0	E
			PM	4,618	> 45.0	F
Between Ave 60 and Ave 64 / Marmion Way	2	1	AM	3,050	24.6	C
			PM	4,731	39.4	E
Between Ave 64 / Marmion Way and Bridewell St	3	0	AM	2,521	20.3	C
			PM	3,840	30.9	D
Between Bridewell St and Orange Grove Ave	2	1	AM	2,510	20.2	C
			PM	3,791	30.5	D
Between Orange Grove Ave off and Orange Grove Ave on	2	--	AM	1,835	22.2	C
			PM	2,788	34.0	D
Between Orange Grove Ave and Fair Oaks Ave	2	1	AM	1,987	16.0	B
			PM	2,918	23.5	C
Downstream of Fair Oaks Ave	3	0	AM	1,454	11.7	B
			PM	2,084	16.8	B

Table 5-10 Concept 1 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,065	5.3	A
			PM	974	4.8	A
Upstream of Fair Oaks Ave	2	1	AM	975	7.8	A
			PM	918	7.4	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	1,787	14.4	B
			PM	1,566	12.6	B
Between Orange Grove Ave off and Orange Grove Ave on	2	--	AM	1,691	20.4	C
			PM	1,332	16.1	B
Between Orange Grove Ave and York Blvd	3	0	AM	2,830	22.8	C
			PM	2,284	18.4	C
Between York Blvd off and York Blvd on	2	--	AM	2,736	33.2	D
			PM	2,098	25.3	C
Between York Blvd and Ave 64 / Marmion Wy	3	0	AM	2,947	36.3	E
			PM	2,303	27.8	D
Between Ave 64 / Marmion Wy and Ave 60	3	0	AM	3,629	29.2	D
			PM	2,737	22.0	C
Between Ave 60 off and	2	--	AM	3,514	> 45.0	F

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Ave 60 on			PM	2,646	32.0	D
Between Ave 60 and Ave 57 / Via Marisol	3	0	AM	3,625	29.2	D
			PM	2,789	22.4	C
Between Ave 57 off and Ave 57 on	2	--	AM	3,551	> 45.0	F
			PM	2,710	32.9	D
Between Ave 57 / Via Marisol and Ave 52	3	0	AM	3,835	30.9	D
			PM	3,129	25.2	C
Between Ave 52 off and Ave 52 on	2	--	AM	3,830	> 45.0	F
			PM	2,948	36.3	E
Between Ave 52 and Ave 43	3	0	AM	4,370	35.8	E
			PM	3,371	27.1	D
Between Ave 43 off and Ave 43 on	2	--	AM	4,234	> 45.0	F
			PM	3,368	42.8	E
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	4,663	38.7	E
			PM	3,679	29.6	D
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,458	28.5	D
			PM	2,800	22.5	C
Between Ave 26 and Figueroa St	3	0	AM	3,258	26.2	D
			PM	2,659	21.4	C
Between Figueroa St and SB I-5	3	0	AM	4,231	34.4	D
			PM	3,398	27.4	D
Between SB I-5 and Academy Rd	3	2	AM	8,435	33.4	D
			PM	6,335	25.0	C
Between Academy Rd and Amador St	3	2	AM	8,430	33.3	D
			PM	6,282	24.8	C
Downstream of Amador	3	2	AM	8,628	34.2	D
			PM	6,426	25.4	C

Table 5-11 Changes to Segment LOS in Concept 1 (SR-710 Sensitivity) – Northbound

Segment of Northbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	AM	30.4	D	29.7	D	-0.7	
	PM	70.7	F	68.5	F	-2.2	
Between Solano Ave and NB I-5 / Riverside Dr	AM	30.1	D	29.1	D	-1.0	
	PM	70.1	F	63.8	F	-6.3	
Between NB I-5 / Riverside Dr and Figueroa St	AM	24.5	C	28.0	D	3.5	YES
	PM	40.3	E	> 45.0	F	N/A	YES
Between Figueroa St and	AM	21.0	C	23.6	C	2.6	

Segment of Northbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
San Fernando Rd	PM	33.1	D	37.2	E	4.1	YES
Between San Fernando Rd and Ave 26	AM	21.5	C	24.7	C	3.2	
	PM	34.2	D	38.4	E	4.2	YES
Between Ave 26 and Ave 43	AM	29.0	D	31.7	D	2.7	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 43 off and Ave 43 on	AM	26.7	D	> 45.0	F	N/A	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 43 and Ave 52	AM	27.6	D	29.5	D	1.9	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 52 off and Ave 52 on	AM	24.7	C	41.6	E	16.9	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 52 and Ave 57 / Via Marisol	AM	25.7	C	27.7	D	2.0	YES
	PM	> 45.0	F	44.6	E	N/A	YES
Between Ave 57 off and Ave 57 on	AM	23.1	C	37.4	E	14.3	YES
	PM	37.5	E	> 45.0	F	N/A	YES
Between Ave 57 / Via Marisol and Ave 60	AM	23.8	C	25.0	C	1.2	
	PM	38.2	E	39.4	E	1.2	
Between Ave 60 off and Ave 60 on	AM	23.1	C	37.0	E	13.9	YES
	PM	37.0	E	> 45.0	F	N/A	YES
Between Ave 60 and Ave 64 / Marmion Way	AM	23.5	C	24.6	C	1.1	
	PM	38.1	E	39.4	E	1.3	
Between Ave 64 / Marmion Way and Bridewell St	AM	20.0	C	20.3	C	0.3	
	PM	30.6	D	30.9	D	0.3	
Between Bridewell St and Orange Grove Ave	AM	19.5	C	20.2	C	0.7	
	PM	30.0	D	30.5	D	0.5	
Between Orange Grove Ave off and Orange Grove Ave on	AM	14.8	B	22.2	C	7.4	YES
	PM	22.4	C	34.0	D	11.6	YES
Between Orange Grove Ave and Fair Oaks Ave	AM	15.8	B	16.0	B	0.2	
	PM	23.2	C	23.5	C	0.3	
Downstream of Fair Oaks Ave	AM	11.3	B	11.7	B	0.4	
	PM	16.3	B	16.8	B	0.5	

Table 5-12 Changes to Segment LOS in Concept 1 (SR-710 Sensitivity) – Southbound

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of State St	AM	7.1	A	5.3	A	-1.8	
	PM	6.1	A	4.8	A	-1.3	
Upstream of Fair Oaks Ave	AM	9.0	A	7.8	A	-1.2	
	PM	8.2	A	7.4	A	-0.8	
Between Fair Oaks Ave and Orange Grove Ave	AM	15.0	B	14.4	B	-0.6	
	PM	13.1	B	12.6	B	-0.5	
Between Orange Grove Ave off and Orange Grove Ave on	AM	21.6	C	20.4	C	-1.2	
	PM	18.2	C	16.1	B	-2.1	
Between Orange Grove Ave and York Blvd	AM	22.2	C	22.8	C	0.6	
	PM	18.7	C	18.4	C	-0.3	
Between York Ave off and York Ave on	AM	21.7	C	33.2	D	11.5	YES
	PM	17.6	B	25.3	C	7.7	YES
Between York Blvd and Ave 64 / Marmion Wy	AM	23.3	C	36.3	E	13.0	YES
	PM	19.1	C	27.8	D	8.7	YES
Between Ave 64 / Marmion Wy and Ave 60	AM	28.8	D	29.2	D	0.4	
	PM	22.6	C	22.0	C	-0.6	
Between Ave 60 off and Ave 60 on	AM	27.8	D	> 45.0	F	N/A	YES
	PM	21.3	C	32.0	D	10.7	YES
Between Ave 60 and Ave 57 / Via Marisol	AM	28.9	D	29.2	D	0.3	
	PM	22.3	C	22.4	C	0.1	
Between Ave 57 off and Ave 57 on	AM	28.3	D	> 45.0	F	N/A	YES
	PM	21.8	C	32.9	D	11.1	YES
Between Ave 57 / Via Marisol and Ave 52	AM	30.2	D	30.9	D	0.7	
	PM	23.9	C	25.2	C	1.3	
Between Ave 52 off and Ave 52 on	AM	30.3	D	> 45.0	F	N/A	YES
	PM	22.8	C	36.3	E	13.5	YES
Between Ave 52 and Ave 43	AM	35.4	E	35.8	E	0.4	
	PM	26.0	D	27.1	D	1.1	
Between Ave 43 off and Ave 43 on	AM	33.8	D	> 45.0	F	N/A	YES
	PM	25.4	C	42.8	E	17.4	YES
Between Ave 43 and I-5 / Pasadena Ave	AM	37.5	E	38.7	E	1.2	
	PM	27.9	D	29.6	D	1.7	
Between I-5 / Pasadena Ave and Ave 26	AM	25.2	C	28.5	D	3.3	YES
	PM	20.6	C	22.5	C	1.9	
Between Ave 26 and Figueroa St	AM	23.9	C	26.2	D	2.3	YES
	PM	19.6	C	21.4	C	1.8	

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Between Figueroa St and SB I-5	AM	30.5	D	34.4	D	3.9	
	PM	24.2	C	27.4	D	3.2	YES
Between SB I-5 and Academy Rd	AM	34.2	D	33.4	D	-0.8	
	PM	25.8	C	25.0	C	-0.8	
Between Academy Rd and Amador St	AM	34.0	D	33.3	D	-0.7	
	PM	25.5	C	24.8	C	-0.7	
Downstream of Amador	AM	34.7	D	34.2	D	-0.5	
	PM	26.0	C	25.4	C	-0.6	

In the SR-710 sensitivity analysis for Concept 1, the forecast peak hour mainline volumes on Arroyo Seco Parkway exceed the capacity during one or both peak periods at the following locations:

- Northbound between Stadium Way and Figueroa Street
- Northbound between Avenue 26 and Avenue 52
- Northbound between the Avenue 57 off-ramp and the Avenue 57 on-ramp
- Northbound between the Avenue 60 off-ramp and the Avenue 60 on-ramp
- Southbound between the Avenue 60 off-ramp and the Avenue 60 on-ramp
- Southbound between the Avenue 57 off-ramp and the Avenue 57 on-ramp
- Southbound between the Avenue 52 off-ramp and the Avenue 52 on-ramp
- Southbound between the Avenue 43 off-ramp and the Avenue 43 on-ramp

5.3.3 VARIATION BETWEEN BASELINE AND SR-710 SENSITIVITY ANALYSIS

The following mainline segment is forecast to operate at LOS F in the baseline condition for Concept 1 but not in the SR-710 sensitivity analysis:

- Northbound between Avenue 52 and Avenue 57

The following mainline segment is forecast to operate at LOS F in the SR-710 sensitivity analysis for Concept 1 but not in the baseline condition:

- Northbound between the Avenue 57 off-ramp and the Avenue 57 on-ramp

5.1 Ramp Merge and Diverge Analysis

5.1.1 RAMP ANALYSIS RESULTS FOR CONCEPT 1

The results of the ramp analysis for the northbound merge and diverge segments of Arroyo Seco Parkway in Concept 1 are presented in Table 5-13. The southbound merge and diverge segment analysis results are summarized in Table 5-14. The changes in density and LOS associated with Concept 1 are summarized in Tables 5-15 and 5-16.

Table 5-13: Concept 1 Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	6,010	1	15	160	227	28.5	D
			PM	9,620				225	46.3	F
ON	Solano Ave	4	AM	5,783	1	15	50	38	25.1	C
			PM	9,395				68	37.6	F
OFF	NB I-5	4	AM	5,821	1	35	1,525	2,386	30.7	F
			PM	9,463	2			4,067	20.0	F
OFF	Figueroa St	3	AM	3,435	1	35	800	538	20.5	C
			PM	5,396				882	29.3	D
ON	San Fernando Rd	3	AM	2,897	1	15	25	72	20.1	C
			PM	4,514				117	28.4	D
ON	I-5/Avenue 26	3	AM	2,969	1	35	1,930	993	19.6	B
			PM	4,631				1,504	32.4	D
OFF	Avenue 43	3	AM	3,962	1	35	300	278	26.1	C
			PM	6,135				399	36.0	E
ON	Avenue 43	2	AM	3,684	1	35	1,500	15	27.4	C
			PM	5,736				5	44.7	F
OFF	Avenue 52	3	AM	3,699	1	35	325	370	24.7	C
			PM	5,741				597	34.5	D
ON	Avenue 52	2	AM	3,329	1	35	600	140	31.0	D
			PM	5,144				142	46.5	F
OFF	Avenue 57	3	AM	3,469	1	35	425	417	22.8	C
			PM	5,286				557	31.7	D
ON	Avenue 57	2	AM	3,052	1	35	1,000	65	25.6	C
			PM	4,729				65	39.8	F
OFF	Avenue 60	3	AM	3,117	1	35	730	103	17.5	B
			PM	4,794				131	26.1	C
ON	Avenue 60	2	AM	3,014	1	35	1,500	117	22.6	C
			PM	4,663				199	37.2	F
OFF	Avenue 64	3	AM	3,131	1	35	600	559	19.6	B
			PM	4,862				928	28.9	D
OFF	Bridewell	3	AM	2,572	1	35	1,740	19	7.4	A
			PM	3,934				74	14.9	B
OFF	Orange Grove	3	AM	2,553	1	35	500	682	17.6	B

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
			PM	3,860				1,034	25.4	C
ON	Orange Grove	2	AM	1,871	1	35	1,500	143	13.1	B
			PM	2,826				194	21.6	C
OFF	Fair Oaks	3	AM	2,014	1	35	430	439	14.5	B
			PM	3,020				660	20.8	C

Table 5-14: Concept 1 Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,336	1	35	425	170	9.8	A
			PM	1,114				126	8.3	A
ON	Fair Oaks	2	AM	1,166	1	35	600	663	16.9	B
			PM	988				602	15.8	B
OFF	Orange Grove	2	AM	1,829	1	35	800	122	14.1	B
			PM	1,590				242	11.9	B
ON	Orange Grove	2	AM	1,707	1	35	760	1,156	24.4	C
			PM	1,348				904	19.4	B
OFF	York Blvd	3	AM	2,863	1	15	600	92	17.3	B
			PM	2,252				187	13.9	B
ON	York Blvd	2	AM	2,771	1	35	1,200	288	23.7	C
			PM	2,065				236	17.3	B
ON	Avenue 64	2	AM	3,059	1	35	1,500	740	27.9	C
			PM	2,301				490	19.5	B
OFF	Avenue 60	3	AM	3,799	1	15	600	139	25.6	C
			PM	2,791				146	18.1	B
ON	Avenue 60	2	AM	3,660	1	35	1,200	92	29.7	D
			PM	2,645				148	21.6	C
OFF	Avenue 57	3	AM	3,752	1	35	200	74	25.6	C
			PM	2,793				62	20.4	C
ON	Avenue 57	2	AM	3,678	1	35	500	310	36.0	E
			PM	2,731				385	28.6	D
OFF	Avenue 52	3	AM	3,988	1	35	350	29	29.3	D
			PM	3,116				200	21.1	C
ON	Avenue 52	2	AM	3,959	1	35	1,500	503	33.6	F
			PM	2,916				420	24.2	C
OFF	Avenue 43	3	AM	4,462	1	35	380	134	27.7	C
			PM	3,336				5	21.7	C
ON	Avenue 43	2	AM	4,328	1	35	1,500	436	36.2	F
			PM	3,331				307	26.8	C
OFF	I-5	3	AM	4,764	2	35	3,500	1,266	-9.7	A
			PM	3,638				868	-16.5	A

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 26	3	AM	3,498	1	35	800	202	19.1	B
			PM	2,770				143	15.0	B
ON	Figueroa St	3	AM	3,296	1	35	550	979	26.4	C
			PM	2,627				738	21.1	C
ON	I-5	3	AM	4,275	2	35	4,500	4,182	31.3	F
			PM	3,365				2,909	16.8	F
OFF	Academy Rd	5	AM	8,457	1	35	300	17	29.2	D
			PM	6,274				50	23.6	C
ON	Amador Pl	5	AM	8,440	1	35	250	246	26.7	C
			PM	6,224				194	20.9	C

Table 5-15: Changes to Ramp LOS in Concept 1 – Northbound

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Solano Ave	AM	28.7	D	28.5	D	-0.2	
		PM	47.1	F	46.3	F	-0.8	
ON	Solano Ave	AM	25.7	C	25.1	C	-0.6	
		PM	38.7	F	37.6	F	-1.1	
OFF	NB I-5	AM	-5.5	A	-5.6	A	-0.1	
		PM	14.5	F	14.9	F	0.4	
OFF	Figueroa St	AM	20.5	C	19.4	B	-1.1	
		PM	30.7	D	29.3	D	-1.4	
ON	San Fernando Rd	AM	21.2	C	20.1	C	-1.1	
		PM	29.8	D	28.4	D	-1.4	
ON	I-5/Avenue 26	AM	22.0	C	19.6	B	-2.4	
		PM	37.5	F	32.4	D	-5.1	
OFF	Avenue 43	AM	28.0	D	26.1	C	-1.9	
		PM	42.7	F	36.0	E	-6.7	
ON	Avenue 43	AM	26.0	C	27.4	C	1.4	
		PM	39.8	F	44.7	F	4.9	
OFF	Avenue 52	AM	27.2	C	24.7	C	-2.5	
		PM	39.5	F	34.5	D	-5.0	
ON	Avenue 52	AM	26.8	C	31.0	D	4.2	YES
		PM	40.6	E	46.5	F	5.9	YES
OFF	Avenue 57	AM	24.8	C	22.8	C	-2.0	
		PM	34.7	D	31.7	D	-3.0	
ON	Avenue 57	AM	23.2	C	25.6	C	2.4	
		PM	32.7	D	39.8	F	7.1	YES
OFF	Avenue 60	AM	20.1	C	17.5	B	-2.6	
		PM	29.5	D	26.1	C	-3.4	

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
ON	Avenue 60	AM	23.3	C	22.6	C	-0.7	
		PM	33.2	D	37.2	F	4.0	YES
OFF	Avenue 64	AM	22.2	C	19.6	B	-2.6	
		PM	32.0	D	28.9	D	-3.1	
OFF	Bridewell	AM	10.4	B	7.4	A	-3.0	
		PM	18.4	B	14.9	B	-3.5	
OFF	Orange Grove	AM	20.1	C	17.6	B	-2.5	
		PM	28.7	D	25.4	C	-3.3	
ON	Orange Grove	AM	17.7	B	13.1	B	-4.6	
		PM	23.5	C	21.6	C	-1.9	
OFF	Fair Oaks	AM	18.4	B	14.5	B	-3.9	
		PM	25.7	C	20.8	C	-4.9	

Table 5-16: Changes to Ramp LOS in Concept 1 – Southbound

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	State/Fair Oaks	AM	11.5	B	9.8	A	-1.7	
		PM	9.8	A	8.3	A	-1.5	
ON	Fair Oaks	AM	21.5	C	16.9	B	-4.6	
		PM	18.2	B	15.8	B	-2.4	
OFF	Orange Grove	AM	19.3	B	14.1	B	-5.2	
		PM	15.6	B	11.9	B	-3.7	
ON	Orange Grove	AM	29.5	D	24.4	C	-5.1	
		PM	23.9	C	19.4	B	-4.5	
OFF	York Blvd	AM	25.2	C	17.3	B	-7.9	
		PM	21.7	C	13.9	B	-7.8	
ON	York Blvd	AM	24.0	C	23.7	C	-0.3	
		PM	19.9	B	17.3	B	-2.6	
ON	Avenue 64	AM	29.6	D	27.9	C	-1.7	
		PM	23.5	C	19.5	B	-4.0	
OFF	Avenue 60	AM	35.2	E	25.6	C	-9.6	
		PM	27.5	C	18.1	B	-9.4	
ON	Avenue 60	AM	27.2	C	29.7	D	2.5	YES
		PM	21.9	C	21.6	C	-0.3	
OFF	Avenue 57	AM	29.2	D	25.6	C	-3.6	
		PM	23.5	C	20.4	C	-3.1	
ON	Avenue 57	AM	29.0	D	36.0	E	7.0	YES
		PM	23.8	C	28.6	D	4.8	YES
OFF	Avenue 52	AM	31.6	D	29.3	D	-2.3	
		PM	27.4	C	21.1	C	-6.3	

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
ON	Avenue 52	AM	32.9	D	33.6	F	0.7	YES
		PM	26.0	C	24.2	C	-1.8	
OFF	Avenue 43	AM	31.4	D	27.7	C	-3.7	
		PM	25.0	C	21.7	C	-3.3	
ON	Avenue 43	AM	33.4	D	36.2	F	2.8	YES
		PM	24.6	C	26.8	C	2.2	
OFF	I-5	AM	-4.6	A	-9.7	A	-5.1	
		PM	-13.3	A	-16.5	A	-3.2	
OFF	Avenue 26	AM	21.0	C	19.1	B	-1.9	
		PM	16.8	B	15.0	B	-1.8	
ON	Figueroa St	AM	27.7	C	26.4	C	-1.3	
		PM	22.2	C	21.1	C	-1.1	
ON	I-5	AM	32.5	F	31.3	F	-1.2	
		PM	17.7	F	16.8	F	-0.9	
OFF	Academy Rd	AM	30.5	D	29.2	D	-1.3	
		PM	23.0	C	23.6	C	0.6	
ON	Amador Pl	AM	27.0	C	26.7	C	-0.3	
		PM	20.9	C	20.9	C	0.0	

Locations where the ramp or mainline volumes exceed capacity during one or both peak time periods in Concept 1 include:

- Northbound off-ramp to Solano Avenue
- Northbound on-ramp from Solano Avenue
- Northbound off-ramp to Northbound I-5
- Northbound on-ramp from Avenue 43
- Northbound on-ramp from Avenue 52
- Northbound on-ramp from Avenue 57
- Northbound on-ramp from Avenue 60
- Southbound on-ramp from Avenue 52
- Southbound on-ramp from Avenue 43
- Southbound on-ramp (major merge) from I-5

Ramp level of service is based on the volume-to-capacity ratios on the ramp facility and on the mainline upstream and downstream of the ramp. Ramp conditions on Arroyo Seco Parkway south of Avenue 43 are congested in the No Project condition, and are not significantly impacted by the modifications in Concept 1. The reduction from three to two lanes on Arroyo Seco Parkway between adjacent off-ramp and on-ramp pairs results in a poor level of service on northbound on-ramps located between Avenue 43 and Avenue 60. North of Avenue 60, ramp level of service on northbound and southbound ramps is not impacted in Concept 1.

5.1.2 SR-710 SENSITIVITY ANALYSIS RESULTS FOR CONCEPT 1 – RAMPS

The results of the SR-710 sensitivity analysis for the northbound merge and diverge ramp segments of Arroyo Seco Parkway with Concept 1 are presented in Table 5-17. The southbound merge and diverge segment analysis results are summarized in Table 5-18. The changes in density and LOS associated with Concept 1 are summarized in Tables 5-19 and 5-20.

Table 5-17: Concept 1 (SR-710 Sensitivity) Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	6,008	1	15	160	173	28.2	D
			PM	9,653				193	46.6	F
ON	Solano Ave	4	AM	5,835	1	15	50	63	25.4	C
			PM	9,460				5	37.3	F
OFF	NB I-5	4	AM	5,898	1	35	1,525	2,420	31.2	F
			PM	9,465	2			4,075	56.8	F
OFF	Figueroa St	3	AM	3,478	1	35	800	552	20.8	C
			PM	5,390				874	30.9	D
ON	San Fernando Rd	3	AM	2,926	1	15	25	73	20.2	C
			PM	4,516				122	28.4	D
ON	I-5/Avenue 26	3	AM	2,999	1	35	1,930	931	19.3	B
			PM	4,638				1,384	31.5	D
OFF	Avenue 43	3	AM	3,930	1	35	300	290	26.0	C
			PM	6,022				400	35.6	E
ON	Avenue 43	2	AM	3,640	1	35	1,500	25	27.1	C
			PM	5,622				38	44	F
OFF	Avenue 52	3	AM	3,665	1	35	325	373	24.6	C
			PM	5,660				573	34.1	D
ON	Avenue 52	2	AM	3,292	1	35	600	151	30.8	D
			PM	5,087				120	45.8	F
OFF	Avenue 57	3	AM	3,443	1	35	425	417	22.8	C
			PM	5,207				543	31.3	D
ON	Avenue 57	2	AM	3,026	1	35	1,000	79	25.5	C
			PM	4,664				66	39.3	F
OFF	Avenue 60	3	AM	3,105	1	35	730	107	17.5	B
			PM	4,730				113	25.7	C
ON	Avenue 60	2	AM	2,998	1	35	1,500	52	21.9	C
			PM	4,617				114	36.1	F
OFF	Avenue 64	3	AM	3,050	1	35	600	529	19.1	B
			PM	4,731				891	28.2	D
OFF	Bridewell	3	AM	2,521	1	35	1,740	11	7.1	A
			PM	3,840				49	14.4	B
OFF	Orange Grove	3	AM	2,510	1	35	500	675	17.3	B
			PM	3,791				1,004	25.0	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
ON	Orange Grove	2	AM	1,835	1	35	1,500	152	12.8	B
			PM	2,787				130	20.7	C
OFF	Fair Oaks	3	AM	1,987	1	35	430	533	14.6	B
			PM	2,917				834	20.6	C

Table 5-18: Concept 1 (SR-710 Sensitivity) Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,065	1	35	425	90	7.9	A
			PM	974				56	7.2	A
ON	Fair Oaks	2	AM	975	1	35	600	812	16.5	B
			PM	918				648	14.7	B
OFF	Orange Grove	2	AM	1,787	1	35	800	96	13.8	B
			PM	1,566				234	11.7	B
ON	Orange Grove	2	AM	1,691	1	35	760	1,139	24.1	C
			PM	1,332				952	19.6	B
OFF	York Blvd	3	AM	2,830	1	15	600	94	17.1	B
			PM	2,284				186	14.1	B
ON	York Blvd	2	AM	2,736	1	35	1,200	211	22.8	C
			PM	2,098				205	17.4	B
ON	Avenue 64	2	AM	2,947	1	35	1,500	682	26.5	C
			PM	2,303				434	19.1	B
OFF	Avenue 60	3	AM	3,629	1	15	600	116	24.2	C
			PM	2,737				91	17.3	B
ON	Avenue 60	2	AM	3,513	1	35	1,200	112	28.6	D
			PM	2,646				143	21.5	C
OFF	Avenue 57	3	AM	3,625	1	35	200	74	25.0	C
			PM	2,789				79	20.4	C
ON	Avenue 57	2	AM	3,551	1	35	500	284	34.7	D
			PM	2,710				419	28.7	D
OFF	Avenue 52	3	AM	3,835	1	35	350	5	27.8	C
			PM	3,129				181	26.6	C
ON	Avenue 52	2	AM	3,830	1	35	1,500	540	32.8	F
			PM	2,948				423	24.4	C
OFF	Avenue 43	3	AM	4,370	1	35	380	136	27.2	C
			PM	3,371				3	21.9	C
ON	Avenue 43	2	AM	4,234	1	35	1,500	429	35.4	F
			PM	3,368				311	27.1	C
OFF	I-5	3	AM	4,663	2	35	3,500	1,205	-10.4	A
			PM	3,679				879	-16.3	A

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 26	3	AM	3,458	1	35	800	200	18.9	B
			PM	2,800				141	15.2	B
ON	Figueroa St	3	AM	3,258	1	35	550	973	26.2	C
			PM	2,659				739	21.3	C
ON	I-5	3	AM	4,231	2	35	4,500	4,204	31.3	F
			PM	3,398				2,937	17.1	F
OFF	Academy Rd	5	AM	8,435	1	35	300	5	29.1	D
			PM	6,335				53	23.8	C
ON	Amador Pl	5	AM	8,430	1	35	250	198	26.3	C
			PM	6,282				145	20.6	C

Table 5-19: Changes to Ramp LOS in Concept 1 (SR-710 Sensitivity) – Northbound

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Solano Ave	AM	28.6	D	28.2	D	-0.4	
		PM	47.3	F	46.6	F	-0.7	
ON	Solano Ave	AM	26.1	C	25.4	C	-0.7	
		PM	38.6	F	37.3	F	-1.3	
OFF	NB I-5	AM	31.7	F	31.2	F	-0.5	
		PM	20.1	F	56.8	F	36.7	
OFF	Figueroa St	AM	20.8	C	20.8	C	0.0	
		PM	32.3	D	30.9	D	-1.4	
ON	San Fernando Rd	AM	21.5	C	20.2	C	-1.3	
		PM	30.3	D	28.4	D	-1.9	
ON	I-5/Avenue 26	AM	21.9	C	19.3	B	-2.6	
		PM	36.6	F	31.5	D	-5.1	
OFF	Avenue 43	AM	28.2	D	26.0	C	-2.2	
		PM	41.8	F	35.6	E	-6.2	
ON	Avenue 43	AM	27.5	C	27.1	C	-0.4	
		PM	39.2	F	44.0	F	4.8	
OFF	Avenue 52	AM	27.1	C	24.6	C	-2.5	
		PM	38.9	F	34.1	D	-4.8	
ON	Avenue 52	AM	26.9	C	30.8	D	3.9	YES
		PM	39.9	E	45.8	F	5.9	YES
OFF	Avenue 57	AM	24.9	C	22.8	C	-2.1	
		PM	34.4	D	31.3	D	-3.1	
ON	Avenue 57	AM	23.4	C	25.5	C	2.1	
		PM	32.4	D	39.3	F	6.9	YES
OFF	Avenue 60	AM	20.2	C	17.5	B	-2.7	
		PM	29.2	D	25.7	C	-3.5	

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
ON	Avenue 60	AM	23.9	C	21.9	C	-2.0	
		PM	36.4	E	36.1	F	-0.3	
OFF	Avenue 64	AM	21.9	C	19.1	B	-2.8	
		PM	31.5	D	28.2	D	-3.3	
OFF	Bridewell	AM	10.1	B	7.1	A	-3.0	
		PM	18.0	B	14.4	B	-3.6	
OFF	Orange Grove	AM	19.9	B	17.3	B	-2.6	
		PM	28.5	D	25.0	C	-3.5	
ON	Orange Grove	AM	18.4	B	12.8	B	-5.6	
		PM	25.5	C	20.7	C	-4.8	
OFF	Fair Oaks	AM	17.4	B	14.6	B	-2.8	
		PM	24.4	C	20.6	C	-3.8	

Table 5-20: Changes to Ramp LOS in Concept 1 (SR-710 Sensitivity) – Southbound

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	State/Fair Oaks	AM	10.2	B	7.9	A	-2.3	
		PM	8.9	A	7.2	A	-1.7	
ON	Fair Oaks	AM	20.5	C	16.5	B	-4.0	
		PM	18.2	B	14.7	B	-3.5	
OFF	Orange Grove	AM	18.3	B	13.8	B	-4.5	
		PM	15.7	B	11.7	B	-4.0	
ON	Orange Grove	AM	28.8	D	24.1	C	-4.7	
		PM	24.3	C	19.6	B	-4.7	
OFF	York Blvd	AM	24.8	C	17.1	B	-7.7	
		PM	22.0	C	14.1	B	-7.9	
ON	York Blvd	AM	23.1	C	22.8	C	-0.3	
		PM	20.0	B	17.4	B	-2.6	
ON	Avenue 64	AM	28.5	D	26.5	C	-2.0	
		PM	23.3	C	19.1	B	-4.2	
OFF	Avenue 60	AM	33.7	D	24.2	C	-9.5	
		PM	27.0	C	17.3	B	-9.7	
ON	Avenue 60	AM	26.9	C	28.6	D	1.7	YES
		PM	22.2	C	21.5	C	-0.7	
OFF	Avenue 57	AM	28.6	D	25.0	C	-3.6	
		PM	23.7	C	20.4	C	-3.3	
ON	Avenue 57	AM	28.2	D	34.7	D	6.5	
		PM	24.1	C	28.7	D	4.6	YES
OFF	Avenue 52	AM	30.5	D	27.8	C	-2.7	
		PM	27.7	C	26.6	C	-1.1	

Ramp	Junction	Peak	Without Project		Concept 1		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
ON	Avenue 52	AM	32.3	D	32.8	F	0.5	YES
		PM	26.0	C	24.4	C	-1.6	
OFF	Avenue 43	AM	30.9	D	27.2	C	-3.7	
		PM	25.1	C	21.9	C	-3.2	
ON	Avenue 43	AM	32.9	D	35.4	F	2.5	YES
		PM	26.7	C	27.1	C	0.4	
OFF	I-5	AM	-5.4	A	-10.4	A	-5.0	
		PM	-13.0	A	-16.3	A	-3.3	
OFF	Avenue 26	AM	20.8	C	18.9	B	-1.9	
		PM	17.1	B	15.2	B	-1.9	
ON	Figueroa St	AM	27.7	C	26.2	C	-1.5	
		PM	22.5	C	21.3	C	-1.2	
ON	I-5	AM	31.8	F	31.3	F	-0.5	
		PM	17.9	F	17.1	F	-0.8	
OFF	Academy Rd	AM	29.9	D	29.1	D	-0.8	
		PM	23.2	C	23.8	C	0.6	
ON	Amador Pl	AM	26.5	C	26.3	C	-0.2	
		PM	20.9	C	20.6	C	-0.3	

The results of the SR-710 sensitivity analysis for ramp facilities in Concept 1 are very similar to the baseline analysis, without any notable differences. Locations where the ramp or mainline volumes exceed capacity during one or both peak time periods in the SR-710 sensitivity analysis for Concept 1 include:

- Northbound off-ramp to Solano Avenue
- Northbound on-ramp from Solano Avenue
- Northbound off-ramp to Northbound I-5
- Northbound on-ramp from Avenue 43
- Northbound on-ramp from Avenue 52
- Northbound on-ramp from Avenue 57
- Northbound on-ramp from Avenue 60
- Southbound on-ramp from Avenue 52
- Southbound on-ramp from Avenue 43
- Southbound on-ramp (major merge) from I-5

Ramp conditions on Arroyo Seco Parkway south of Avenue 43 are congested in the No Project condition, and are not significantly impacted by the modifications in Concept 1. The reduction from three to two lanes on Arroyo Seco Parkway between adjacent off-ramp and on-ramp pairs results in a poor level of service on northbound on-ramps located between Avenue 43 and Avenue 60. North of Avenue 60, ramp level of service on northbound and southbound ramps is not impacted in Concept 1.

5.2 Weaving Analysis

In the existing condition, many of the Arroyo Seco Parkway on-ramps located within the study area merge directly into the outside travel lane with little to no weaving area. In Concept 1, the outside travel lane is converted to an auxiliary lane between adjacent on-ramp and off-ramp pairs to facilitate the merging of vehicles that enter and exit the facility. As defined in the Highway Capacity Manual, the presence of weaving behavior depends on the length between ramps and the volume on the ramps and mainline. The maximum length for which weaving analysis is conducted is 2,500 feet. Beyond these lengths, merge and diverge areas are considered separately. If the weave length is under 2,500 feet but the weave volumes do not create sufficient turbulence, then the segment should also be analyzed as separate merge and diverge areas.

A weaving analysis for valid weaving segments created in Concept 1 was performed utilizing the HCS 2010 software package. Table 5-21 contains a summary of the weaving analysis results for northbound Arroyo Seco Parkway and Table 5-22 contains the results for the southbound direction.

Regardless of the resulting LOS values, safety and operations are significantly improved with Concept 1 over the existing and No Build conditions. Without the project, there is a similar magnitude of entering and exiting vehicles at these locations, but no weaving length is provided. Due to the non-standard design of the existing ramps, they cannot be analyzed using the Highway Capacity Manual methodology, so there is no quantifiable basis for comparison. The creation of the weaving segment, even if it is forecast to operate at LOS F, would provide safer ingress compared to the existing condition.

Table 5-21: Concept 1 Weaving Analysis Results – NB Arroyo Seco Parkway

From On-Ramp	To Off-Ramp	Weave Dist	Peak	On-Ramp Volume	Non-Weaving Volume	Off-Ramp Volume	Density (pc/mi/ln)	LOS
Ave 52	Ave 57	0.22 mi (1,180 ft)	AM	140	2,912	417	35.4	E
			PM	142	4,587	557	> 40.0	F
Orange Grove	Fair Oaks	0.47 mi (2,490 ft)	AM	143	1,432	439	22.0	C
			PM	194	2,166	660	31.3	D

Table 5-22: Concept 1 Weaving Analysis Results – SB Arroyo Seco Parkway

From On-Ramp	To Off-Ramp	Weave Dist	Peak	On-Ramp Volume	Non-Weaving Volume	Off-Ramp Volume	Density (pc/mi/ln)	LOS
Ave 57	Ave 52	0.19 mi (980 ft)	AM	310	3,649	29	40.4	E
			PM	385	2,531	200	31.3	D

Table 5-23 contains a summary of the SR-710 sensitivity weaving analysis results for northbound Arroyo Seco Parkway. Table 5-24 contains the results for the southbound direction.

Table 5-23: Concept 1 (SR-710 Sensitivity) Weaving Analysis Results – NB Arroyo Seco Parkway

From On-Ramp	To Off-Ramp	Weave Dist	Peak	On-Ramp Volume	Non-Weaving Volume	Off-Ramp Volume	Density (pc/mi/ln)	LOS
Ave 52	Ave 57	0.22 mi (1,180 ft)	AM	151	2,875	417	35.2	E
			PM	120	4,544	543	> 40.0	F
Orange Grove	Fair Oaks	0.47 mi (2,490 ft)	AM	152	1,302	533	19.0	B
			PM	130	1,954	834	30.6	D

Table 5-24: Concept 1 (SR-710 Sensitivity) Weaving Analysis Results – SB Arroyo Seco Parkway

From On-Ramp	To Off-Ramp	Weave Dist	Peak	On-Ramp Volume	Non-Weaving Volume	Off-Ramp Volume	Density (pc/mi/ln)	LOS
Ave 57	Ave 52	0.19 mi (980 ft)	AM	284	3,546	5	38.3	E
			PM	419	2,529	181	31.6	D

5.3 Queuing Analysis

The queuing analysis results for Concept 1 are shown in Table 5-17. All ramps have sufficient capacity to accommodate forecast demand.

Table 5-25: Concept 1 Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks Ave (State St)	425	120	0		233	0	
4	NB Exit 31B: Fair Oaks Ave	750	349	150		609	225	
5	SB Exit 31A: Orange Grove Ave	800	113	75		279	225	
6	NB Exit 31A: Orange Grove Ave	875	449	150		1035	475	
12	NB Exit 29: Ave 60	730	62	0		94	0	
14	NB Exit 28B: Via Marisol	425	309	0		459	0	
16	SB Exit 28A: Ave 52	350	229	25		326	50	
17	NB Exit 28A: Ave 52	325	214	25		434	50	
18	SB Exit 27: Ave 43	380	240	25		82	25	
19	NB Exit 27: Ave 43	300	199	25		309	25	
20	SB Exit 26A: Ave 26	1,240	341	0		301	0	
23	NB Exit 26 B: Figueroa St	800	533	50		528	100	

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
28	SB Exit 24D: Stadium Way	1,560	229	25		171	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

The ramp storage capacity and worst case expected queue lengths in the SR-710 sensitivity analysis for Concept 1 are presented in Table 5-18. All ramps have sufficient capacity to accommodate forecast demand, and queue lengths are not expected to vary significantly with the SR-710 connection.

Table 5-26: Concept 1 (SR-710 Sensitivity) Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks Ave (State St)	425	40	0		172	0	
4	NB Exit 31B: Fair Oaks Ave	750	444	150		784	250	
5	SB Exit 31A: Orange Grove Ave	800	87	50		270	200	
6	NB Exit 31A: Orange Grove Ave	875	376	125		1005	400	
12	NB Exit 29: Ave 60	730	65	0		76	0	
14	NB Exit 28B: Via Marisol	425	308	0		446	0	
16	SB Exit 28A: Ave 52	350	170	25		306	25	
17	NB Exit 28A: Ave 52	325	218	25		410	50	
18	SB Exit 27: Ave 43	380	243	25		81	25	
19	NB Exit 27: Ave 43	300	211	25		310	25	
20	SB Exit 26A: Ave 26	1,240	339	0		299	0	
23	NB Exit 26 B: Figueroa St	800	548	50		520	100	
28	SB Exit 24D: Stadium Way	1,560	207	25		186	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

6. CONCEPT 2

6.1 Concept Description

Concept 2 involves the closure or modification of selected ramps with limited merging area for ingress or egress to improve safety on the corridor.

In the northbound direction, the following ramps are closed in Concept 2:

- On-ramp from Solano Avenue
- On-ramp from Avenue 52
- On-ramp from Avenue 57/Via Marisol

6.1.1 LANE GEOMETRY AND CONTROL

The proposed modifications to Arroyo Seco Parkway in Concept 2 would not result in any changes to study intersection lane geometry. Lane geometry and control at all study intersections in Concept 2 would remain the same as in the Future Without Project condition.

6.1.2 TRAFFIC VOLUMES

Forecast AM peak hour turning movement volumes for Concept 2 are shown in Figures 6.1A, 6.1B and 6.1C. The PM peak hour volumes are shown in Figures 6.2A, 6.2B and 6.2C. The Concept 2 (SR-710 Sensitivity) forecast AM peak hour turning movement volumes are shown in Figures 6.3A, 6.3B and 6.3C. The Concept 2 (SR-710 Sensitivity) PM peak hour volumes are shown in Figures 6.4A, 6.4B and 6.4C.

FIGURE 6.1A: INTERSECTION VOLUMES: CONCEPT 2 - AM PEAK HOUR

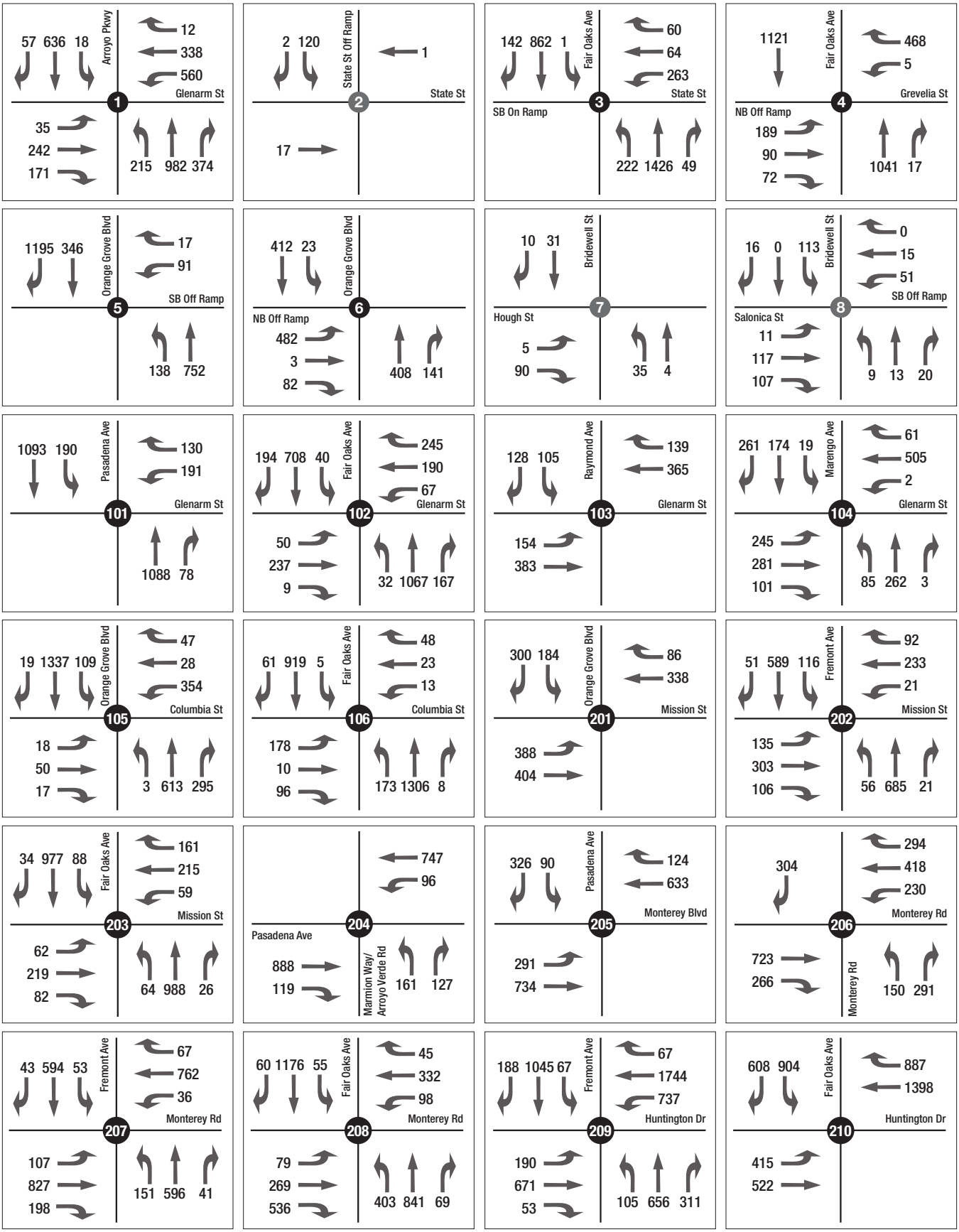


FIGURE 6.1B: INTERSECTION VOLUMES: CONCEPT 2 - AM PEAK HOUR

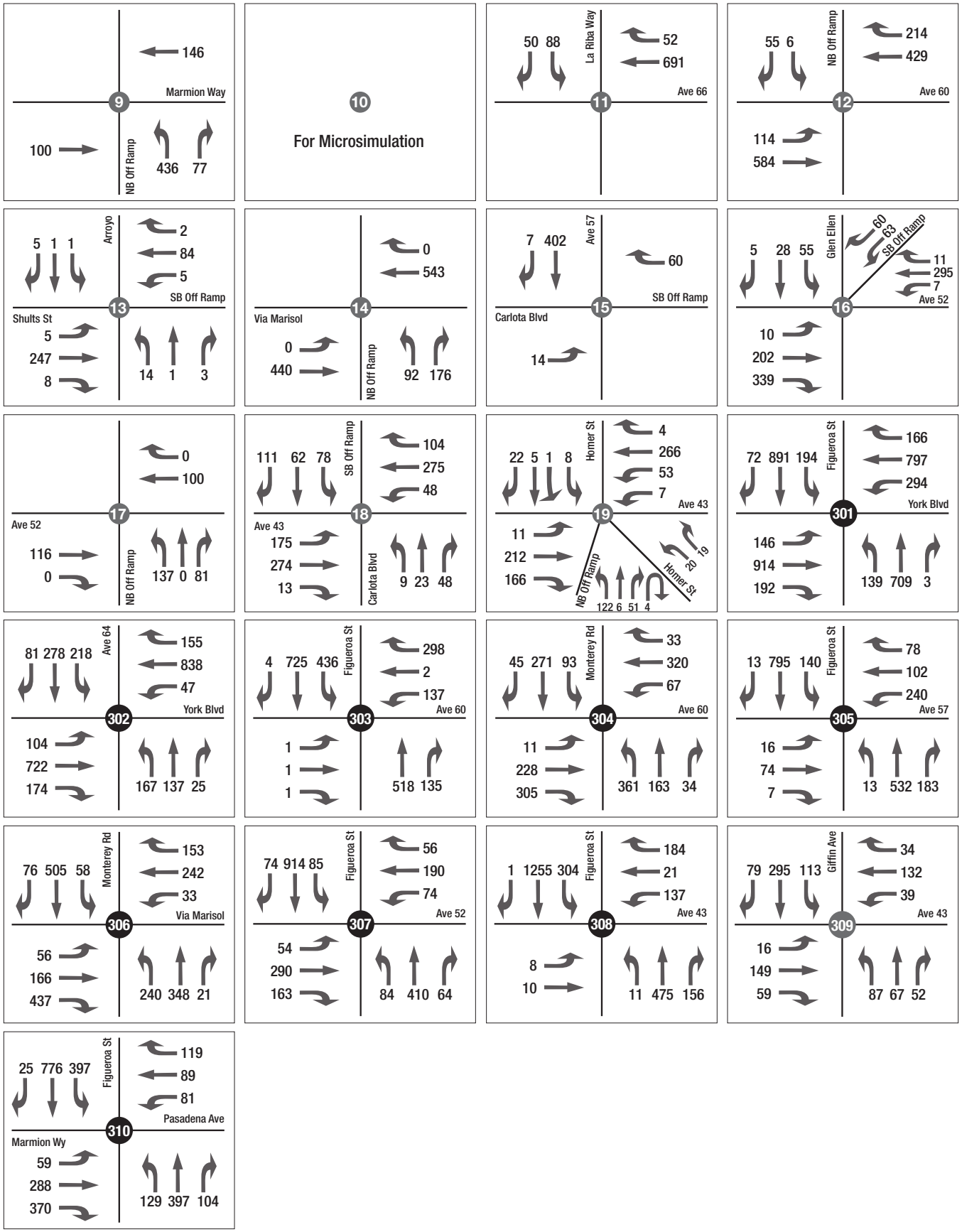


FIGURE 6.1C: INTERSECTION VOLUMES: CONCEPT 2 - AM PEAK HOUR

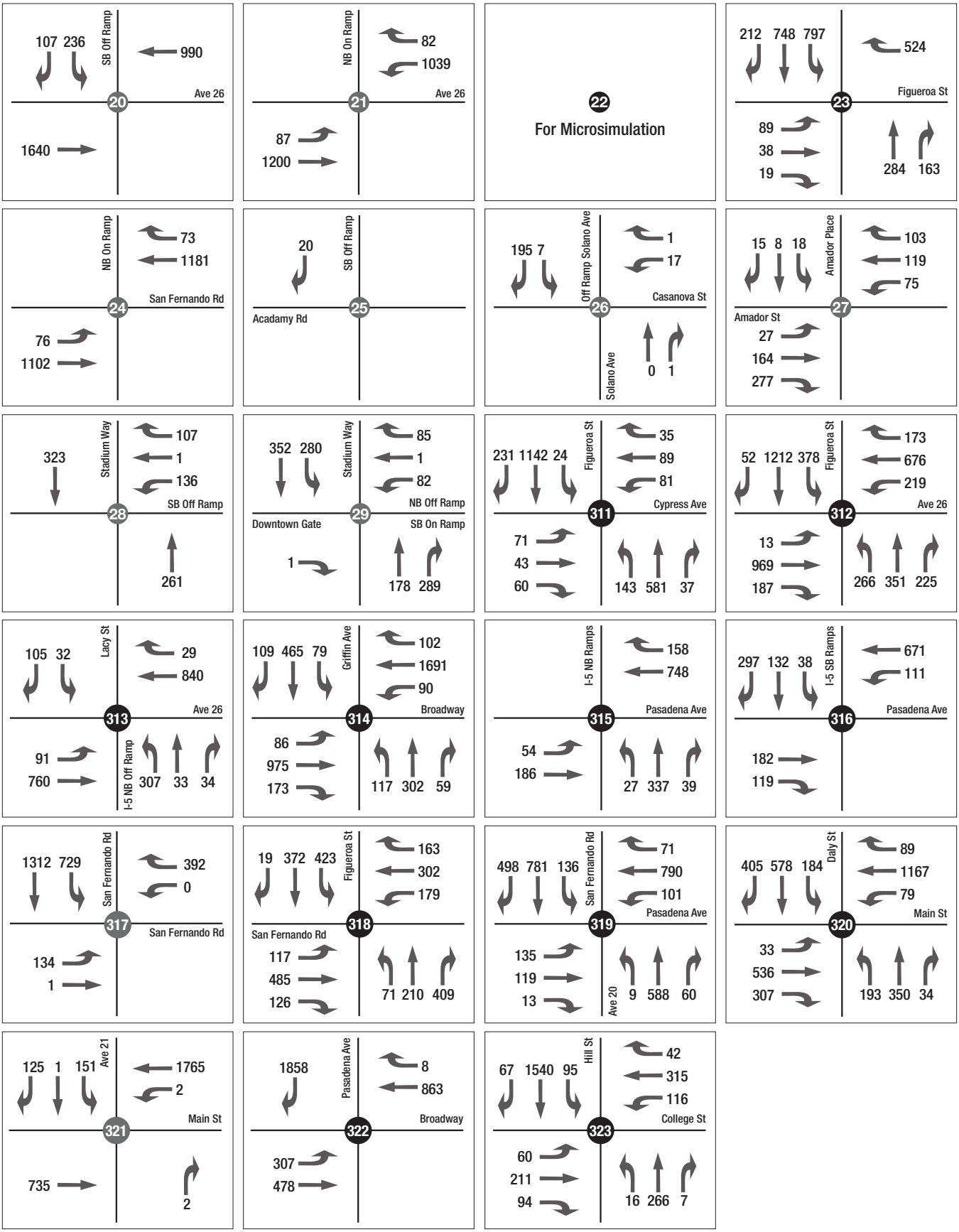


FIGURE 6.2A: INTERSECTION VOLUMES: CONCEPT 2 - PM PEAK HOUR

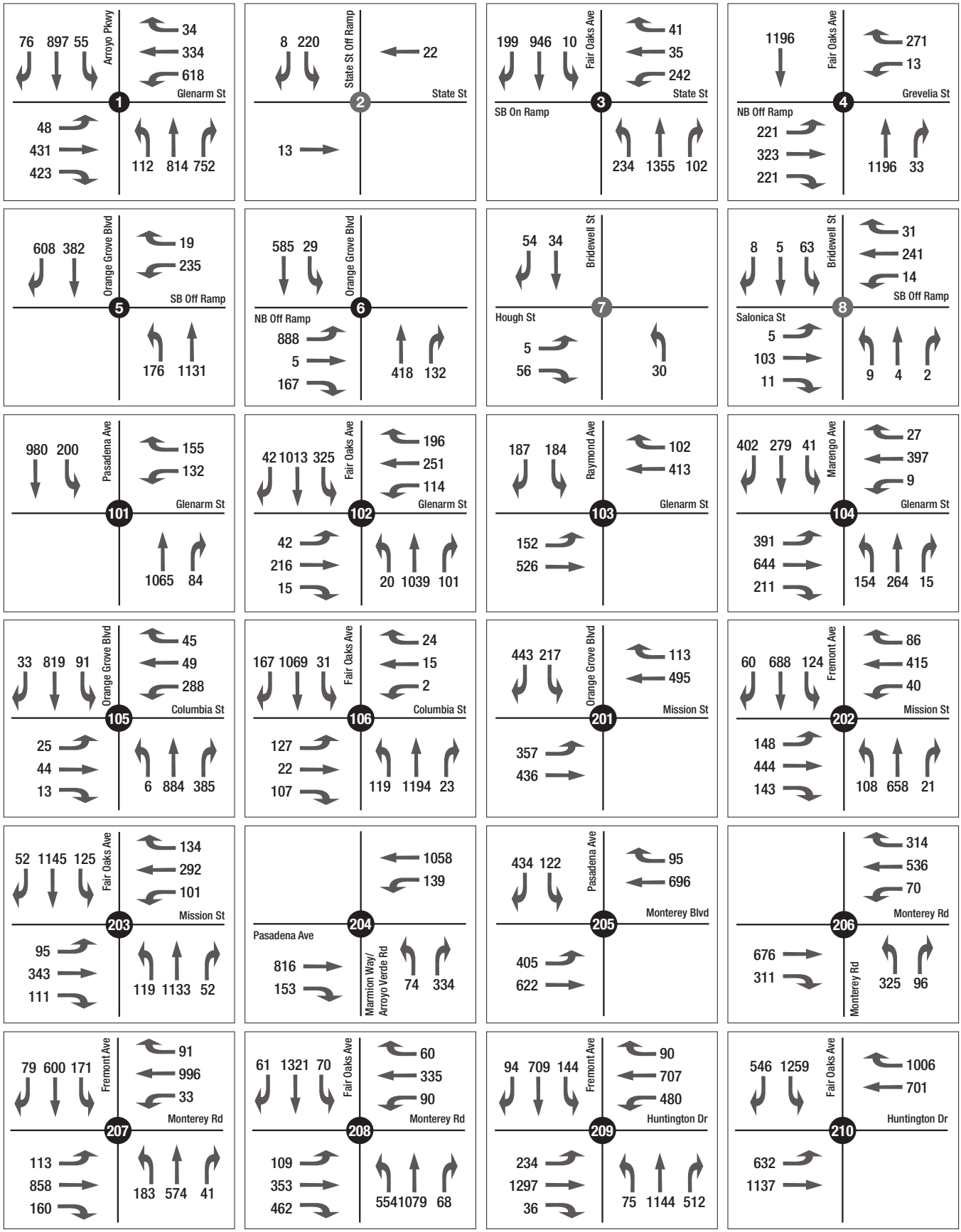


FIGURE 6.2B: INTERSECTION VOLUMES: CONCEPT 2 - PM PEAK HOUR

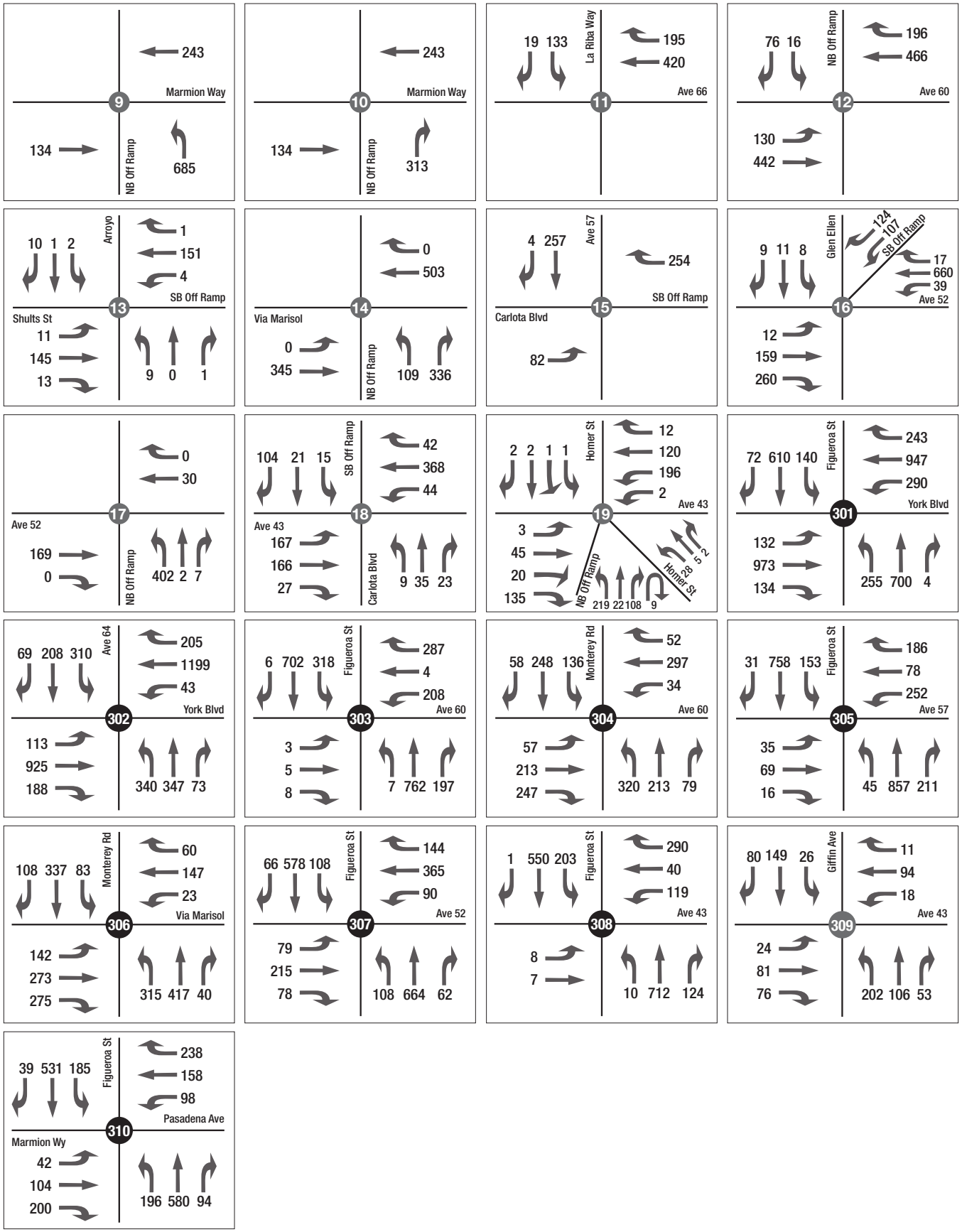


FIGURE 6.2C: INTERSECTION VOLUMES: CONCEPT 2 - PM PEAK HOUR

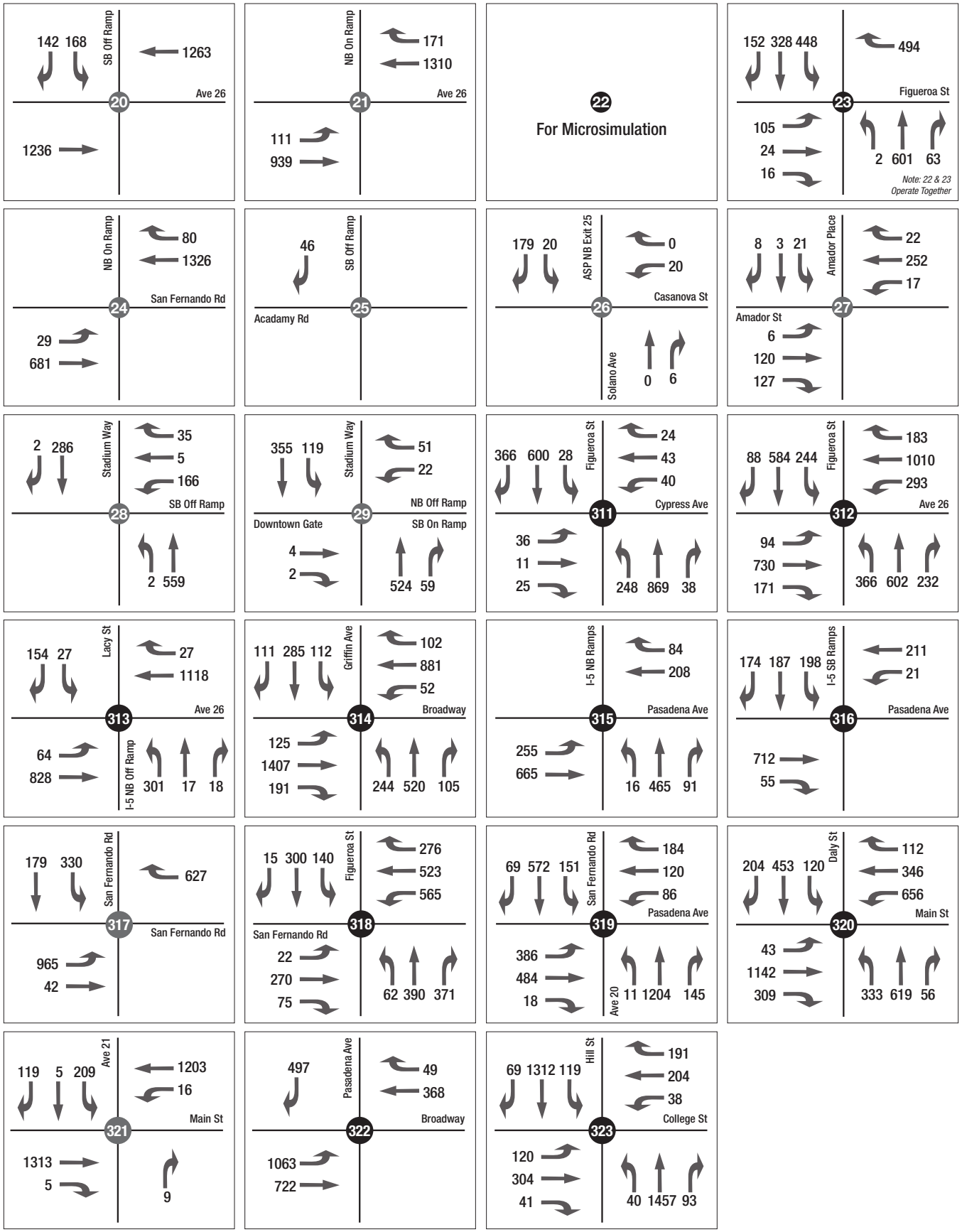


FIGURE 6.3A: INTERSECTION VOLUMES: CONCEPT 2 (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

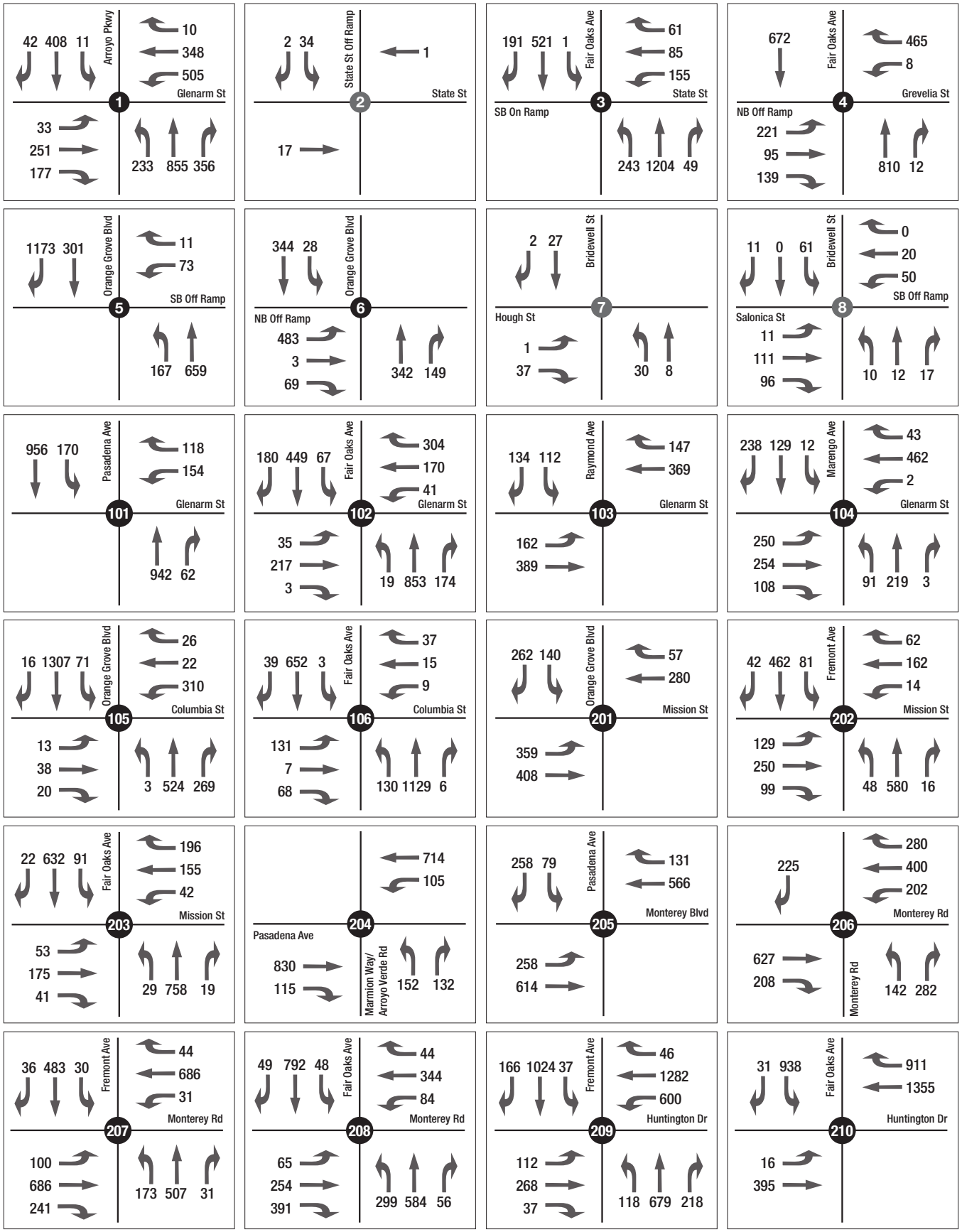


FIGURE 6.3B: INTERSECTION VOLUMES: CONCEPT 2 (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

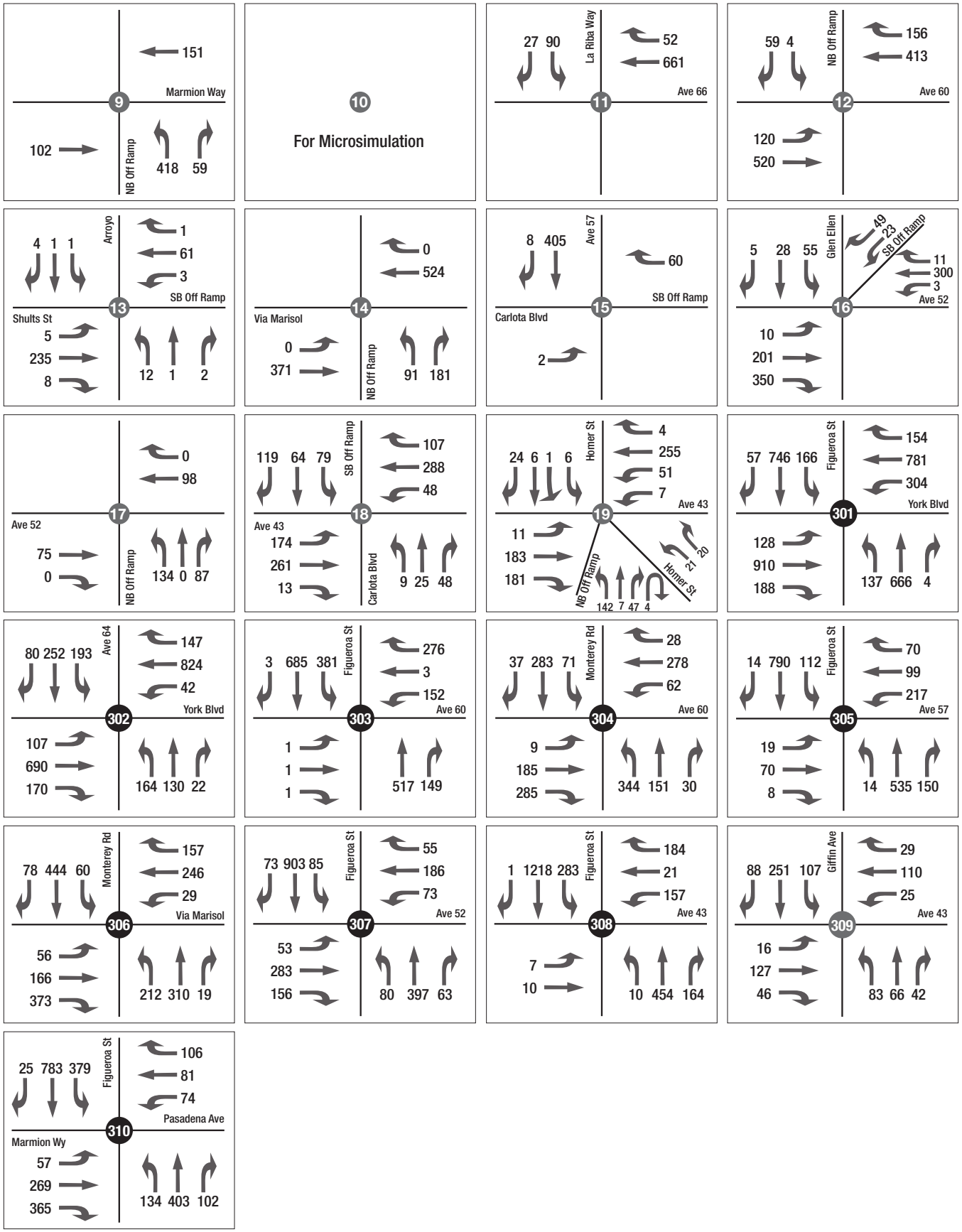


FIGURE 6.3C: INTERSECTION VOLUMES: CONCEPT 2 (SR-710 SENSITIVITY ANALYSIS) - AM PEAK HOUR

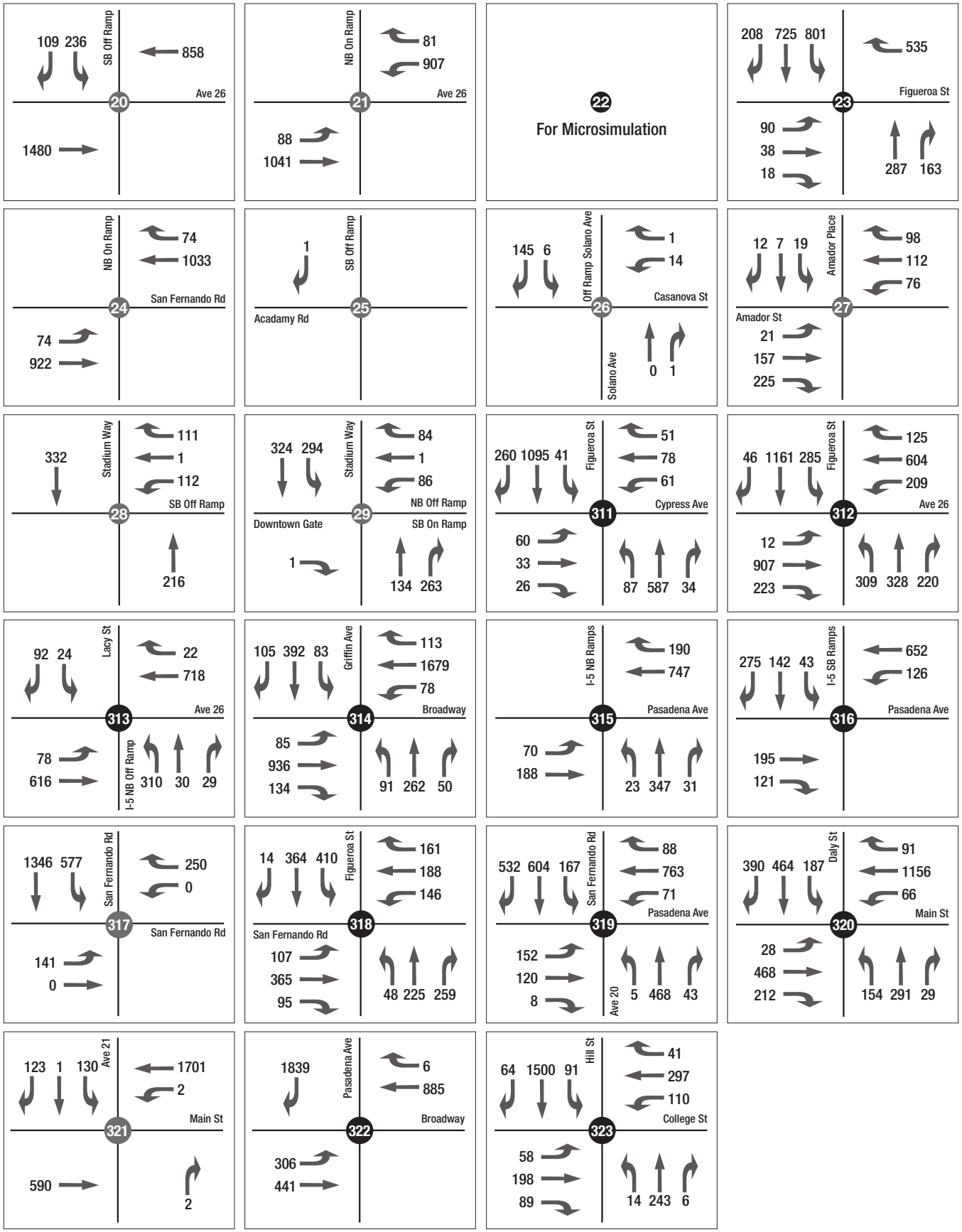


FIGURE 6.4A: INTERSECTION VOLUMES: CONCEPT 2 (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR

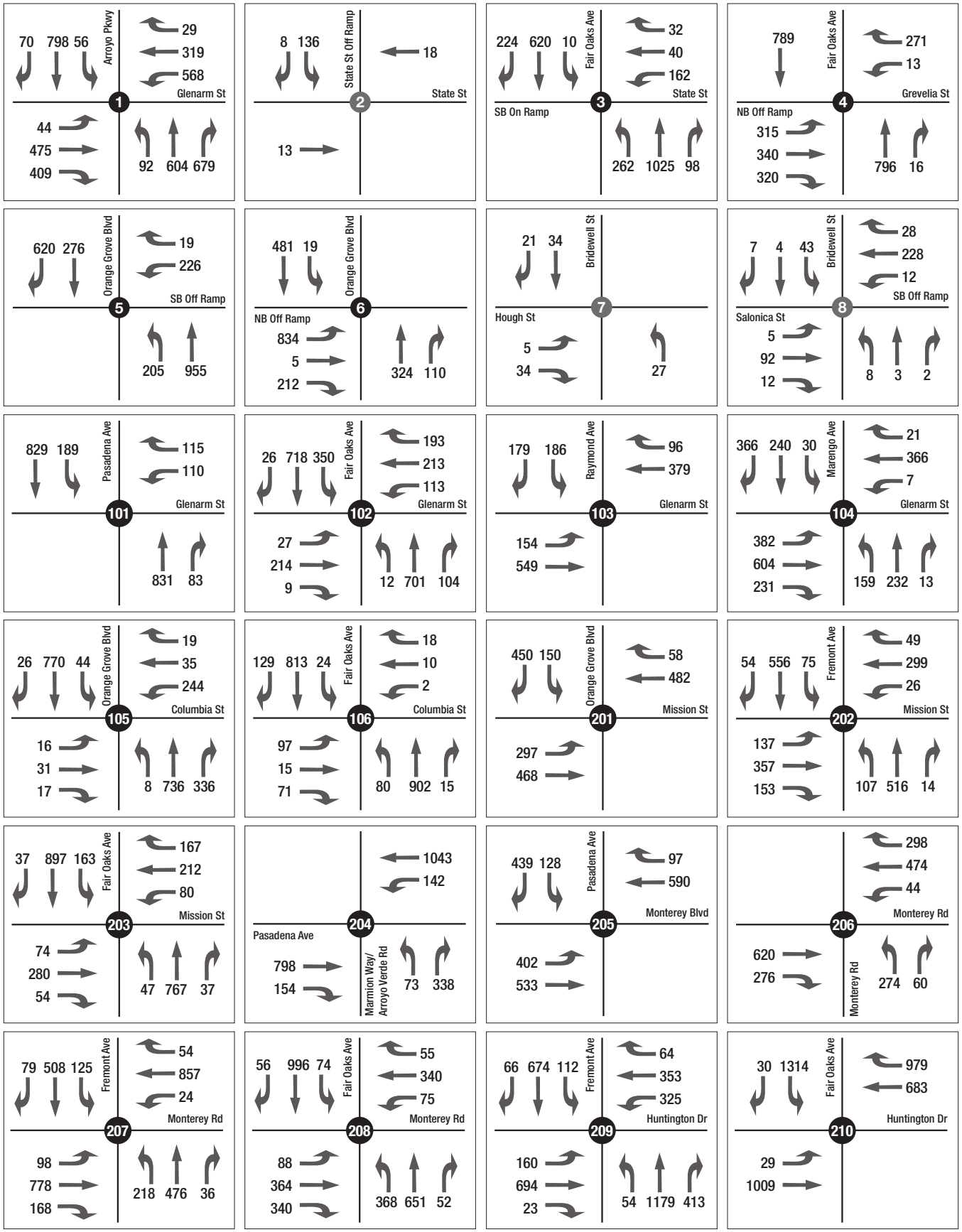


FIGURE 6.4B: INTERSECTION VOLUMES: CONCEPT 2 (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR

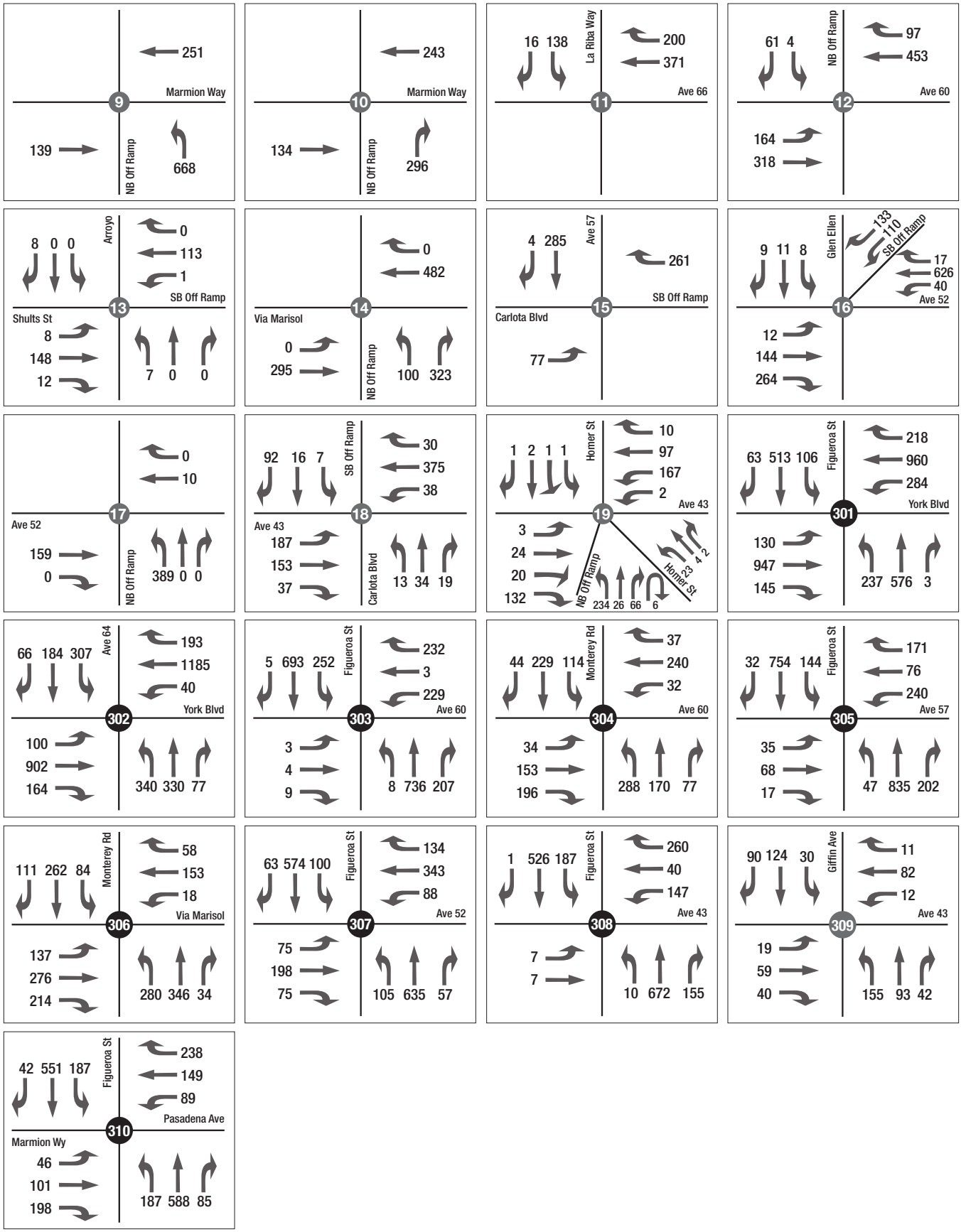
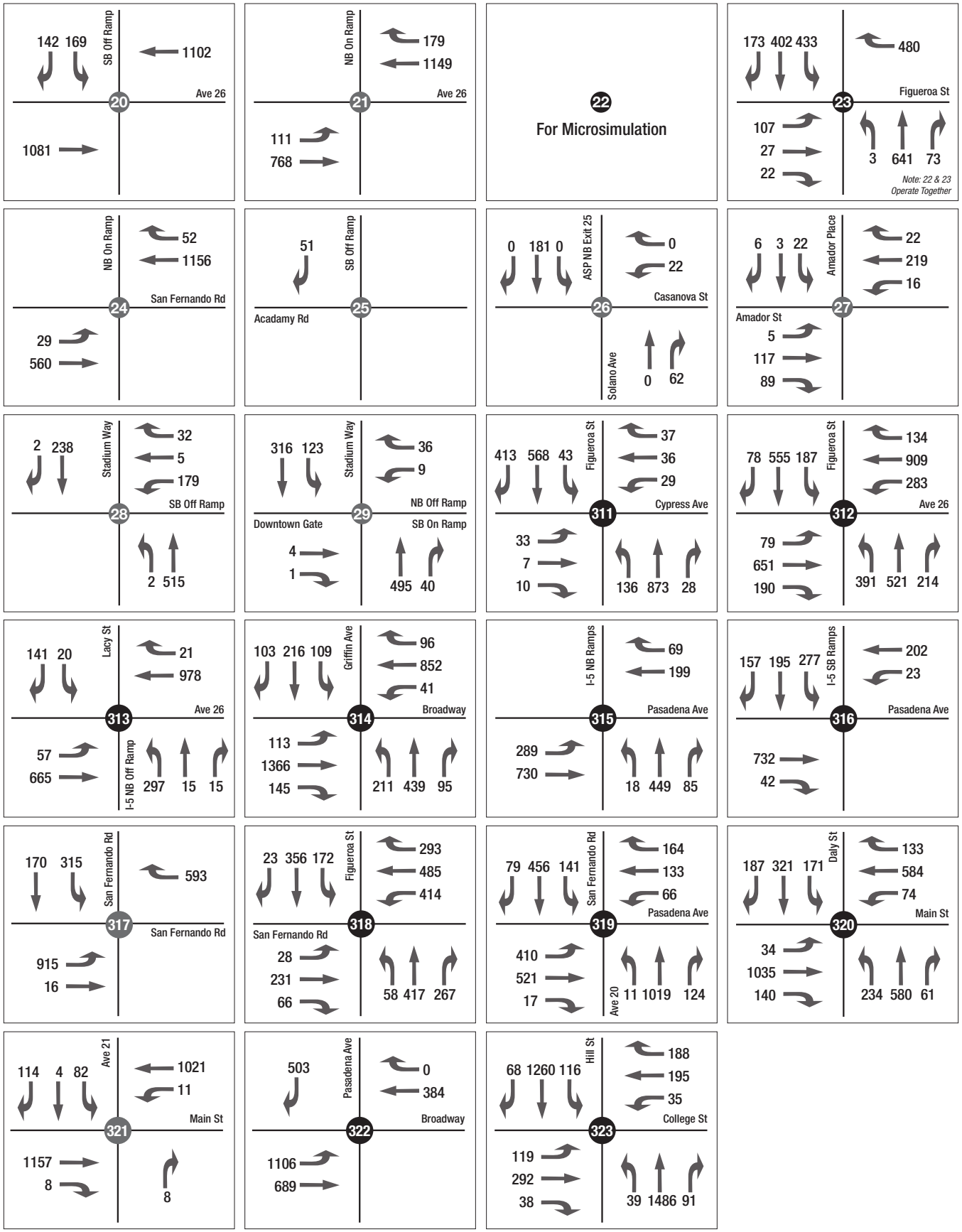


FIGURE 6.4C: INTERSECTION VOLUMES: CONCEPT 2 (SR-710 SENSITIVITY ANALYSIS) - PM PEAK HOUR



6.2 Intersection Level of Service Analysis

6.2.1 INTERSECTION LEVEL OF SERVICE ANALYSIS RESULTS FOR CONCEPT 2

A summary of the AM and PM peak hour level of service analysis results for Concept 2 and the changes compared to the No Build scenario are included in Table 6-1.

Table 6-1: Concept 2 LOS Results

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
1	Arroyo Pkwy & Glenarm St	X	AM	0.802	D	0.719	C	-0.083	
			PM	1.093	F	1.025	F	-0.068	
2	ASP SB Exit 31B & State St		AM	8.9 s	A	9.1 s	A	0.2 s	
			PM	9.8 s	A	9.7 s	A	-0.1 s	
3	Fair Oaks Av & State St	X	AM	0.544	A	0.564	A	0.020	
			PM	0.537	A	0.548	A	0.011	
4	Fair Oaks Av & Grevelia St	X	AM	0.630	B	0.616	B	-0.014	
			PM	0.724	C	0.702	C	-0.022	
5	Orange Grove Bl & ASP SB Exit 31A	X	AM	0.373	A	0.370	A	-0.003	
			PM	0.491	A	0.512	A	0.021	
6	Orange Grove Bl & ASP NB Exit 31A	X	AM	0.433	A	0.435	A	0.002	
			PM	0.685	B	0.697	B	0.012	
7	Bridewell St & Hough St		AM	9.0 s	A	8.8 s	A	-0.2 s	
			PM	9.0 s	A	8.8 s	A	-0.2 s	
8	Bridewell St & ASP SB Exit 30		AM	11.7 s	B	12.3 s	B	0.6 s	
			PM	12.6 s	B	12.4 s	B	-0.2 s	
9	ASP NB Exit 30A & Marmion Wy		AM	40.4 s	E	52.0 s	F	11.6 s	
			PM	929.8 s	F	930.8 s	F	1.0 s	
11	La Riba Wy & Ave 66		AM	22.0 s	C	26.3 s	D	4.3 s	
			PM	16.7 s	C	15.5 s	C	-1.2 s	
12	ASP NB Exit 29 & Ave 60		AM	15.2 s	C	14.6 s	B	-0.6 s	
			PM	21.2 s	C	17.2 s	C	-4.0 s	
14	ASP NB Exit 28B & Via Marisol		AM	24.2 s	C	20.7 s	C	-3.5 s	
			PM	57.3 s	F	23.5 s	C	-33.8 s	
15	Ave 57 & ASP SB Exit 28B		AM	11.3 s	B	12.0 s	B	0.7 s	
			PM	11.4 s	B	12.9 s	B	1.5 s	
16	ASP SB Exit 28A & Ave 52		AM	12.4 s	B	10.8 s	B	-1.6 s	
			PM	14.0 s	B	14.2 s	B	0.2 s	Warrant

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
17	ASP NB Exit 28A & Ave 52		AM	13.4 s	B	8.5 s	A	-4.9 s	
			PM	18.1 s	C	11.3 s	B	-6.8 s	
18	ASP SB Exit 27 & Ave 43		AM	22.1 s	C	18.2 s	C	-3.9 s	Warrant
			PM	16.5 s	C	13.6 s	B	-2.9 s	
19	Homer St & Ave 43		AM	13.7 s	B	12.3 s	B	-1.4 s	
			PM	11.1 s	B	12.0 s	B	0.9 s	
20	ASP SB Exit 26A & Ave 26		AM	828.7 s	F	799.9 s	F	-28.8 s	Warrant
			PM	420.0 s	F	479.9 s	F	59.9 s	Warrant
21	ASP NB on-ramp & Ave 26		AM	11.5 s	B	11.6 s	B	0.1 s	
			PM	14.4 s	B	15.3 s	C	0.9 s	
23	ASP NB Exit 26B & Figueroa St	X	AM	0.761	C	0.777	C	0.016	
			PM	0.513	A	0.525	A	0.012	
24	ASP NB on-ramp & San Fernando		AM	12.4 s	B	12.4 s	B	.0 s	
			PM	12.5 s	B	12.8 s	B	.3 s	
26	ASP NB Exit 25 & Casanova St		AM	9.7 s	A	9.6 s	A	-.1 s	
			PM	9.7 s	A	8.4 s	A	-1.3 s	
27	Amador Pl & Amador St		AM	14.8 s	B	13.8 s	B	-1.0 s	
			PM	11.5 s	B	11.8 s	B	.3 s	
28	Stadium Wy & ASP SB Exit 24D		AM	12.8 s	B	12.2 s	B	-.6 s	
			PM	22.9 s	C	23.6 s	C	.7 s	
29	Stadium Wy & ASP NB Exit 24B		AM	13.0 s	B	12.6 s	B	-.4 s	
			PM	16.4 s	C	16.6 s	C	.2 s	
101	Pasadena Av & Glenarm St	X	AM	0.609	B	0.602	B	-0.007	
			PM	0.589	A	0.581	A	-0.008	
102	Fair Oaks Av & Glenarm St	X	AM	0.765	C	0.714	C	-0.051	
			PM	0.895	D	0.865	D	-0.030	
103	Raymond Av & Glenarm St	X	AM	0.469	A	0.404	A	-0.065	
			PM	0.499	A	0.470	A	-0.029	
104	Marengo Av & Glenarm St	X	AM	0.781	C	0.737	C	-0.044	
			PM	0.893	D	0.857	D	-0.036	
105	Orange Grove Bl & Columbia St	X	AM	0.720	C	0.734	C	0.014	
			PM	0.550	A	0.566	A	0.016	
106	Fair Oaks Av & Columbia St	X	AM	0.558	A	0.578	A	0.020	
			PM	0.553	A	0.566	A	0.013	

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
201	Orange Grove Bl & Mission St	X	AM	0.479	A	0.476	A	-0.003	
			PM	0.537	A	0.552	A	0.015	
202	Fremont Av & Mission St	X	AM	0.704	C	0.687	B	-0.017	
			PM	0.754	C	0.747	C	-0.007	
203	Fair Oaks Av & Mission St	X	AM	0.683	B	0.646	B	-0.037	
			PM	0.804	D	0.795	C	-0.009	
204	Arroyo Verde Rd & Pasadena Av	X	AM	0.464	A	0.555	A	0.091	
			PM	0.621	B	0.643	B	0.022	
205	Pasadena Av & Monterey Rd	X	AM	0.582	A	0.622	B	0.040	
			PM	0.714	C	0.772	C	0.058	
206	Monterey Rd & Monterey Rd	X	AM	0.686	B	0.742	C	0.056	
			PM	0.356	A	0.368	A	0.012	
207	Fremont Av & Monterey Rd	X	AM	0.801	D	0.808	D	0.007	
			PM	0.903	E	0.900	D	-0.003	
208	Fair Oaks Av & Monterey Rd	X	AM	1.026	F	1.034	F	0.008	
			PM	1.131	F	1.123	F	-0.008	
209	Fremont Av & Huntington Dr	X	AM	1.311	F	1.330	F	0.019	
			PM	1.361	F	1.383	F	0.022	Impact
210	Fair Oaks Av & Huntington Dr	X	AM	1.096	F	1.078	F	-0.018	
			PM	1.317	F	1.285	F	-0.032	
301	Figueroa St & York Bl	X	AM	0.995	E	1.030	F	0.035	Impact
			PM	0.968	E	1.011	F	0.043	Impact
302	Ave 64 & York Bl	X	AM	0.815	D	0.792	C	-0.023	
			PM	1.069	F	1.084	F	0.015	Impact
303	Figueroa St & Ave 60	X	AM	0.603	B	0.656	B	0.053	
			PM	0.689	B	0.742	C	0.052	Impact
304	Monterey Rd & Ave 60	X	AM	0.864	D	0.896	D	0.032	Impact
			PM	0.751	C	0.772	C	0.020	
305	Figueroa St & Ave 57	X	AM	0.554	A	0.622	B	0.068	
			PM	0.807	D	0.825	D	0.018	
306	Monterey Rd & Via Marisol	X	AM	0.727	C	0.731	C	0.004	
			PM	0.623	B	0.633	B	0.011	
307	Figueroa St & Ave 52	X	AM	0.840	D	0.813	D	-0.027	
			PM	0.801	D	0.807	D	0.006	

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
308	Figueroa St & Ave 43	X	AM	0.663	B	0.659	B	-0.004	
			PM	0.750	C	0.719	C	-0.031	
309	Griffin Av & Ave 43		AM	14.9 s	B	13.6 s	B	-1.3 s	
			PM	10.4 s	B	10.8 s	B	0.4 s	
310	Figueroa St & Marmion Wy	X	AM	0.715	C	0.724	C	0.009	
			PM	0.504	A	0.507	A	0.004	
311	Figueroa St & Cypress Av	X	AM	0.657	B	0.676	B	0.019	
			PM	0.526	A	0.539	A	0.013	
312	Figueroa St & Ave 26	X	AM	1.205	F	1.215	F	0.010	**Impact**
			PM	1.032	F	1.020	F	-0.012	
313	Lacy St & Ave 26	X	AM	0.534	A	0.542	A	0.008	
			PM	0.620	B	0.651	B	0.031	
314	Griffin Av & Broadway	X	AM	0.718	C	0.725	C	0.007	
			PM	0.685	B	0.685	B	0.000	
315	I-5 NB ramps & Pasadena Av	X	AM	0.473	A	0.473	A	-0.001	
			PM	0.465	A	0.458	A	-0.007	
316	I-5 SB ramps & Pasadena Av	X	AM	0.336	A	0.327	A	-0.009	
			PM	0.391	A	0.402	A	0.011	
317	Ave 19 & San Fernando Rd		AM	OVERFL	F	OVERFL	F		
			PM	OVERFL	F	OVERFL	F		**Warrant**
318	Figueroa St & San Fernando Rd	X	AM	0.862	D	0.861	D	-0.001	
			PM	0.874	D	0.891	D	0.016	
319	San Fernando Rd & Pasadena Av	X	AM	0.954	E	0.936	E	-0.018	
			PM	1.399	F	1.415	F	0.015	**Impact**
320	Daly St & Main St	X	AM	1.002	F	1.003	F	0.001	
			PM	1.034	F	1.055	F	0.021	**Impact**
321	Ave 21 & Main St		AM	OVERFL	F	OVERFL	F		**Warrant**
			PM	885.8 s	F	OVERFL	F		**Warrant**
322	Pasadena Av & Broadway	X	AM	0.963	E	0.969	E	0.007	
			PM	0.479	A	0.519	A	0.040	
323	Hill St & College St	X	AM	0.757	C	0.783	C	0.026	
			PM	0.813	D	0.833	D	0.021	**Impact**

Concept 2 results in impacts during one or both peak periods at the following signalized intersections:

- Fremont Avenue & Huntington Drive (#209)
- Figueroa Street & York Boulevard (#301)
- Avenue 64 & York Boulevard (#302)
- Figueroa Street & Avenue 60 (#303)
- Monterey Road & Avenue 60 (#304)
- Figueroa Street & Avenue 52 (#307)
- Figueroa Street & Avenue 26 (#312)
- San Fernando Road & Pasadena Avenue (#319)
- Daly Street & Main Street (#320)
- Hill Street & College Street (#323)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy any MUTCD Signal Warrants based on peak hour volume in this (or any) project scenarios.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay, but may not have sufficient storage capacity on the Arroyo Seco Parkway off-ramp to be appropriate for signal control:

- Arroyo Seco Parkway Southbound Exit 28A & Avenue 52 (#16)
- Arroyo Seco Parkway Southbound Exit 27 & Avenue 43 (#18)
- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)

The following unsignalized non-ramp intersections also satisfy MUTCD Signal Warrant 3 in the Concept 2 scenario:

- Avenue 19 & San Fernando Road (#317)
- Avenue 21 & Main Street (#321)

6.2.2 SR-710 SENSITIVITY ANALYSIS FOR CONCEPT 2 – INTERSECTION LOS

A summary of the SR-710 sensitivity analysis results for Concept 2 intersection level of service and the changes compared to the No Build scenario are included in Table 6-2.

Table 6-2: Concept 2 (SR-710 Sensitivity) Intersection LOS Results

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
1	Arroyo Pkwy & Glenarm St	X	AM	0.754	C	0.653	B	-0.101	
			PM	1.014	F	0.930	E	-0.084	
2	ASP SB Exit 31B & State St		AM	8.6 s	A	8.7 s	A	0.1 s	
			PM	9.0 s	A	9.2 s	A	0.2 s	
3	Fair Oaks Av & State St	X	AM	0.450	A	0.467	A	0.017	
			PM	0.396	A	0.420	A	0.024	
4	Fair Oaks Av & Grevelia St	X	AM	0.535	A	0.500	A	-0.035	
			PM	0.639	B	0.640	B	0.001	
5	Orange Grove Bl & ASP SB Exit 31A	X	AM	0.349	A	0.345	A	-0.004	
			PM	0.436	A	0.454	A	0.018	
6	Orange Grove Bl & ASP NB Exit 31A	X	AM	0.390	A	0.388	A	-0.002	
			PM	0.611	B	0.629	B	0.018	
7	Bridewell St & Hough St		AM	8.8 s	A	8.6 s	A	-0.2 s	
			PM	8.7 s	A	8.7 s	A	0.0 s	
8	Bridewell St & ASP SB Exit 30		AM	11.0 s	B	11.3 s	B	0.3 s	
			PM	11.9 s	B	11.7 s	B	-0.2 s	
9	ASP NB Exit 30A & Marmion Wy		AM	39.8 s	E	47.4 s	E	7.6 s	
			PM	905.0 s	F	884.8 s	F	-20.2 s	
11	La Riba Wy & Ave 66		AM	19.4 s	C	22.3 s	C	2.9 s	
			PM	15.0 s	B	13.8 s	B	-1.2 s	
12	ASP NB Exit 29 & Ave 60		AM	13.6 s	B	13.1 s	B	-0.5 s	
			PM	14.7 s	B	13.0 s	B	-1.7 s	
14	ASP NB Exit 28B & Via Marisol		AM	23.6 s	C	18.1 s	C	-5.5 s	
			PM	32.2 s	D	19.0 s	C	-13.2 s	
15	Ave 57 & ASP SB Exit 28B		AM	8.5 s	A	11.9 s	B	3.4 s	
			PM	11.5 s	B	13.3 s	B	1.8 s	
16	ASP SB Exit 28A & Ave 52		AM	11.8 s	B	10.4 s	B	-1.4 s	
			PM	14.2 s	B	13.9 s	B	-0.3 s	**Warrant**
17	ASP NB Exit 28A & Ave 52		AM	12.8 s	B	8.3 s	A	-4.5 s	
			PM	16.7 s	C	10.9 s	B	-5.8 s	

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
18	ASP SB Exit 27 & Ave 43		AM	22.1 s	C	18.6 s	C	-3.5 s	Warrant
			PM	15.3 s	C	13.2 s	B	-2.1 s	
19	Homer St & Ave 43		AM	13.2 s	B	12.2 s	B	-1.0 s	
			PM	10.6 s	B	11.3 s	B	0.7 s	
20	ASP SB Exit 26A & Ave 26		AM	482.1 s	F	497.1 s	F	15.0 s	Warrant
			PM	284.0 s	F	272.1 s	F	-11.9 s	Warrant
21	ASP NB on-ramp & Ave 26		AM	10.8 s	B	10.8 s	B	0.0 s	
			PM	13.3 s	B	13.7 s	B	0.4 s	
23	ASP NB Exit 26B & Figueroa St	X	AM	0.741	C	0.757	C	0.016	
			PM	0.518	A	0.546	A	0.028	
24	ASP NB on-ramp & San Fernando		AM	11.4 s	B	11.4 s	B	.0 s	
			PM	11.6 s	B	11.7 s	B	.1 s	
26	ASP NB Exit 25 & Casanova St		AM	9.5 s	A	9.3 s	A	-.2 s	
			PM	8.9 s	A	8.4 s	A	-.5 s	
27	Amador Pl & Amador St		AM	13.6 s	B	13.3 s	B	-.3 s	
			PM	11.2 s	B	11.3 s	B	.1 s	
28	Stadium Wy & ASP SB Exit 24D		AM	12.3 s	B	11.7 s	B	-.6 s	
			PM	21.1 s	C	19.3 s	C	-1.8 s	
29	Stadium Wy & ASP NB Exit 24B		AM	12.7 s	B	12.2 s	B	-.5 s	
			PM	15.2 s	C	14.4 s	B	-.8 s	
101	Pasadena Av & Glenarm St	X	AM	0.523	A	0.653	B	0.130	Impact
			PM	0.483	A	0.473	A	-0.010	
102	Fair Oaks Av & Glenarm St	X	AM	0.732	C	0.516	A	-0.216	
			PM	0.801	D	0.741	C	-0.060	
103	Raymond Av & Glenarm St	X	AM	0.478	A	0.681	B	0.203	
			PM	0.513	A	0.445	A	-0.068	
104	Marengo Av & Glenarm St	X	AM	0.741	C	0.416	A	-0.325	
			PM	0.840	D	0.809	D	-0.031	
105	Orange Grove Bl & Columbia St	X	AM	0.659	B	0.676	B	0.017	
			PM	0.444	A	0.452	A	0.008	
106	Fair Oaks Av & Columbia St	X	AM	0.444	A	0.477	A	0.033	
			PM	0.421	A	0.424	A	0.003	
201	Orange Grove Bl & Mission St	X	AM	0.417	A	0.413	A	-0.004	
			PM	0.469	A	0.495	A	0.026	

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
202	Fremont Av & Mission St	X	AM	0.564	A	0.564	A	0.000	
			PM	0.616	B	0.609	B	-0.007	
203	Fair Oaks Av & Mission St	X	AM	0.592	A	0.552	A	-0.040	
			PM	0.666	B	0.636	B	-0.030	
204	Arroyo Verde Rd & Pasadena Av	X	AM	0.456	A	0.538	A	0.082	
			PM	0.625	B	0.643	B	0.018	
205	Pasadena Av & Monterey Rd	X	AM	0.510	A	0.540	A	0.030	
			PM	0.681	B	0.740	C	0.059	
206	Monterey Rd & Monterey Rd	X	AM	0.593	A	0.639	B	0.046	
			PM	0.309	A	0.316	A	0.007	
207	Fremont Av & Monterey Rd	X	AM	0.703	C	0.719	C	0.016	
			PM	0.805	D	0.800	C	-0.005	
208	Fair Oaks Av & Monterey Rd	X	AM	0.734	C	0.747	C	0.013	
			PM	0.829	D	0.826	D	-0.003	
209	Fremont Av & Huntington Dr	X	AM	1.143	F	1.152	F	0.009	
			PM	1.123	F	1.159	F	0.036	Impact
210	Fair Oaks Av & Huntington Dr	X	AM	0.940	E	0.901	E	-0.039	
			PM	0.671	B	0.666	B	-0.005	
301	Figueroa St & York Bl	X	AM	0.941	E	0.978	E	0.036	Impact
			PM	0.912	E	0.952	E	0.039	Impact
302	Ave 64 & York Bl	X	AM	0.774	C	0.765	C	-0.009	
			PM	1.033	F	1.055	F	0.022	Impact
303	Figueroa St & Ave 60	X	AM	0.578	A	0.632	B	0.054	
			PM	0.653	B	0.704	C	0.051	Impact
304	Monterey Rd & Ave 60	X	AM	0.763	C	0.811	D	0.048	Impact
			PM	0.659	B	0.652	B	-0.007	
305	Figueroa St & Ave 57	X	AM	0.510	A	0.574	A	0.064	
			PM	0.775	C	0.790	C	0.015	
306	Monterey Rd & Via Marisol	X	AM	0.625	B	0.638	B	0.013	
			PM	0.526	A	0.554	A	0.028	
307	Figueroa St & Ave 52	X	AM	0.819	D	0.794	C	-0.025	
			PM	0.779	C	0.762	C	-0.017	
308	Figueroa St & Ave 43	X	AM	0.673	B	0.659	B	-0.014	
			PM	0.731	C	0.705	C	-0.027	

No.	Intersection	Signal	Peak	No Project		Concept 2		Change in V/C or Delay	Impact or Warrant
				V/C or Delay	LOS	V/C or Delay	LOS		
309	Griffin Av & Ave 43		AM	12.5 s	B	11.8 s	B	-0.7 s	
			PM	9.6 s	A	9.7 s	A	0.1 s	
310	Figueroa St & Marmion Wy	X	AM	0.695	B	0.705	C	0.010	
			PM	0.502	A	0.504	A	0.001	
311	Figueroa St & Cypress Av	X	AM	0.572	A	0.589	A	0.017	
			PM	0.424	A	0.451	A	0.027	
312	Figueroa St & Ave 26	X	AM	1.195	F	1.210	F	0.015	**Impact**
			PM	1.011	F	0.997	E	-0.014	
313	Lacy St & Ave 26	X	AM	0.480	A	0.481	A	0.001	
			PM	0.572	A	0.585	A	0.013	
314	Griffin Av & Broadway	X	AM	0.677	B	0.681	B	0.004	
			PM	0.611	B	0.613	B	0.003	
315	I-5 NB ramps & Pasadena Av	X	AM	0.491	A	0.493	A	0.001	
			PM	0.468	A	0.467	A	-0.001	
316	I-5 SB ramps & Pasadena Av	X	AM	0.322	A	0.320	A	-0.002	
			PM	0.424	A	0.459	A	0.035	
317	Ave 19 & San Fernando Rd		AM	OVERFL	F	OVERFL	F		
			PM	OVERFL	F	OVERFL	F		**Warrant**
318	Figueroa St & San Fernando Rd	X	AM	0.763	C	0.752	C	-0.011	
			PM	0.746	C	0.756	C	0.010	
319	San Fernando Rd & Pasadena Av	X	AM	0.868	D	0.861	D	-0.007	
			PM	1.277	F	1.273	F	-0.004	
320	Daly St & Main St	X	AM	0.905	E	0.911	E	0.006	
			PM	0.836	D	0.815	D	-0.021	
321	Ave 21 & Main St		AM	642.4 s	F	731.2 s	F	88.8 s	**Warrant**
			PM	237.8 s	F	127.4 s	F	-110.4 s	**Warrant**
322	Pasadena Av & Broadway	X	AM	0.964	E	0.969	E	0.005	
			PM	0.497	A	0.527	A	0.031	
323	Hill St & College St	X	AM	0.743	C	0.739	C	-0.003	
			PM	0.783	C	0.835	D	0.052	**Impact**

Under the SR-710 sensitivity analysis, Concept 2 results in impacts during one or both peak periods at the following signalized intersections:

- Pasadena Avenue & Glenarm Street (#101)
- Fremont Avenue & Huntington Drive (#209)
- Figueroa Street & York Boulevard (#301)
- Avenue 64 & York Boulevard (#302)
- Figueroa Street & Avenue 60 (#303)
- Monterey Road & Avenue 60 (#304)
- Figueroa Street & Avenue 26 (#312)
- Hill Street & College Street (#323)

The intersection of Arroyo Seco Parkway Southbound Exit 29 & Shults Street (#13) is stop controlled on three approaches and uncontrolled on the off-ramp approach. This non-standard configuration cannot be analyzed using the Highway Capacity Manual methodology and results in model output that is unreliable. This intersection does not satisfy any MUTCD Signal Warrants based on peak hour volume in this (or any) project scenarios.

The following unsignalized intersections satisfy MUTCD Signal Warrant 3 based on peak hour volume and delay, but may not have sufficient storage capacity on the Arroyo Seco Parkway off-ramp to be appropriate for signal control:

- Arroyo Seco Parkway Southbound Exit 28A & Avenue 52 (#16)
- Arroyo Seco Parkway Southbound Exit 27 & Avenue 43 (#18)
- Arroyo Seco Parkway Southbound Exit 26A & Avenue 26 (#20)

The following unsignalized non-ramp intersections also satisfy MUTCD Signal Warrant 3 in the Concept 2 (SR-710 Sensitivity Analysis) scenario:

- Avenue 19 & San Fernando Road (#317)
- Avenue 21 & Main Street (#321)

6.2.3 VARIATION BETWEEN BASELINE AND SR-710 SENSITIVITY ANALYSIS

The following intersections are impacted in the baseline condition for this scenario but are not forecast to experience impacts in the SR-710 sensitivity analysis:

- Figueroa Street & Avenue 52 (#307)
- San Fernando Road & Pasadena Avenue (#319)
- Daly Street & Main Street (#320)

The following intersection is not impacted in the baseline condition for this scenario but is forecast to experience impacts in the SR-710 sensitivity analysis:

- Pasadena Avenue & Glenarm Street (#101)

6.3 Mainline Analysis

6.3.1 MAINLINE ANALYSIS RESULTS FOR CONCEPT 2

The results of the mainline analysis for the northbound basic segments of Arroyo Seco Parkway in Concept 2 are presented in Table 6-3. The results for the southbound basic segments are presented in Table 6-4. The changes in density and LOS associated with Concept 2 are summarized in Tables 6-5 and 6-6.

Table 6-3 Concept 2 Arroyo Seco Parkway Segment LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	0	AM	6,129	30.3	D
			PM	9,703	> 45.0	F
Between Solano Ave and NB I-5 / Riverside Dr	4	0	AM	5,836	28.8	D
			PM	9,408	> 45.0	F
Between NB I-5 / Riverside Dr and Figueroa St	3	0	AM	3,465	27.9	D
			PM	5,465	> 45.0	F
Between Figueroa St and San Fernando Rd	3	0	AM	2,936	23.6	C
			PM	4,616	38.2	E
Between San Fernando Rd and Ave 26	3	0	AM	3,011	24.8	C
			PM	4,739	39.5	E
Between Ave 26 and Ave 43	2	1	AM	4,049	32.7	D
			PM	6,582	> 45.0	F
Between Ave 43 and Ave 52	2	1	AM	3,848	31.0	D
			PM	6,407	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	2	1	AM	3,440	27.7	D
			PM	5,554	> 45.0	F
Between Ave 57 / Via Marisol and Ave 60	2	1	AM	3,089	24.9	C
			PM	5,046	42.8	E
Between Ave 60 and Ave 64 / Marmion Way	2	1	AM	3,166	25.5	C
			PM	5,189	44.4	E
Between Ave 64 / Marmion Way and Bridewell St	3	0	AM	2,609	21.0	C
			PM	4,260	34.7	D
Between Bridewell St and Orange Grove Ave	2	1	AM	2,584	20.8	C
			PM	4,166	33.8	D
Between Orange Grove Ave and Fair Oaks Ave	2	1	AM	2,032	16.4	B
			PM	3,274	26.4	D
Downstream of Fair Oaks Ave	3	0	AM	1,591	12.8	B
			PM	2,457	19.8	C

Table 6-4 Concept 2 Arroyo Seco Parkway Segment LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,433	7.1	A
			PM	1,179	5.8	A
Upstream of Fair Oaks Ave	2	1	AM	1,261	10.1	A
			PM	1,067	8.6	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	2,001	16.1	B
			PM	1,700	13.7	B
Between Orange Grove Ave and York Blvd	3	0	AM	3,059	24.6	C
			PM	2,440	19.6	C
Between York Blvd and Ave 64 / Marmion Wy	2	0	AM	3,289	41.5	E
			PM	2,498	30.2	D
Between Ave 64 / Marmion Wy and Ave 60	3	0	AM	4,101	33.2	D
			PM	3,026	24.4	C
Between Ave 60 and Ave 57 / Via Marisol	3	0	AM	4,089	33.1	D
			PM	3,012	24.2	C
Between Ave 57 / Via Marisol and Ave 52	3	0	AM	4,332	35.4	E
			PM	3,275	26.4	D
Between Ave 52 and Ave 43	3	0	AM	4,946	41.7	E
			PM	3,613	29.1	D
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	5,231	> 45.0	F
			PM	3,886	31.3	D
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,687	30.4	D
			PM	2,892	23.3	C
Between Ave 26 and Figueroa St	3	0	AM	3,483	28.0	D
			PM	2,739	22.0	C
Between Figueroa St and SB I-5	3	0	AM	4,432	36.4	E
			PM	3,454	27.8	D
Between SB I-5 and Academy Rd	3	2	AM	8,579	34.0	D
			PM	6,343	25.1	C
Between Academy Rd and Amador St	3	2	AM	8,525	33.7	D
			PM	6,286	24.9	C
Downstream of Amador	3	2	AM	8,771	34.9	D
			PM	6,500	25.7	C

Table 6-5 Changes to Segment LOS in Concept 2 – Northbound

Segment of Northbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	AM	30.2	D	30.3	D	0.1	
	PM	69.9	F	> 45.0	F	N/A	
Between Solano Ave and NB I-5 / Riverside Dr	AM	29.6	D	28.8	D	-0.8	
	PM	69.7	F	> 45.0	F	N/A	
Between NB I-5 / Riverside Dr and Figueroa St	AM	24.0	C	27.9	D	3.9	YES
	PM	40.6	E	> 45.0	F	N/A	YES
Between Figueroa St and San Fernando Rd	AM	20.6	C	23.6	C	3.0	
	PM	33.3	D	38.2	E	4.9	YES
Between San Fernando Rd and Ave 26	AM	21.1	C	24.8	C	3.7	
	PM	33.8	D	39.5	E	5.7	YES
Between Ave 26 and Ave 43	AM	28.9	D	32.7	D	3.8	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 43 and Ave 52	AM	27.7	D	31.0	D	3.3	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 52 and Ave 57 / Via Marisol	AM	25.6	C	27.7	D	2.1	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 57 / Via Marisol and Ave 60	AM	23.7	C	24.9	C	1.2	
	PM	38.7	E	42.8	E	4.1	
Between Ave 60 and Ave 64 / Marmion Way	AM	23.8	C	25.5	C	1.7	
	PM	39.1	E	44.4	E	5.3	
Between Ave 64 / Marmion Way and Bridewell St	AM	20.3	C	21.0	C	0.7	
	PM	31.3	D	34.7	D	3.4	
Between Bridewell St and Orange Grove Ave	AM	19.7	C	20.8	C	1.1	
	PM	30.4	D	33.8	D	3.4	
Between Orange Grove Ave and Fair Oaks Ave	AM	16.1	B	16.4	B	0.3	
	PM	23.8	C	26.4	D	2.6	YES
Downstream of Fair Oaks Ave	AM	12.1	B	12.8	B	0.7	
	PM	17.6	B	19.8	C	2.2	YES

Table 6-6 Changes to Segment LOS in Concept 2 – Southbound

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of State St	AM	8.1	A	7.1	A	-1.0	
	PM	6.7	A	5.8	A	-0.9	
Upstream of Fair Oaks Ave	AM	9.9	A	10.1	A	0.2	

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
	PM	8.4	A	8.6	A	0.2	
Between Fair Oaks Ave and Orange Grove Ave	AM	15.7	B	16.1	B	0.4	
	PM	13.1	B	13.7	B	0.6	
Between Orange Grove Ave and York Blvd	AM	22.8	C	24.6	C	1.8	
	PM	18.4	C	19.6	C	1.2	
Between York Blvd and Ave 64 / Marmion Wy	AM	24.3	C	41.5	E	17.2	YES
	PM	18.9	C	30.2	D	11.3	YES
Between Ave 64 / Marmion Wy and Ave 60	AM	30.2	D	33.2	D	3.0	
	PM	22.7	C	24.4	C	1.7	
Between Ave 60 and Ave 57 / Via Marisol	AM	29.9	D	33.1	D	3.2	
	PM	22.1	C	24.2	C	2.1	
Between Ave 57 / Via Marisol and Ave 52	AM	31.4	D	35.4	E	4.0	YES
	PM	23.6	C	26.4	D	2.8	YES
Between Ave 52 and Ave 43	AM	36.3	E	41.7	E	5.4	
	PM	25.9	C	29.1	D	3.2	YES
Between Ave 43 and I-5 / Pasadena Ave	AM	38.4	E	> 45.0	F	N/A	YES
	PM	27.5	D	31.3	D	3.8	
Between I-5 / Pasadena Ave and Ave 26	AM	25.4	C	30.4	D	5.0	YES
	PM	20.3	C	23.3	C	3.0	
Between Ave 26 and Figueroa St	AM	23.9	C	28.0	D	4.1	YES
	PM	19.2	C	22.0	C	2.8	
Between Figueroa St and SB I-5	AM	30.6	D	36.4	E	5.8	YES
	PM	23.8	C	27.8	D	4.0	YES
Between SB I-5 and Academy Rd	AM	34.6	D	34.0	D	-0.6	
	PM	25.6	C	25.1	C	-0.5	
Between Academy Rd and Amador St	AM	34.2	D	33.7	D	-0.5	
	PM	25.4	C	24.9	C	-0.5	
Downstream of Amador	AM	35.1	E	34.9	D	-0.2	
	PM	25.9	C	25.7	C	-0.2	

In Concept 2, the forecast peak hour mainline volumes on Arroyo Seco Parkway exceed the capacity during one or both peak periods at the following locations:

- Northbound between Stadium Way and Figueroa Street
- Northbound between Avenue 26 and Avenue 57
- Southbound between Avenue 43 and I-5/Pasadena Avenue

6.3.2 SR-710 SENSITIVITY ANALYSIS FOR CONCEPT 2 – MAINLINE

The results of the SR-710 sensitivity analysis for the basic northbound and southbound mainline segments of Arroyo Seco Parkway in Concept 2 are presented in Tables 6-7 and 6-8. The changes in density and LOS are summarized in Tables 6-9 and 6-10.

Table 6-7 Concept 2 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – Northbound

Segment of Northbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	4	0	AM	6,154	30.4	D
			PM	9,731	70.7	F
Between Solano Ave and NB I-5 / Riverside Dr	4	0	AM	5,912	29.2	D
			PM	9,439	63.3	F
Between NB I-5 / Riverside Dr and Figueroa St	3	0	AM	3,514	28.3	D
			PM	5,431	> 45.0	F
Between Figueroa St and San Fernando Rd	3	0	AM	2,974	23.9	C
			PM	4,598	38.0	E
Between San Fernando Rd and Ave 26	3	0	AM	3,047	25.1	C
			PM	4,722	39.3	E
Between Ave 26 and Ave 43	2	1	AM	4,032	32.6	D
			PM	6,472	> 45.0	F
Between Ave 43 and Ave 52	2	1	AM	3,828	30.8	D
			PM	6,289	> 45.0	F
Between Ave 52 and Ave 57 / Via Marisol	2	1	AM	3,417	27.5	D
			PM	5,449	> 45.0	F
Between Ave 57 / Via Marisol and Ave 60	2	1	AM	3,061	24.6	C
			PM	4,963	41.9	E
Between Ave 60 and Ave 64 / Marmion Way	2	1	AM	3,085	24.8	C
			PM	5,068	43.0	E
Between Ave 64 / Marmion Way and Bridewell St	3	0	AM	2,546	20.5	C
			PM	4,156	33.7	D
Between Bridewell St and Orange Grove Ave	2	1	AM	2,533	20.4	C
			PM	4,096	33.2	D
Between Orange Grove Ave and Fair Oaks Ave	2	1	AM	2,008	16.2	B
			PM	3,181	25.6	C
Downstream of Fair Oaks Ave	3	0	AM	1,462	11.8	B
			PM	2,154	17.3	B

Table 6-8 Concept 2 (SR-710 Sensitivity) Arroyo Seco Parkway Segment LOS – Southbound

Segment of Southbound Arroyo Seco Parkway	Mainline Lanes	Aux Lanes	Peak Hour	Volume	Density (pc/mi/ln)	LOS
Upstream of State St	3	1	AM	1,157	5.7	A
			PM	1,017	5.0	A
Upstream of Fair Oaks Ave	2	1	AM	1,072	8.6	A
			PM	988	7.9	A
Between Fair Oaks Ave and Orange Grove Ave	2	1	AM	1,903	15.3	B
			PM	1,680	13.5	B
Between Orange Grove Ave and York Blvd	3	0	AM	2,992	24.1	C
			PM	2,470	19.9	C
Between York Blvd and Ave 64 / Marmion Wy	2	0	AM	3,144	39.2	E
			PM	2,514	30.4	D
Between Ave 64 / Marmion Wy and Ave 60	3	0	AM	3,903	31.4	D
			PM	2,988	24.0	C
Between Ave 60 and Ave 57 / Via Marisol	3	0	AM	3,904	31.4	D
			PM	3,015	24.3	C
Between Ave 57 / Via Marisol and Ave 52	3	0	AM	4,151	33.7	D
			PM	3,298	26.5	D
Between Ave 52 and Ave 43	3	0	AM	4,823	40.4	E
			PM	3,628	29.2	D
Between Ave 43 and I-5 / Pasadena Ave	3	0	AM	5,102	43.4	E
			PM	3,933	31.7	D
Between I-5 / Pasadena Ave and Ave 26	3	0	AM	3,642	30.0	D
			PM	2,933	23.6	C
Between Ave 26 and Figueroa St	3	0	AM	3,437	27.7	D
			PM	2,780	22.4	C
Between Figueroa St and SB I-5	3	0	AM	4,388	35.9	E
			PM	3,498	28.2	D
Between SB I-5 and Academy Rd	3	2	AM	8,563	33.9	D
			PM	6,369	25.2	C
Between Academy Rd and Amador St	3	2	AM	8,549	33.8	D
			PM	6,308	24.9	C
Downstream of Amador	3	2	AM	8,738	34.7	D
			PM	6,479	25.6	C

Table 6-9 Changes to Segment LOS in Concept 2 (SR-710 Sensitivity) – Northbound

Segment of Northbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of Academy Rd / Solano Ave	AM	30.4	D	30.4	D	0.0	
	PM	70.7	F	70.7	F	0.0	
Between Solano Ave and NB I-5 / Riverside Dr	AM	30.1	D	29.2	D	-0.9	
	PM	70.1	F	63.3	F	-6.8	
Between NB I-5 / Riverside Dr and Figueroa St	AM	24.5	C	28.3	D	3.8	YES
	PM	40.3	E	> 45.0	F	N/A	YES
Between Figueroa St and San Fernando Rd	AM	21.0	C	23.9	C	2.9	
	PM	33.1	D	38.0	E	4.9	YES
Between San Fernando Rd and Ave 26	AM	21.5	C	25.1	C	3.6	
	PM	34.2	D	39.3	E	5.1	YES
Between Ave 26 and Ave 43	AM	29.0	D	32.6	D	3.6	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 43 and Ave 52	AM	27.6	D	30.8	D	3.2	
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 52 and Ave 57 / Via Marisol	AM	25.7	C	27.5	D	1.8	YES
	PM	> 45.0	F	> 45.0	F	N/A	
Between Ave 57 / Via Marisol and Ave 60	AM	23.8	C	24.6	C	0.8	
	PM	38.2	E	41.9	E	3.7	
Between Ave 60 and Ave 64 / Marmion Way	AM	23.5	C	24.8	C	1.3	
	PM	38.1	E	43.0	E	4.9	
Between Ave 64 / Marmion Way and Bridewell St	AM	20.0	C	20.5	C	0.5	
	PM	30.6	D	33.7	D	3.1	
Between Bridewell St and Orange Grove Ave	AM	19.5	C	20.4	C	0.9	
	PM	30.0	D	33.2	D	3.2	
Between Orange Grove Ave and Fair Oaks Ave	AM	15.8	B	16.2	B	0.4	
	PM	23.2	C	25.6	C	2.4	
Downstream of Fair Oaks Ave	AM	11.3	B	11.8	B	0.5	
	PM	16.3	B	17.3	B	1.0	

Table 6-10 Changes to Segment LOS in Concept 2 (SR-710 Sensitivity) – Southbound

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Upstream of State St	AM	7.1	A	5.7	A	-1.4	
	PM	6.1	A	5.0	A	-1.1	
Upstream of Fair Oaks Ave	AM	9.0	A	8.6	A	-0.4	
	PM	8.2	A	7.9	A	-0.3	
Between Fair Oaks Ave	AM	15.0	B	15.3	B	0.3	

Segment of Southbound Arroyo Seco Parkway	Peak Hour	Without Project		Concept 1		Change	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
and Orange Grove Ave	PM	13.1	B	13.5	B	0.4	
Between Orange Grove Ave and York Blvd	AM	22.2	C	24.1	C	1.9	
	PM	18.7	C	19.9	C	1.2	
Between York Blvd and Ave 64 / Marmion Wy	AM	23.3	C	39.2	E	15.9	YES
	PM	19.1	C	30.4	D	11.3	YES
Between Ave 64 / Marmion Wy and Ave 60	AM	28.8	D	31.4	D	2.6	
	PM	22.6	C	24.0	C	1.4	
Between Ave 60 and Ave 57 / Via Marisol	AM	28.9	D	31.4	D	2.5	
	PM	22.3	C	24.3	C	2.0	
Between Ave 57 / Via Marisol and Ave 52	AM	30.2	D	33.7	D	3.5	
	PM	23.9	C	26.5	D	2.6	YES
Between Ave 52 and Ave 43	AM	35.4	E	40.4	E	5.0	
	PM	26.0	D	29.2	D	3.2	
Between Ave 43 and I-5 / Pasadena Ave	AM	37.5	E	43.4	E	5.9	
	PM	27.9	D	31.7	D	3.8	
Between I-5 / Pasadena Ave and Ave 26	AM	25.2	C	30.0	D	4.8	YES
	PM	20.6	C	23.6	C	3.0	
Between Ave 26 and Figueroa St	AM	23.9	C	27.7	D	3.8	YES
	PM	19.6	C	22.4	C	2.8	
Between Figueroa St and SB I-5	AM	30.5	D	35.9	E	5.4	YES
	PM	24.2	C	28.2	D	4.0	YES
Between SB I-5 and Academy Rd	AM	34.2	D	33.9	D	-0.3	
	PM	25.8	C	25.2	C	-0.6	
Between Academy Rd and Amador St	AM	34.0	D	33.7	D	-0.3	
	PM	25.5	C	24.9	C	-0.6	
Downstream of Amador	AM	34.7	D	34.7	D	0.0	
	PM	26.0	C	25.6	C	-0.4	

In the SR-710 sensitivity analysis for Concept 2, the forecast peak hour mainline volumes on Arroyo Seco Parkway exceed the capacity during one or both peak periods at the following locations:

- Northbound between Stadium Way and Figueroa Street
- Northbound between Avenue 26 and Avenue 57

6.3.3 VARIATION BETWEEN BASELINE AND SR-710 SENSITIVITY ANALYSIS

The following mainline segment is forecast to operate at LOS F in the baseline condition for Concept 2 but not in the SR-710 sensitivity analysis:

- Southbound between Avenue 43 and I-5/Pasadena Avenue

6.4 Ramp Merge and Diverge Analysis

The Highway Capacity Manual (HCM 2000) ramp merge and diverge analysis methodology was developed to measure the density (vehicles per hour per lane) of freeway and multilane highway facilities in the vicinity of on- and off-ramps. It is assumed that the facilities have been designed according to current engineering standards. While the ramp length is an input, the upstream or downstream mainline volumes and lane configurations have a greater impact on the level of service value than the ramp configuration. The impacts to operations that result from on-ramps with stop control and no acceleration length may not be adequately reflected in these results.

6.4.1 RAMP ANALYSIS RESULTS FOR CONCEPT 2

The results of the ramp analysis for the northbound merge and diverge segments of Arroyo Seco Parkway in the Concept 2 condition are presented in Table 6-11. The southbound merge and diverge segment analysis results are summarized in Table 6-12.

Table 6-11: Concept 2 Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	6,129	1	15	160	293	29.3	D
			PM	9,703				295	47.1	F
ON	Solano Ave – CLOSED	4	AM	5,836						
			PM	9,408						
OFF	NB I-5	4	AM	5,836	1	35	1,525	2,371	30.7	F
			PM	9,408	2			3,943	18.9	F
OFF	Figueroa St	3	AM	3,465	1	35	800	529	20.7	C
			PM	5,465				849	31.2	D
ON	San Fernando Rd	3	AM	2,936	1	15	25	75	20.3	C
			PM	4,616				123	28.9	D
ON	I-5/Avenue 26	3	AM	3,011	1	35	1,930	1,038	20.2	C
			PM	4,739				1,843	35.7	F
OFF	Avenue 43	3	AM	4,049	1	35	300	288	26.6	C
			PM	6,582				460	39.9	F
ON	Avenue 43	3	AM	3,761	1	15	50	87	24.3	C
			PM	6,122				285	38.3	F
OFF	Avenue 52	3	AM	3,848	1	35	325	408	25.6	C
			PM	6,407				853	38.0	F
ON	Avenue 52 – CLOSED	3	AM	3,440						
			PM	5,554						
OFF	Avenue 57	3	AM	3,440	1	35	425	351	22.5	C
			PM	5,554				508	32.7	D
ON	Avenue 57 – CLOSED	3	AM	3,089						
			PM	5,046						
OFF	Avenue 60	3	AM	3,089	1	35	730	103	17.4	B
			PM	5,046				129	27.2	C
ON	Avenue 60	3	AM	2,986	1	15	50	180	21.3	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
			PM	4,917				272	31.5	D
OFF	Avenue 64	3	AM	3,166	1	35	600	557	19.8	B
			PM	5,189				929	30.5	D
OFF	Bridewell	3	AM	2,609	1	35	1,740	25	7.6	A
			PM	4,260				94	16.5	B
OFF	Orange Grove	3	AM	2,584	1	35	500	694	17.8	B
			PM	4,166				1,058	26.9	C
ON	Orange Grove	3	AM	1,890	1	15	50	142	15.9	B
			PM	3,108				166	23.4	C
OFF	Fair Oaks	3	AM	2,032	1	35	430	441	14.7	B
			PM	3,274				817	22.5	C

Table 6-12: Concept 2 Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,433	1	35	425	172	10.4	B
			PM	1,179				112	8.7	A
ON	Fair Oaks	2	AM	1,261	1	35	600	740	18.3	B
			PM	1,067				633	15.8	B
OFF	Orange Grove	2	AM	2,001	1	35	800	117	15.8	B
			PM	1,700				217	12.9	B
ON	Orange Grove	2	AM	1,884	1	35	760	1,175	26.1	C
			PM	1,483				957	20.9	C
OFF	York Blvd	3	AM	3,059	1	15	80	75	23.0	C
			PM	2,440				186	19.7	B
ON	York Blvd	3	AM	2,984	1	15	70	305	22.1	C
			PM	2,254				244	18.1	B
ON	Avenue 64	3	AM	3,289	1	35	100	812	27.5	C
			PM	2,498				528	21.4	C
OFF	Avenue 60	3	AM	4,101	1	15	50	129	32.9	D
			PM	3,026				159	24.7	C
ON	Avenue 60	3	AM	3,972	1	35	50	117	25.6	C
			PM	2,867				145	20.4	C
OFF	Avenue 57	3	AM	4,089	1	35	200	74	27.4	C
			PM	3,012				81	21.7	C
ON	Avenue 57	3	AM	4,015	1	15	25	317	27.5	C
			PM	2,931				344	22.7	C
OFF	Avenue 52	3	AM	4,332	1	35	350	11	31.3	D
			PM	3,275				133	21.9	C
ON	Avenue 52	3	AM	4,321	1	15	50	625	31.4	D
			PM	3,142				471	24.3	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Avenue 43	3	AM	4,946	1	35	380	146	29.9	D
			PM	3,613				63	23.3	C
ON	Avenue 43	3	AM	4,800	1	15	80	431	32.0	D
			PM	3,550				336	25.1	C
OFF	I-5	3	AM	5,231	2	35	3,500	1,544	-6.3	A
			PM	3,886				994	-14.8	A
OFF	Avenue 26	3	AM	3,687	1	35	800	204	20.1	C
			PM	2,892				153	15.7	B
ON	Figueroa St	3	AM	3,483	1	35	550	949	27.1	C
			PM	2,739				715	21.5	C
ON	I-5	3	AM	4,432	2	35	4,500	4,147	31.8	F
			PM	3,454				2,889	17.0	F
OFF	Academy Rd	3	AM	8,579	1	35	300	54	29.8	D
			PM	6,343				57	23.8	C
ON	Amador Pl	3	AM	8,525	1	35	250	246	27.0	C
			PM	6,286				213	21.2	C

Table 6-13: Changes to Ramp LOS in Concept 2– Northbound

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Solano Ave	AM	28.7	D	29.3	D	0.6	
		PM	47.1	F	47.1	F	0.0	
ON	Solano Ave	AM	25.7	C	0.0	0.0	-25.7	
		PM	38.7	F	0.0	0.0	-38.7	
OFF	NB I-5	AM	31.1	F	30.7	F	-0.4	
		PM	19.6	F	18.9	F	-0.7	
OFF	Figueroa St	AM	21.6	C	20.7	C	-0.9	
		PM	32.4	D	31.2	D	-1.2	
ON	San Fernando Rd	AM	21.2	C	20.3	C	-0.9	
		PM	29.8	D	28.9	D	-0.9	
ON	I-5/Avenue 26	AM	22.0	C	20.2	C	-1.8	
		PM	37.5	F	35.7	F	-1.8	
OFF	Avenue 43	AM	28.0	D	26.6	C	-1.4	
		PM	42.7	F	39.9	F	-2.8	
ON	Avenue 43	AM	26.0	C	24.3	C	-1.7	
		PM	39.8	F	38.3	F	-1.5	
OFF	Avenue 52	AM	27.2	C	25.6	C	-1.6	
		PM	39.5	F	38.0	F	-1.5	
ON	Avenue 52	AM	26.8	C	0.0	0.0	-26.8	
		PM	40.6	E	0.0	0.0	-40.6	

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Avenue 57	AM	24.8	C	22.5	C	-2.3	
		PM	34.7	D	32.7	D	-2.0	
ON	Avenue 57	AM	23.2	C	0.0	0.0	-23.2	
		PM	32.7	D	0.0	0.0	-32.7	
OFF	Avenue 60	AM	20.1	C	17.4	B	-2.7	
		PM	29.5	D	27.2	C	-2.3	
ON	Avenue 60	AM	23.3	C	21.3	C	-2.0	
		PM	33.2	D	31.5	D	-1.7	
OFF	Avenue 64	AM	22.2	C	19.8	B	-2.4	
		PM	32.0	D	30.5	D	-1.5	
OFF	Bridewell	AM	10.4	B	7.6	A	-2.8	
		PM	18.4	B	16.5	B	-1.9	
OFF	Orange Grove	AM	20.1	C	17.8	B	-2.3	
		PM	28.7	D	26.9	C	-1.8	
ON	Orange Grove	AM	17.7	B	15.9	B	-1.8	
		PM	23.5	C	23.4	C	-0.1	
OFF	Fair Oaks	AM	18.4	B	14.7	B	-3.7	
		PM	25.7	C	22.5	C	-3.2	

Table 6-14: Changes to Ramp LOS in Concept 2 – Southbound

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	State/Fair Oaks	AM	11.5	B	10.4	B	-1.1	
		PM	9.8	A	8.7	A	-1.1	
ON	Fair Oaks	AM	21.5	C	18.3	B	-3.2	
		PM	18.2	B	15.8	B	-2.4	
OFF	Orange Grove	AM	19.3	B	15.8	B	-3.5	
		PM	15.6	B	12.9	B	-2.7	
ON	Orange Grove	AM	29.5	D	26.1	C	-3.4	
		PM	23.9	C	20.9	C	-3.0	
OFF	York Blvd	AM	25.2	C	23.0	C	-2.2	
		PM	21.7	C	19.7	B	-2.0	
ON	York Blvd	AM	24.0	C	22.1	C	-1.9	
		PM	19.9	B	18.1	B	-1.8	
ON	Avenue 64	AM	29.6	D	27.5	C	-2.1	
		PM	23.5	C	21.4	C	-2.1	
OFF	Avenue 60	AM	35.2	E	32.9	D	-2.3	
		PM	27.5	C	24.7	C	-2.8	
ON	Avenue 60	AM	27.2	C	25.6	C	-1.6	
		PM	21.9	C	20.4	C	-1.5	

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Avenue 57	AM	29.2	D	27.4	C	-1.8	
		PM	23.5	C	21.7	C	-1.8	
ON	Avenue 57	AM	29.0	D	27.5	C	-1.5	
		PM	23.8	C	22.7	C	-1.1	
OFF	Avenue 52	AM	31.6	D	31.3	D	-0.3	
		PM	27.4	C	21.9	C	-5.5	
ON	Avenue 52	AM	32.9	D	31.4	D	-1.5	
		PM	26.0	C	24.3	C	-1.7	
OFF	Avenue 43	AM	31.4	D	29.9	D	-1.5	
		PM	25.0	C	23.3	C	-1.7	
ON	Avenue 43	AM	33.4	D	32.0	D	-1.4	
		PM	24.6	C	25.1	C	0.5	
OFF	I-5	AM	-4.6	A	-6.3	A	-1.7	
		PM	-13.3	A	-14.8	A	-1.5	
OFF	Avenue 26	AM	21.0	C	20.1	C	-0.9	
		PM	16.8	B	15.7	B	-1.1	
ON	Figueroa St	AM	27.7	C	27.1	C	-0.6	
		PM	22.2	C	21.5	C	-0.7	
ON	I-5	AM	32.5	F	31.8	F	-0.7	
		PM	17.7	F	17.0	F	-0.7	
OFF	Academy Rd	AM	30.5	D	29.8	D	-0.7	
		PM	23.0	C	23.8	C	0.8	
ON	Amador Pl	AM	27.0	C	27.0	C	0.0	
		PM	20.9	C	21.2	C	0.3	

Locations where the ramp or mainline volumes exceed capacity during one or both peak time periods in Concept 2 include:

- Northbound off-ramp to Solano Avenue
- Northbound off-ramp to Northbound I-5
- Northbound on-ramp from I-5/Avenue 26
- Northbound off-ramp to Avenue 43
- Northbound on-ramp from Avenue 43
- Northbound off-ramp to Avenue 52
- Southbound on-ramp (major merge) from I-5

All locations that are forecast to operate at LOS F in Concept 2 are also expected to operate at LOS F in the Year 2035 Without Project condition. There are no impacts to ramp operations associated with Concept 2, based on the Highway Capacity Manual (HCM 2000) analysis methodology used.

6.4.2 SR-710 SENSITIVITY ANALYSIS RESULTS FOR CONCEPT 2 – RAMPS

The results of the SR-710 sensitivity analysis for the northbound merge and diverge segments of Arroyo Seco Parkway in Concept 2 are presented in Table 6-15. The southbound merge and diverge segment analysis results are summarized in Table 6-16.

Table 6-15: Concept 2 (SR-710 Sensitivity) Ramp Analysis Results – Northbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Solano Ave	4	AM	6,154	1	15	160	242	29.2	D
			PM	9,731				292	47.3	F
ON	Solano Ave – CLOSED	4	AM	5,912				0		A
			PM	9,439				0		A
OFF	NB I-5	4	AM	5,912	1	35	1,525	2,398	31.2	F
			PM	9,439	2			4,008	56.3	F
OFF	Figueroa St	3	AM	3,514	1	35	800	540	21.0	C
			PM	5,431				833	31.0	D
ON	San Fernando Rd	3	AM	2,974	1	15	25	73	20.5	C
			PM	4,598				124	28.9	D
ON	I-5/Avenue 26	3	AM	3,047	1	35	1,930	985	19.9	B
			PM	4,722				1,750	34.8	F
OFF	Avenue 43	3	AM	4,032	1	35	300	305	26.5	F
			PM	6,472				437	38.8	E
ON	Avenue 43	3	AM	3,727	1	15	50	101	24.3	C
			PM	6,035				254	37.3	F
OFF	Avenue 52	3	AM	3,828	1	35	325	411	25.5	C
			PM	6,289				840	37.0	F
ON	Avenue 52 – CLOSED	3	AM	3,417				0		A
			PM	5,449				0		A
OFF	Avenue 57	3	AM	3,417	1	35	425	356	22.3	C
			PM	5,449				486	32.2	D
ON	Avenue 57 – CLOSED	3	AM	3,061				0		A
			PM	4,963				0		A
OFF	Avenue 60	3	AM	3,061	1	35	730	106	17.2	B
			PM	4,963				102	26.8	C
ON	Avenue 60	3	AM	2,955	1	15	50	130	21.7	C
			PM	4,861				207	34.2	D
OFF	Avenue 64	3	AM	3,085	1	35	600	539	19.3	B
			PM	5,068				912	29.8	D
OFF	Bridewell	3	AM	2,546	1	35	1,740	13	7.2	A
			PM	4,156				60	16.0	B
OFF	Orange Grove	3	AM	2,533	1	35	500	682	17.5	B
			PM	4,096				1,049	26.5	C
ON	Orange Grove	3	AM	1,851	1	15	50	157	16.0	B
			PM	3,047				134	23.4	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	Fair Oaks	3	AM	2,008	1	35	430	546	14.8	B
			PM	3,181				1,027	22.5	C

Table 6-16: Concept 2 (SR-710 Sensitivity) Ramp Analysis Results – Southbound

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
OFF	State/Fair Oaks	3	AM	1,157	1	35	425	85	8.5	A
			PM	1,017				29	7.4	A
ON	Fair Oaks	2	AM	1,072	1	35	600	831	17.4	B
			PM	988				692	15.6	B
OFF	Orange Grove	2	AM	1,903	1	35	800	93	14.8	B
			PM	1,680				208	12.8	B
ON	Orange Grove	2	AM	1,810	1	35	760	1,181	25.5	C
			PM	1,472				998	21.2	C
OFF	York Blvd	3	AM	2,991	1	15	80	78	22.6	C
			PM	2,470				168	19.8	B
ON	York Blvd	3	AM	2,913	1	15	70	231	21.2	C
			PM	2,302				212	18.0	B
ON	Avenue 64	3	AM	3,144	1	35	100	759	26.4	C
			PM	2,514				474	21.0	C
OFF	Avenue 60	3	AM	3,903	1	15	50	102	31.2	D
			PM	2,988				116	24.0	C
ON	Avenue 60	3	AM	3,801	1	35	50	103	24.6	C
			PM	2,872				143	20.4	C
OFF	Avenue 57	3	AM	3,904	1	35	200	74	26.4	C
			PM	3,015				89	21.7	C
ON	Avenue 57	3	AM	3,830	1	15	25	321	26.7	C
			PM	2,926				372	22.9	C
OFF	Avenue 52	3	AM	4,151	1	35	350	5	30.5	D
			PM	3,298				146	26.8	C
ON	Avenue 52	3	AM	4,146	1	15	50	631	30.5	D
			PM	3,152				476	24.4	C
OFF	Avenue 43	3	AM	4,777	1	35	380	155	29.2	D
			PM	3,628				38	23.3	C
ON	Avenue 43	3	AM	4,622	1	15	80	434	31.2	D
			PM	3,590				343	25.4	C
OFF	I-5	3	AM	5,056	2	35	3,500	1,460	-7.5	A
			PM	3,933				1,000	-14.6	A
OFF	Avenue 26	3	AM	3,596	1	35	800	205	19.6	B
			PM	2,933				153	16.0	B
ON	Figueroa St	3	AM	3,391	1	35	550	951	26.7	C

Ramp	Junction	Mainline			Ramp					LOS
		Lanes	Peak	Volume	Lanes	FFS (MPH)	Length (ft)	Volume	Density	
			PM	2,780				718	21.7	C
ON	I-5	3	AM	4,342	2	35	4,500	4,175	31.6	F
			PM	3,498				2,871	17.1	F
OFF	Academy Rd	3	AM	8,517	1	35	300	14	29.4	D
			PM	6,369				61	23.9	C
ON	Amador Pl	3	AM	8,503	1	35	250	189	26.4	C
			PM	6,308				172	20.9	C

Table 6-17: Changes to Ramp LOS in Concept 2 (SR-710 Sensitivity) – Northbound

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Solano Ave	AM	28.6	D	29.2	D	0.6	
		PM	47.3	F	47.3	F	0.0	
ON	Solano Ave	AM	26.1	C	CLOSED			
		PM	38.6	F	CLOSED			
OFF	NB I-5	AM	31.7	F	31.2	F	-0.5	
		PM	20.1	F	56.3	F	36.2	
OFF	Figueroa St	AM	20.8	C	21.0	C	0.2	
		PM	32.3	D	31.0	D	-1.3	
ON	San Fernando Rd	AM	21.5	C	20.5	C	-1.0	
		PM	30.3	D	28.9	D	-1.4	
ON	I-5/Avenue 26	AM	21.9	C	19.9	B	-2.0	
		PM	36.6	F	34.8	F	-1.8	
OFF	Avenue 43	AM	28.2	D	26.5	F	-1.7	
		PM	41.8	F	38.8	E	-3.0	
ON	Avenue 43	AM	27.5	C	24.3	C	-3.2	
		PM	39.2	F	37.3	F	-1.9	
OFF	Avenue 52	AM	27.1	C	25.5	C	-1.6	
		PM	38.9	F	37.0	F	-1.9	
ON	Avenue 52	AM	26.9	C	CLOSED			
		PM	39.9	E	CLOSED			
OFF	Avenue 57	AM	24.9	C	22.3	C	-2.6	
		PM	34.4	D	32.2	D	-2.2	
ON	Avenue 57	AM	23.4	C	CLOSED			
		PM	32.4	D	CLOSED			
OFF	Avenue 60	AM	20.2	C	17.2	B	-3.0	
		PM	29.2	D	26.8	C	-2.4	
ON	Avenue 60	AM	23.9	C	21.7	C	-2.2	
		PM	36.4	E	34.2	D	-2.2	
OFF	Avenue 64	AM	21.9	C	19.3	B	-2.6	
		PM	31.5	D	29.8	D	-1.7	

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	Bridewell	AM	10.1	B	7.2	A	-2.9	
		PM	18.0	B	16.0	B	-2.0	
OFF	Orange Grove	AM	19.9	B	17.5	B	-2.4	
		PM	28.5	D	26.5	C	-2.0	
ON	Orange Grove	AM	18.4	B	16.0	B	-2.4	
		PM	25.5	C	23.4	C	-2.1	
OFF	Fair Oaks	AM	17.4	B	14.8	B	-2.6	
		PM	24.4	C	22.5	C	-1.9	

Table 6-18: Changes to Ramp LOS in Concept 2 (SR-710 Sensitivity) – Southbound

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
OFF	State/Fair Oaks	AM	10.2	B	8.5	A	-1.7	
		PM	8.9	A	7.4	A	-1.5	
ON	Fair Oaks	AM	20.5	C	17.4	B	-3.1	
		PM	18.2	B	15.6	B	-2.6	
OFF	Orange Grove	AM	18.3	B	14.8	B	-3.5	
		PM	15.7	B	12.8	B	-2.9	
ON	Orange Grove	AM	28.8	D	25.5	C	-3.3	
		PM	24.3	C	21.2	C	-3.1	
OFF	York Blvd	AM	24.8	C	22.6	C	-2.2	
		PM	22.0	C	19.8	B	-2.2	
ON	York Blvd	AM	23.1	C	21.2	C	-1.9	
		PM	20.0	B	18.0	B	-2.0	
ON	Avenue 64	AM	28.5	D	26.4	C	-2.1	
		PM	23.3	C	21.0	C	-2.3	
OFF	Avenue 60	AM	33.7	D	31.2	D	-2.5	
		PM	27.0	C	24.0	C	-3.0	
ON	Avenue 60	AM	26.9	C	24.6	C	-2.3	
		PM	22.2	C	20.4	C	-1.8	
OFF	Avenue 57	AM	28.6	D	26.4	C	-2.2	
		PM	23.7	C	21.7	C	-2.0	
ON	Avenue 57	AM	28.2	D	26.7	C	-1.5	
		PM	24.1	C	22.9	C	-1.2	
OFF	Avenue 52	AM	30.5	D	30.5	D	0.0	
		PM	27.7	C	26.8	C	-0.9	
ON	Avenue 52	AM	32.3	D	30.5	D	-1.8	
		PM	26.0	C	24.4	C	-1.6	
OFF	Avenue 43	AM	30.8	D	29.2	D	-1.6	
		PM	25.1	C	23.3	C	-1.8	

Ramp	Junction	Peak	Without Project		Concept 2		Change	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
ON	Avenue 43	AM	32.8	D	31.2	D	-1.6	
		PM	26.7	C	25.4	C	-1.3	
OFF	I-5	AM	-5.5	A	-7.5	A	-2.0	
		PM	-13.0	A	-14.6	A	-1.6	
OFF	Avenue 26	AM	20.8	C	19.6	B	-1.2	
		PM	17.1	B	16.0	B	-1.1	
ON	Figueroa St	AM	27.6	C	26.7	C	-0.9	
		PM	22.5	C	21.7	C	-0.8	
ON	I-5	AM	31.7	F	31.6	F	-0.1	
		PM	17.9	F	17.1	F	-0.8	
OFF	Academy Rd	AM	29.9	D	29.4	D	-0.5	
		PM	23.2	C	23.9	C	0.7	
ON	Amador Pl	AM	26.4	C	26.4	C	0.0	
		PM	20.9	C	20.9	C	0.0	

Locations where the ramp or mainline volumes exceed capacity during one or both peak time periods in the SR-710 sensitivity analysis for Concept 2 include:

- Northbound off-ramp to Solano Avenue
- Northbound off-ramp to Northbound I-5
- Northbound on-ramp from I-5/Avenue 26
- Northbound off-ramp to Avenue 43
- Northbound on-ramp from Avenue 43
- Northbound off-ramp to Avenue 52
- Southbound on-ramp (major merge) from I-5

Although northbound ramp conditions on Arroyo Seco Parkway south of Avenue 52 are congested in the Year 2035 Without Project condition, ramp level of service throughout the study area is not significantly impacted by the modifications in Concept 2.

6.5 Weaving Analysis

There are no valid weave segments within the study area in the Concept 2 condition. The corridor has been analyzed as a series of basic segments utilizing the methodology from Chapter 23 of the HCM 2000 and ramp merge and diverge segments using the methodology from Chapter 25.

6.6 Queuing Analysis

The queuing analysis results for Concept 2 are shown in Table 6-11. The SR-710 sensitivity analysis results for Concept 2 are presented in Table 6-12. All ramps have sufficient capacity to accommodate existing demand in both scenarios.

Table 6-19: Concept 2 Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks Ave (State St)	425	122	0		228	0	
4	NB Exit 31B: Fair Oaks Ave	750	351	150		765	275	
5	SB Exit 31A: Orange Grove Ave	800	108	75		254	200	
6	NB Exit 31A: Orange Grove Ave	875	435	150		1060	475	
12	NB Exit 29: Ave 60	730	61	0		92	0	
14	NB Exit 28B: Via Marisol	425	268	0		445	0	
16	SB Exit 28A: Ave 52	350	211	25		259	25	
17	NB Exit 28A: Ave 52	325	218	25		402	25	
18	SB Exit 27: Ave 43	380	251	25		140	25	
19	NB Exit 27: Ave 43	300	218	25		384	25	
20	SB Exit 26A: Ave 26	1,240	343	0		310	0	
23	NB Exit 26 B: Figueroa St	800	524	50		494	75	
28	SB Exit 24D: Stadium Way	1,560	244	25		206	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

Table 6-20: Concept 2 (SR-710 Sensitivity) Ramp Queuing Analysis

Int. #	Arroyo Seco Parkway Off-Ramp	Storage Capacity (ft)	AM Peak Hour			PM Peak Hour		
			Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?	Peak Hour Volumes (vehicles)	95th% Q (ft)	Q > Capacity ?
2	SB Exit 31B: Fair Oaks Ave (State St)	425	36	0		144	0	
4	NB Exit 31B: Fair Oaks Ave	750	455	150		975	300	
5	SB Exit 31A: Orange Grove Ave	800	84	50		245	175	
6	NB Exit 31A: Orange Grove Ave	875	555	200		1051	425	
12	NB Exit 29: Ave 60	730	63	0		65	0	
14	NB Exit 28B: Via Marisol	425	272	0		423	0	
16	SB Exit 28A: Ave 52	350	160	25		271	25	
17	NB Exit 28A: Ave 52	325	221	25		389	25	
18	SB Exit 27: Ave 43	380	262	25		115	25	
19	NB Exit 27: Ave 43	300	237	25		355	25	
20	SB Exit 26A: Ave 26	1,240	345	0		311	0	
23	NB Exit 26 B: Figueroa St	800	535	50		480	75	
28	SB Exit 24D: Stadium Way	1,560	224	25		216	25	

Note: 95th% queue lengths are rounded up to the next whole car length, assuming 25 feet per vehicle.

7. FINDINGS

This technical report summarizes the traffic analysis results for the Arroyo Seco Parkway Corridor Partnership Plan. A brief summary of the analysis results is provided in this section.

Intersection Level of Service Summary

Intersections that meet the local City thresholds for significant impact in Concept 1 or Concept 2 are noted in Table 7-1. Unsignalized intersections that meet the threshold criteria for an MUTCD signal warrant based on peak hour volumes are indicated in Table 7-2.

Table 7-1: Impacts at Signalized Intersections

No.	Intersection	Concept 1		Concept 2	
		No 710	With 710	No 710	With 710
101	Pasadena Av & Glenarm St				X
209	Fremont Av & Huntington Dr	X	X	X	X
301	Figueroa St & York Bl	X	X	X	X
302	Ave 64 & York Bl	X	X	X	X
303	Figueroa St & Ave 60			X	X
304	Monterey Rd & Ave 60	X	X	X	X
307	Figueroa St & Ave 52	X	X	X	
312	Figueroa St & Ave 26	X	X	X	X
319	San Fernando Rd & Pasadena Av	X		X	
320	Daly St & Main St	X		X	
323	Hill St & College St		X	X	X

Table 7-2: Signal Warrant Analysis Results Summary

No.	Intersection	Year 2035 Without Project	SR-710 Sensitivity Without Project	Concept 1	SR-710 Sensitivity Concept 1	Concept 2	SR-710 Sensitivity Concept 2
13	ASP SB Exit 29 & Shults St						
14	ASP NB Exit 28B & Via Marisol	X	X				
16	ASP SB Exit 28A & Ave 52	X		X	X	X	X
17	ASP NB Exit 28A & Ave 52	X		X	X		
18	ASP SB Exit 27 & Ave 43	X	X			X	X
20	ASP SB Exit 26A & Ave 26	X	X	X	X	X	X
317	Ave 19 & San Fernando Rd	X	X	X	X	X	X
321	Ave 21 & Main St	X	X	X	X	X	X

Intersections marked meet the threshold criteria for MUTCD Signal Warrant 3, Peak Hour.

Some of the intersections that are forecast to meet the threshold criteria for MUTCD Signal Warrant 3 may not be appropriate for signal control based on geometric conditions and other operational factors. More detailed analysis would be required before any of these locations would be recommended for signal control.

By the year 2035, the Arroyo Seco Parkway Southbound Exit 26A intersection with Avenue 26 (#20) is forecast to experience more than 5 vehicle-hours of delay on the off-ramp approach during the peak hour, and satisfies MUTCD Signal Warrant 3. However, the intersection is located about 120 feet east of Figueroa Street, and its proximity to the signalized intersection of Figueroa Street and Avenue 26 (#312) precludes the installation of a traffic signal at this location.

Arroyo Seco Parkway Mainline and Ramp Analysis

The Highway Capacity Manual (HCM 2000) ramp merge and diverge analysis methodology was developed to measure the density (vehicles per hour per lane) of freeway and multilane highway facilities in the vicinity of on- and off-ramps. It is assumed that the facilities have been designed according to current engineering standards. While the ramp length is an input, the upstream or downstream mainline volumes and lane configurations have a greater impact on the level of service value than the ramp configuration. The impacts to operations that result from on-ramps with stop control and no acceleration length may not be adequately reflected in these results.

A summary of the Arroyo Seco Parkway mainline segments that are forecast to operate at LOS F in each scenario during one or both peak periods is provided in Table 7-3. Ramp segments that are forecast to operate at LOS F are noted in Table 7-4.

Table 7-3 Mainline Segments Forecast to Operate at LOS F

Dir	Segment	Year 2035 W/O Project	SR-710 Sensitivity W/O Project	Concept 1	SR-710 Sensitivity Concept 1	Concept 2	SR-710 Sensitivity Concept 2
NB	Stadium Wy to Solano Ave	X	X	X	X	X	X
NB	Solano Ave to Riverside Dr	X	X	X	X	X	X
NB	Riverside Dr to Figueroa St			X	X	X	X
NB	Ave 26 to Ave 43	X	X	X	X	X	X
NB	Ave 43 off to Ave 43 on	X	X	X	X	X	X
NB	Ave 43 to Ave 52	X	X	X	X	X	X
NB	Ave 52 off to Ave 52 on	X	X	X	X	X	X
NB	Ave 52 to Ave 57	X	X	X		X	X
NB	Ave 57 off to Ave 57 on				X		
NB	Ave 60 off to Ave 60 on			X	X		
SB	Ave 60 off to Ave 60 on			X	X		
SB	Ave 57 off to Ave 57 on			X	X		
SB	Ave 52 off to Ave 52 on			X	X		
SB	Ave 43 off to Ave 43 on			X	X		
SB	Ave 43 to I-5/Pasadena Ave					X	

NB – northbound; SB – southbound

Table 7-4 Arroyo Seco Parkway Ramp Segments Forecast to Operate at LOS F

Dir	Ramp Segment	Year 2035 W/O Project	SR-710 Sensitivity W/O Project	Concept 1	SR-710 Sensitivity Concept 1	Concept 2	SR-710 Sensitivity Concept 2
NB	OFF to Solano Avenue	X	X	X	X	X	X
NB	ON from Solano Avenue	X	X	X	X		
NB	OFF to Northbound I-5	X	X	X	X	X	X
NB	ON from I-5/Avenue 26	X	X			X	X
NB	OFF to Avenue 43	X	X			X	X
NB	ON from Avenue 43	X	X	X	X	X	X
NB	OFF to Avenue 52	X	X			X	X
NB	ON from Avenue 52			X	X		
NB	ON from Avenue 57			X	X		
NB	ON from Avenue 60			X	X		
SB	ON from Avenue 52			X	X		
SB	ON from Avenue 43			X	X		
SB	ON (major merge) from I-5	X	X	X	X	X	X

NB – northbound; SB – southbound
Segments that are not forecast to operate at LOS F in any analysis scenario are not included in this table.

Weaving Analysis

There are no weaving segments on Arroyo Seco Parkway in the existing, Year 2035 Without Project, or Concept 2 conditions. In these scenarios, many of the Arroyo Seco Parkway on-ramps merge directly into the outside travel lane with little to no acceleration lane and no weaving areas.

In Concept 1, weaving segments are created on northbound Arroyo Seco Parkway between Avenue 52 and Avenue 57 and between Orange Grove Avenue and Fair Oaks Avenue. A weaving segment is also created on southbound Arroyo Seco Parkway between Avenue 57 and Avenue 52. In the analysis for Concept 1 and in the SR-710 sensitivity analysis for Concept 1, there is only one weave segment where forecast volume exceeds capacity: northbound between Avenue 52 and Avenue 57.

Safety and operations are significantly improved with Concept 1 over the existing and No Build conditions. Due to the non-standard design of the existing ramps, they cannot be analyzed using the Highway Capacity Manual methodology, so there is no quantifiable basis for comparison. The creation of the weaving segment, even if it is forecast to operate at LOS F, would provide safer ingress compared to the existing condition.

Queuing Analysis

A queuing analysis was performed by comparing storage capacity to the 95th percentile queue values produced in the Synchro reports for selected intersections. All study intersection ramps have sufficient capacity to meet existing and forecast demand for both Concept 1 and Concept 2.

APPENDIX

(UNDER SEPARATE COVER)

APPENDIX

A. Traffic Data Collection and Sources

B. Analysis Worksheets – Intersection Level of Service

C. Analysis Worksheets – Signal Warrant Analysis

D. Analysis Worksheets – Mainline Analysis

E. Analysis Worksheets – Ramp Analysis

F. Analysis Worksheets – Weaving Analysis

APPENDIX A

TRAFFIC DATA COLLECTION AND SOURCES

APPENDIX

NEW TURNING MOVEMENT COUNTS

Prepared by NDS/ATD

VOLUME

N Broadway between Griffin Ave & Lincoln Park

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,263	12,878	25,141

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			29		12		41		12:00			152		177		329	
00:15			35		14		49		12:15			153		156		309	
00:30			22		12		34		12:30			161		170		331	
00:45			15	101	12	50	27	151	12:45			181	647	156	659	337	1306
01:00			13		9		22		13:00			179		149		328	
01:15			27		10		37		13:15			184		143		327	
01:30			9		18		27		13:30			209		227		436	
01:45			13	62	9	46	22	108	13:45			207	779	223	742	430	1521
02:00			14		12		26		14:00			192		210		402	
02:15			11		4		15		14:15			181		165		346	
02:30			9		8		17		14:30			199		220		419	
02:45			8	42	11	35	19	77	14:45			202	774	182	777	384	1551
03:00			3		10		13		15:00			219		170		389	
03:15			10		10		20		15:15			218		200		418	
03:30			8		21		29		15:30			261		182		443	
03:45			22	43	23	64	45	107	15:45			243	941	186	738	429	1679
04:00			12		15		27		16:00			226		168		394	
04:15			9		34		43		16:15			259		167		426	
04:30			10		31		41		16:30			288		173		461	
04:45			18	49	45	125	63	174	16:45			256	1029	199	707	455	1736
05:00			10		57		67		17:00			270		202		472	
05:15			15		77		92		17:15			316		195		511	
05:30			38		82		120		17:30			313		199		512	
05:45			37	100	104	320	141	420	17:45			301	1200	200	796	501	1996
06:00			40		109		149		18:00			312		161		473	
06:15			73		175		248		18:15			289		153		442	
06:30			88		216		304		18:30			229		137		366	
06:45			92	293	276	776	368	1069	18:45			197	1027	138	589	335	1616
07:00			129		303		432		19:00			164		128		292	
07:15			201		367		568		19:15			160		139		299	
07:30			330		452		782		19:30			149		126		275	
07:45			387	1047	434	1556	821	2603	19:45			130	603	98	491	228	1094
08:00			234		401		635		20:00			130		75		205	
08:15			158		362		520		20:15			113		95		208	
08:30			142		320		462		20:30			140		91		231	
08:45			126	660	284	1367	410	2027	20:45			113	496	72	333	185	829
09:00			118		248		366		21:00			109		79		188	
09:15			113		247		360		21:15			108		75		183	
09:30			128		203		331		21:30			91		66		157	
09:45			122	481	154	852	276	1333	21:45			80	388	58	278	138	666
10:00			120		145		265		22:00			68		40		108	
10:15			116		170		286		22:15			79		63		142	
10:30			135		174		309		22:30			62		43		105	
10:45			146	517	159	648	305	1165	22:45			67	276	30	176	97	452
11:00			136		170		306		23:00			51		44		95	
11:15			143		151		294		23:15			40		36		76	
11:30			140		160		300		23:30			30		44		74	
11:45			136	555	125	606	261	1161	23:45			32	153	23	147	55	300
TOTALS				3950		6445		10395	TOTALS				8313		6433		14746
SPLIT %				38.0%		62.0%		41.3%	SPLIT %				56.4%		43.6%		58.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,263	12,878	25,141

AM Peak Hour			07:15	07:15	07:15	PM Peak Hour			17:15	13:30	17:15
AM Pk Volume			1152	1654	2806	PM Pk Volume			1242	825	1997
Pk Hr Factor			0.744	0.915	0.854	Pk Hr Factor			0.983	0.909	0.975
7 - 9 Volume	0	0	1707	2923	4630	4 - 6 Volume	0	0	2229	1503	3732
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	1152	1654	2806	4 - 6 Pk Volume	0	0	1200	796	1996
Pk Hr Factor	0.000	0.000	0.744	0.915	0.854	Pk Hr Factor	0.000	0.000	0.949	0.985	0.975

Prepared by NDS/ATD

VOLUME

Griffin Ave between Avenue 39 & Avenue 41

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_002

DAILY TOTALS	NB	SB	EB	WB	Total
	2,944	2,644	0	0	5,588

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	6		6						12		12:00	37		36						73	
00:15	5		7						12		12:15	46		33						79	
00:30	4		3						7		12:30	50		30						80	
00:45	1	16	1	17					2	33	12:45	37	170	27	126					64	296
01:00	4		7						11		13:00	34		29						63	
01:15	3		2						5		13:15	30		27						57	
01:30	1		4						5		13:30	43		33						76	
01:45	2	10	1	14					3	24	13:45	50	157	46	135					96	292
02:00	1		2						3		14:00	43		38						81	
02:15	0		1						1		14:15	42		47						89	
02:30	2		3						5		14:30	50		43						93	
02:45	0	3	2	8					2	11	14:45	51	186	44	172					95	358
03:00	3		5						8		15:00	54		50						104	
03:15	2		3						5		15:15	63		38						101	
03:30	1		3						4		15:30	67		38						105	
03:45	2	8	1	12					3	20	15:45	88	272	48	174					136	446
04:00	0		1						1		16:00	51		45						96	
04:15	1		2						3		16:15	73		37						110	
04:30	2		1						3		16:30	69		51						120	
04:45	8	11	2	6					10	17	16:45	71	264	52	185					123	449
05:00	3		8						11		17:00	70		52						122	
05:15	8		5						13		17:15	87		54						141	
05:30	10		9						19		17:30	72		50						122	
05:45	7	28	9	31					16	59	17:45	75	304	42	198					117	502
06:00	9		14						23		18:00	89		38						127	
06:15	10		16						26		18:15	86		39						125	
06:30	13		22						35		18:30	68		33						101	
06:45	19	51	35	87					54	138	18:45	83	326	33	143					116	469
07:00	14		47						61		19:00	57		21						78	
07:15	40		67						107		19:15	50		33						83	
07:30	48		104						152		19:30	39		28						67	
07:45	54	156	73	291					127	447	19:45	37	183	19	101					56	284
08:00	35		73						108		20:00	35		23						58	
08:15	39		62						101		20:15	19		31						50	
08:30	33		82						115		20:30	32		37						69	
08:45	23	130	54	271					77	401	20:45	23	109	19	110					42	219
09:00	44		33						77		21:00	28		19						47	
09:15	33		42						75		21:15	15		28						43	
09:30	40		21						61		21:30	24		16						40	
09:45	28	145	34	130					62	275	21:45	11	78	17	80					28	158
10:00	33		44						77		22:00	16		11						27	
10:15	21		36						57		22:15	18		22						40	
10:30	29		29						58		22:30	14		13						27	
10:45	32	115	21	130					53	245	22:45	7	55	14	60					21	115
11:00	23		33						56		23:00	5		11						16	
11:15	36		35						71		23:15	10		4						14	
11:30	41		33						74		23:30	7		5						12	
11:45	39	139	37	138					76	277	23:45	6	28	5	25					11	53
TOTALS		812		1135						1947	TOTALS		2132		1509						3641
SPLIT %		41.7%		58.3%						34.8%	SPLIT %		58.6%		41.4%						65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,944	2,644	0	0	5,588

AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	18:00	16:30			16:45
AM Pk Volume	177	317			494	PM Pk Volume	326	209			508
Pk Hr Factor	0.819	0.762			0.813	Pk Hr Factor	0.916	0.968			0.901
7 - 9 Volume	286	562	0	0	848	4 - 6 Volume	568	383	0	0	951
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	17:00	16:30			16:45
7 - 9 Pk Volume	177	317	0	0	494	4 - 6 Pk Volume	304	209	0	0	508
Pk Hr Factor	0.819	0.762	0.000	0.000	0.813	Pk Hr Factor	0.874	0.968	0.000	0.000	0.901

Prepared by NDS/ATD

VOLUME

Figueroa St between Pasadena Ave & Avenue 39

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_003

DAILY TOTALS	NB	SB	EB	WB	Total
	12,044	12,721	0	0	24,765

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	26		35						61		12:00	191		167						358	
00:15	16		26						42		12:15	165		159						324	
00:30	21		15						36		12:30	188		166						354	
00:45	19	82	26	102					45	184	12:45	198	742	186	678					384	1420
01:00	17		22						39		13:00	193		167						360	
01:15	20		14						34		13:15	168		171						339	
01:30	17		21						38		13:30	173		149						322	
01:45	10	64	23	80					33	144	13:45	177	711	183	670					360	1381
02:00	15		14						29		14:00	192		160						352	
02:15	18		16						34		14:15	184		160						344	
02:30	18		23						41		14:30	194		178						372	
02:45	8	59	29	82					37	141	14:45	185	755	201	699					386	1454
03:00	7		12						19		15:00	199		215						414	
03:15	5		11						16		15:15	213		205						418	
03:30	5		11						16		15:30	235		168						403	
03:45	16	33	14	48					30	81	15:45	240	887	176	764					416	1651
04:00	14		19						33		16:00	246		184						430	
04:15	10		21						31		16:15	239		156						395	
04:30	9		17						26		16:30	238		179						417	
04:45	13	46	32	89					45	135	16:45	272	995	192	711					464	1706
05:00	22		29						51		17:00	259		178						437	
05:15	13		48						61		17:15	267		202						469	
05:30	37		60						97		17:30	279		209						488	
05:45	38	110	74	211					112	321	17:45	269	1074	188	777					457	1851
06:00	60		63						123		18:00	288		194						482	
06:15	80		114						194		18:15	263		190						453	
06:30	72		172						244		18:30	278		120						398	
06:45	89	301	217	566					306	867	18:45	263	1092	163	667					426	1759
07:00	87		264						351		19:00	233		171						404	
07:15	127		368						495		19:15	165		154						319	
07:30	171		379						550		19:30	200		137						337	
07:45	222	607	356	1367					578	1974	19:45	173	771	137	599					310	1370
08:00	156		344						500		20:00	164		116						280	
08:15	140		314						454		20:15	133		104						237	
08:30	140		322						462		20:30	122		104						226	
08:45	149	585	300	1280					449	1865	20:45	108	527	98	422					206	949
09:00	131		204						335		21:00	100		106						206	
09:15	147		225						372		21:15	78		101						179	
09:30	132		196						328		21:30	66		93						159	
09:45	141	551	166	791					307	1342	21:45	74	318	85	385					159	703
10:00	159		191						350		22:00	78		68						146	
10:15	158		167						325		22:15	79		61						140	
10:30	176		156						332		22:30	58		71						129	
10:45	134	627	161	675					295	1302	22:45	37	252	55	255					92	507
11:00	165		176						341		23:00	63		47						110	
11:15	173		149						322		23:15	38		59						97	
11:30	180		165						345		23:30	29		34						63	
11:45	192	710	135	625					327	1335	23:45	15	145	38	178					53	323
TOTALS		3775		5916						9691	TOTALS		8269		6805						15074
SPLIT %		39.0%		61.0%						39.1%	SPLIT %		54.9%		45.1%						60.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,044	12,721	0	0	24,765

AM Peak Hour	11:15	07:15			07:15	PM Peak Hour	17:15	14:30			17:15
AM Pk Volume	736	1447			2123	PM Pk Volume	1103	799			1896
Pk Hr Factor	0.958	0.954			0.918	Pk Hr Factor	0.957	0.929			0.971
7 - 9 Volume	1192	2647	0	0	3839	4 - 6 Volume	2069	1488	0	0	3557
7 - 9 Peak Hour	07:30	07:15			07:15	4 - 6 Peak Hour	16:45	16:45			16:45
7 - 9 Pk Volume	689	1447	0	0	2123	4 - 6 Pk Volume	1077	781	0	0	1858
Pk Hr Factor	0.776	0.954	0.000	0.000	0.918	Pk Hr Factor	0.965	0.934	0.000	0.000	0.952

Prepared by NDS/ATD

VOLUME

Marmion Way between Pasadena Ave & Mt Washington Dr

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_004

DAILY TOTALS	NB	SB	EB	WB	Total
	3,829	5,478	0	0	9,307

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	10		5						15		12:00	35		75						110	
00:15	11		2						13		12:15	46		41						87	
00:30	9		10						19		12:30	51		73						124	
00:45	12	42	4	21					16	63	12:45	49	181	62	251					111	432
01:00	6		0						6		13:00	40		71						111	
01:15	3		2						5		13:15	54		50						104	
01:30	3		4						7		13:30	54		54						108	
01:45	3	15	0	6					3	21	13:45	57	205	49	224					106	429
02:00	5		4						9		14:00	37		65						102	
02:15	7		3						10		14:15	57		68						125	
02:30	10		7						17		14:30	55		81						136	
02:45	5	27	2	16					7	43	14:45	62	211	83	297					145	508
03:00	4		1						5		15:00	61		88						149	
03:15	8		5						13		15:15	82		61						143	
03:30	4		2						6		15:30	81		102						183	
03:45	2	18	5	13					7	31	15:45	69	293	74	325					143	618
04:00	2		5						7		16:00	77		64						141	
04:15	3		7						10		16:15	75		74						149	
04:30	2		9						11		16:30	97		114						211	
04:45	2	9	13	34					15	43	16:45	103	352	94	346					197	698
05:00	2		7						9		17:00	98		81						179	
05:15	2		18						20		17:15	122		94						216	
05:30	3		30						33		17:30	114		94						208	
05:45	5	12	31	86					36	98	17:45	116	450	100	369					216	819
06:00	9		50						59		18:00	91		76						167	
06:15	11		73						84		18:15	119		71						190	
06:30	11		100						111		18:30	95		84						179	
06:45	16	47	123	346					139	393	18:45	82	387	57	288					139	675
07:00	15		152						167		19:00	90		84						174	
07:15	39		183						222		19:15	70		42						112	
07:30	52		169						221		19:30	61		49						110	
07:45	45	151	152	656					197	807	19:45	63	284	47	222					110	506
08:00	42		139						181		20:00	63		42						105	
08:15	34		178						212		20:15	53		37						90	
08:30	35		145						180		20:30	32		54						86	
08:45	30	141	119	581					149	722	20:45	48	196	29	162					77	358
09:00	32		137						169		21:00	41		28						69	
09:15	34		113						147		21:15	31		33						64	
09:30	31		94						125		21:30	44		25						69	
09:45	40	137	76	420					116	557	21:45	35	151	24	110					59	261
10:00	37		61						98		22:00	48		38						86	
10:15	34		89						123		22:15	56		18						74	
10:30	35		82						117		22:30	23		20						43	
10:45	41	147	71	303					112	450	22:45	19	146	25	101					44	247
11:00	35		69						104		23:00	29		13						42	
11:15	29		58						87		23:15	24		17						41	
11:30	36		56						92		23:30	17		9						26	
11:45	42	142	71	254					113	396	23:45	15	85	8	47					23	132
TOTALS		888		2736						3624	TOTALS		2941		2742						5683
SPLIT %		24.5%		75.5%						38.9%	SPLIT %		51.8%		48.2%						61.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,829	5,478	0	0	9,307

AM Peak Hour	07:15	07:00			07:15	PM Peak Hour	17:00	16:30			17:00
AM Pk Volume	178	656			821	PM Pk Volume	450	383			819
Pk Hr Factor	0.856	0.896			0.925	Pk Hr Factor	0.922	0.840			0.948
7 - 9 Volume	292	1237	0	0	1529	4 - 6 Volume	802	715	0	0	1517
7 - 9 Peak Hour	07:15	07:00			07:15	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	178	656	0	0	821	4 - 6 Pk Volume	450	383	0	0	819
Pk Hr Factor	0.856	0.896	0.000	0.000	0.925	Pk Hr Factor	0.922	0.840	0.000	0.000	0.948

Prepared by NDS/ATD

VOLUME

Division St between Avenue 33 & Future St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,284	3,103	6,387

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			14		3		17		12:00			45		40		85	
00:15			10		6		16		12:15			36		33		69	
00:30			12		3		15		12:30			43		28		71	
00:45			9	45	2	14	11	59	12:45			38	162	47	148	85	310
01:00			8		2		10		13:00			30		44		74	
01:15			9		3		12		13:15			42		41		83	
01:30			8		2		10		13:30			41		43		84	
01:45			6	31	0	7	6	38	13:45			35	148	34	162	69	310
02:00			4		2		6		14:00			48		43		91	
02:15			7		4		11		14:15			51		40		91	
02:30			12		3		15		14:30			61		36		97	
02:45			6	29	1	10	7	39	14:45			58	218	37	156	95	374
03:00			4		5		9		15:00			70		54		124	
03:15			7		3		10		15:15			49		33		82	
03:30			3		3		6		15:30			71		45		116	
03:45			2	16	2	13	4	29	15:45			57	247	41	173	98	420
04:00			0		4		4		16:00			75		48		123	
04:15			1		4		5		16:15			54		32		86	
04:30			4		7		11		16:30			77		48		125	
04:45			5	10	5	20	10	30	16:45			74	280	41	169	115	449
05:00			5		15		20		17:00			85		46		131	
05:15			5		20		25		17:15			74		52		126	
05:30			4		22		26		17:30			85		39		124	
05:45			6	20	21	78	27	98	17:45			91	335	47	184	138	519
06:00			10		38		48		18:00			67		51		118	
06:15			9		27		36		18:15			79		40		119	
06:30			10		52		62		18:30			79		40		119	
06:45			15	44	76	193	91	237	18:45			57	282	45	176	102	458
07:00			13		71		84		19:00			64		38		102	
07:15			22		108		130		19:15			62		23		85	
07:30			45		130		175		19:30			54		37		91	
07:45			48	128	114	423	162	551	19:45			61	241	19	117	80	358
08:00			43		91		134		20:00			46		26		72	
08:15			33		69		102		20:15			47		22		69	
08:30			34		83		117		20:30			48		21		69	
08:45			22	132	62	305	84	437	20:45			51	192	17	86	68	278
09:00			30		52		82		21:00			44		18		62	
09:15			28		70		98		21:15			43		10		53	
09:30			25		49		74		21:30			37		11		48	
09:45			31	114	44	215	75	329	21:45			34	158	15	54	49	212
10:00			27		42		69		22:00			40		14		54	
10:15			30		45		75		22:15			31		17		48	
10:30			27		40		67		22:30			38		14		52	
10:45			22	106	44	171	66	277	22:45			21	130	7	52	28	182
11:00			26		47		73		23:00			22		12		34	
11:15			23		35		58		23:15			26		10		36	
11:30			37		32		69		23:30			17		7		24	
11:45			42	128	29	143	71	271	23:45			23	88	5	34	28	122
TOTALS				803		1592		2395	TOTALS				2481		1511		3992
SPLIT %				33.5%		66.5%		37.5%	SPLIT %				62.1%		37.9%		62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,284	3,103	6,387

AM Peak Hour			07:30	07:15	07:15	PM Peak Hour			17:00	17:15	17:00
AM Pk Volume			169	443	601	PM Pk Volume			335	189	519
Pk Hr Factor			0.880	0.852	0.859	Pk Hr Factor			0.920	0.909	0.940
7 - 9 Volume	0	0	260	728	988	4 - 6 Volume	0	0	615	353	968
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			17:00	16:30	17:00
7 - 9 Pk Volume	0	0	169	443	601	4 - 6 Pk Volume	0	0	335	187	519
Pk Hr Factor	0.000	0.000	0.880	0.852	0.859	Pk Hr Factor	0.000	0.000	0.920	0.899	0.940

Prepared by NDS/ATD

VOLUME

Huntington Dr between Poplar Blvd & Stilwell Ave

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_006

DAILY TOTALS	NB	SB	EB	WB	Total
	16,863	15,121	0	0	31,984

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	18		29						47		12:00	181		142						323	
00:15	18		26						44		12:15	212		191						403	
00:30	17		22						39		12:30	206		178						384	
00:45	17	70	15	92					32	162	12:45	195	794	150	661					345	1455
01:00	16		18						34		13:00	169		169						338	
01:15	12		7						19		13:15	225		166						391	
01:30	19		10						29		13:30	179		184						363	
01:45	11	58	12	47					23	105	13:45	199	772	168	687					367	1459
02:00	13		5						18		14:00	195		188						383	
02:15	18		11						29		14:15	227		186						413	
02:30	6		8						14		14:30	267		221						488	
02:45	12	49	8	32					20	81	14:45	293	982	163	758					456	1740
03:00	4		5						9		15:00	315		208						523	
03:15	7		6						13		15:15	351		183						534	
03:30	12		9						21		15:30	333		169						502	
03:45	7	30	8	28					15	58	15:45	382	1381	203	763					585	2144
04:00	3		5						8		16:00	417		193						610	
04:15	16		14						30		16:15	435		200						635	
04:30	23		13						36		16:30	469		208						677	
04:45	25	67	24	56					49	123	16:45	478	1799	232	833					710	2632
05:00	24		30						54		17:00	545		223						768	
05:15	25		39						64		17:15	573		237						810	
05:30	43		63						106		17:30	536		256						792	
05:45	49	141	87	219					136	360	17:45	540	2194	270	986					810	3180
06:00	67		93						160		18:00	523		215						738	
06:15	74		171						245		18:15	551		205						756	
06:30	116		222						338		18:30	466		185						651	
06:45	105	362	351	837					456	1199	18:45	368	1908	176	781					544	2689
07:00	141		389						530		19:00	345		190						535	
07:15	178		534						712		19:15	316		198						514	
07:30	215		548						763		19:30	281		175						456	
07:45	231	765	488	1959					719	2724	19:45	220	1162	167	730					387	1892
08:00	208		511						719		20:00	197		125						322	
08:15	192		492						684		20:15	171		171						342	
08:30	168		478						646		20:30	168		138						306	
08:45	173	741	404	1885					577	2626	20:45	135	671	130	564					265	1235
09:00	148		298						446		21:00	121		139						260	
09:15	141		234						375		21:15	113		127						240	
09:30	136		228						364		21:30	107		130						237	
09:45	158	583	164	924					322	1507	21:45	100	441	118	514					218	955
10:00	165		165						330		22:00	81		95						176	
10:15	179		167						346		22:15	67		104						171	
10:30	165		146						311		22:30	71		76						147	
10:45	159	668	158	636					317	1304	22:45	63	282	55	330					118	612
11:00	200		171						371		23:00	65		33						98	
11:15	201		162						363		23:15	56		46						102	
11:30	176		158						334		23:30	41		46						87	
11:45	159	736	152	643					311	1379	23:45	45	207	31	156					76	363
TOTALS		4270		7358						11628	TOTALS		12593		7763						20356
SPLIT %		36.7%		63.3%						36.4%	SPLIT %		61.9%		38.1%						63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	16,863	15,121	0	0	31,984

AM Peak Hour	07:30	07:15			07:15	PM Peak Hour	17:00	17:00			17:00
AM Pk Volume	846	2081			2913	PM Pk Volume	2194	986			3180
Pk Hr Factor	0.916	0.949			0.954	Pk Hr Factor	0.957	0.913			0.981
7 - 9 Volume	1506	3844	0	0	5350	4 - 6 Volume	3993	1819	0	0	5812
7 - 9 Peak Hour	07:30	07:15			07:15	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	846	2081	0	0	2913	4 - 6 Pk Volume	2194	986	0	0	3180
Pk Hr Factor	0.916	0.949	0.000	0.000	0.954	Pk Hr Factor	0.957	0.913	0.000	0.000	0.981

Prepared by NDS/ATD

VOLUME

Monterey Rd between Hardison Way & Lomitas Dr

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,797	3,784	7,581

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		10		18		12:00			48		40		88	
00:15			11		11		22		12:15			44		40		84	
00:30			1		2		3		12:30			43		49		92	
00:45			3	23	4	27	7	50	12:45			52	187	53	182	105	369
01:00			2		4		6		13:00			41		36		77	
01:15			0		4		4		13:15			38		40		78	
01:30			7		2		9		13:30			51		36		87	
01:45			3	12	2	12	5	24	13:45			53	183	33	145	86	328
02:00			0		0		0		14:00			48		44		92	
02:15			1		1		2		14:15			52		39		91	
02:30			11		7		18		14:30			53		47		100	
02:45			5	17	3	11	8	28	14:45			56	209	51	181	107	390
03:00			3		1		4		15:00			58		61		119	
03:15			1		1		2		15:15			80		57		137	
03:30			3		4		7		15:30			70		63		133	
03:45			0	7	3	9	3	16	15:45			87	295	52	233	139	528
04:00			7		1		8		16:00			81		59		140	
04:15			2		3		5		16:15			74		59		133	
04:30			5		2		7		16:30			79		68		147	
04:45			5	19	6	12	11	31	16:45			93	327	59	245	152	572
05:00			8		2		10		17:00			95		65		160	
05:15			12		2		14		17:15			126		74		200	
05:30			14		8		22		17:30			110		82		192	
05:45			13	47	6	18	19	65	17:45			114	445	63	284	177	729
06:00			11		15		26		18:00			115		56		171	
06:15			24		27		51		18:15			110		59		169	
06:30			17		23		40		18:30			83		60		143	
06:45			28	80	43	108	71	188	18:45			64	372	55	230	119	602
07:00			47		55		102		19:00			72		58		130	
07:15			70		121		191		19:15			39		44		83	
07:30			99		158		257		19:30			59		36		95	
07:45			75	291	144	478	219	769	19:45			41	211	40	178	81	389
08:00			63		159		222		20:00			37		26		63	
08:15			61		152		213		20:15			39		33		72	
08:30			49		124		173		20:30			23		33		56	
08:45			60	233	103	538	163	771	20:45			27	126	29	121	56	247
09:00			46		59		105		21:00			37		41		78	
09:15			43		67		110		21:15			30		29		59	
09:30			51		54		105		21:30			25		38		63	
09:45			50	190	43	223	93	413	21:45			27	119	27	135	54	254
10:00			44		35		79		22:00			14		25		39	
10:15			42		43		85		22:15			14		17		31	
10:30			39		35		74		22:30			17		21		38	
10:45			42	167	32	145	74	312	22:45			9	54	16	79	25	133
11:00			44		44		88		23:00			12		11		23	
11:15			35		37		72		23:15			13		14		27	
11:30			38		39		77		23:30			11		11		22	
11:45			26	143	28	148	54	291	23:45			4	40	6	42	10	82
TOTALS				1229		1729		2958	TOTALS				2568		2055		4623
SPLIT %				41.5%		58.5%		39.0%	SPLIT %				55.5%		44.5%		61.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,797	3,784	7,581

AM Peak Hour			07:15	07:30	07:30	PM Peak Hour			17:15	17:00	17:15
AM Pk Volume			307	613	911	PM Pk Volume			465	284	740
Pk Hr Factor			0.775	0.964	0.886	Pk Hr Factor			0.923	0.866	0.925
7 - 9 Volume	0	0	524	1016	1540	4 - 6 Volume	0	0	772	529	1301
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	307	613	911	4 - 6 Pk Volume	0	0	445	284	729
Pk Hr Factor	0.000	0.000	0.775	0.964	0.886	Pk Hr Factor	0.000	0.000	0.883	0.866	0.911

Prepared by NDS/ATD

VOLUME

Figueroa St between Rail tracks & Arroyo Glen St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_008

DAILY TOTALS	NB	SB	EB	WB	Total
	11,884	11,645	0	0	23,529

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	22		29						51		12:00	162		165						327	
00:15	17		18						35		12:15	175		192						367	
00:30	24		18						42		12:30	190		157						347	
00:45	17	80	14	79					31	159	12:45	177	704	183	697					360	1401
01:00	22		9						31		13:00	182		187						369	
01:15	16		7						23		13:15	184		157						341	
01:30	20		10						30		13:30	208		204						412	
01:45	16	74	7	33					23	107	13:45	190	764	209	757					399	1521
02:00	10		5						15		14:00	171		171						342	
02:15	24		7						31		14:15	207		176						383	
02:30	24		5						29		14:30	218		170						388	
02:45	13	71	3	20					16	91	14:45	249	845	192	709					441	1554
03:00	7		3						10		15:00	235		198						433	
03:15	12		4						16		15:15	236		195						431	
03:30	23		6						29		15:30	204		203						407	
03:45	10	52	5	18					15	70	15:45	241	916	207	803					448	1719
04:00	8		7						15		16:00	226		216						442	
04:15	11		12						23		16:15	222		175						397	
04:30	23		7						30		16:30	233		216						449	
04:45	9	51	19	45					28	96	16:45	241	922	240	847					481	1769
05:00	13		26						39		17:00	222		234						456	
05:15	20		19						39		17:15	250		211						461	
05:30	34		33						67		17:30	252		235						487	
05:45	32	99	26	104					58	203	17:45	263	987	219	899					482	1886
06:00	59		42						101		18:00	232		206						438	
06:15	50		55						105		18:15	210		201						411	
06:30	67		75						142		18:30	232		174						406	
06:45	105	281	111	283					216	564	18:45	197	871	192	773					389	1644
07:00	158		176						334		19:00	197		176						373	
07:15	180		211						391		19:15	179		202						381	
07:30	162		234						396		19:30	127		151						278	
07:45	177	677	224	845					401	1522	19:45	159	662	140	669					299	1331
08:00	160		292						452		20:00	140		118						258	
08:15	136		227						363		20:15	135		117						252	
08:30	141		219						360		20:30	107		95						202	
08:45	139	576	190	928					329	1504	20:45	98	480	108	438					206	918
09:00	164		187						351		21:00	103		90						193	
09:15	146		175						321		21:15	108		100						208	
09:30	140		157						297		21:30	93		88						181	
09:45	136	586	183	702					319	1288	21:45	67	371	89	367					156	738
10:00	153		135						288		22:00	93		75						168	
10:15	174		183						357		22:15	102		59						161	
10:30	155		152						307		22:30	86		61						147	
10:45	181	663	146	616					327	1279	22:45	53	334	55	250					108	584
11:00	161		133						294		23:00	49		47						96	
11:15	159		165						324		23:15	29		33						62	
11:30	155		171						326		23:30	33		34						67	
11:45	198	673	153	622					351	1295	23:45	34	145	27	141					61	286
TOTALS		3883		4295						8178	TOTALS		8001		7350						15351
SPLIT %		47.5%		52.5%						34.8%	SPLIT %		52.1%		47.9%						65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,884	11,645	0	0	23,529

AM Peak Hour	11:45	07:30			07:15	PM Peak Hour	17:15	16:45			17:00
AM Pk Volume	725	977			1640	PM Pk Volume	997	920			1886
Pk Hr Factor	0.915	0.836			0.907	Pk Hr Factor	0.948	0.958			0.968
7 - 9 Volume	1253	1773	0	0	3026	4 - 6 Volume	1909	1746	0	0	3655
7 - 9 Peak Hour	07:15	07:30			07:15	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	679	977	0	0	1640	4 - 6 Pk Volume	987	920	0	0	1886
Pk Hr Factor	0.943	0.836	0.000	0.000	0.907	Pk Hr Factor	0.938	0.958	0.000	0.000	0.968

Prepared by NDS/ATD

VOLUME

Piedmont Ave between Avenue 61 & Figueroa St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_009

DAILY TOTALS	NB	SB	EB	WB	Total
	447	1,754	0	0	2,201

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	1		5						6		12:00	6		24						30	
00:15	2		3						5		12:15	10		17						27	
00:30	1		2						3		12:30	5		18						23	
00:45	0	4	0	10					0	14	12:45	8	29	24	83					32	112
01:00	0		0						0		13:00	10		13						23	
01:15	0		0						0		13:15	9		24						33	
01:30	1		3						4		13:30	8		18						26	
01:45	0	1	1	4					1	5	13:45	6	33	25	80					31	113
02:00	0		1						1		14:00	4		28						32	
02:15	0		2						2		14:15	13		18						31	
02:30	0		4						4		14:30	9		27						36	
02:45	0		0	7					0	7	14:45	5	31	39	112					44	143
03:00	1		1						2		15:00	7		41						48	
03:15	0		1						1		15:15	18		30						48	
03:30	1		0						1		15:30	16		53						69	
03:45	0	2	2	4					2	6	15:45	15	56	33	157					48	213
04:00	0		0						0		16:00	13		30						43	
04:15	0		2						2		16:15	10		39						49	
04:30	1		1						2		16:30	9		44						53	
04:45	0	1	2	5					2	6	16:45	10	42	44	157					54	199
05:00	0		2						2		17:00	9		46						55	
05:15	1		2						3		17:15	20		45						65	
05:30	1		1						2		17:30	10		46						56	
05:45	2	4	5	10					7	14	17:45	12	51	40	177					52	228
06:00	1		6						7		18:00	11		32						43	
06:15	0		9						9		18:15	11		34						45	
06:30	1		13						14		18:30	9		38						47	
06:45	2	4	17	45					19	49	18:45	8	39	33	137					41	176
07:00	4		24						28		19:00	4		28						32	
07:15	7		28						35		19:15	2		20						22	
07:30	2		50						52		19:30	6		27						33	
07:45	11	24	60	162					71	186	19:45	5	17	31	106					36	123
08:00	8		37						45		20:00	1		26						27	
08:15	5		28						33		20:15	1		12						13	
08:30	2		25						27		20:30	2		14						16	
08:45	3	18	23	113					26	131	20:45	2	6	12	64					14	70
09:00	4		15						19		21:00	2		13						15	
09:15	3		18						21		21:15	1		16						17	
09:30	5		15						20		21:30	6		11						17	
09:45	7	19	13	61					20	80	21:45	1	10	11	51					12	61
10:00	5		25						30		22:00	1		5						6	
10:15	5		22						27		22:15	2		7						9	
10:30	5		18						23		22:30	3		10						13	
10:45	4	19	17	82					21	101	22:45	2	8	4	26					6	34
11:00	8		19						27		23:00	2		4						6	
11:15	3		24						27		23:15	0		5						5	
11:30	5		18						23		23:30	2		6						8	
11:45	9	25	25	86					34	111	23:45	0	4	0	15					0	19
TOTALS		121		589						710	TOTALS		326		1165						1491
SPLIT %		17.0%		83.0%						32.3%	SPLIT %		21.9%		78.1%						67.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	447	1,754	0	0	2,201

AM Peak Hour	11:30	07:15			07:15	PM Peak Hour	15:15	16:45			16:45
AM Pk Volume	30	175			203	PM Pk Volume	62	181			230
Pk Hr Factor	0.750	0.729			0.715	Pk Hr Factor	0.861	0.984			0.885
7 - 9 Volume	42	275	0	0	317	4 - 6 Volume	93	334	0	0	427
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	17:00	16:45			16:45
7 - 9 Pk Volume	28	175	0	0	203	4 - 6 Pk Volume	51	181	0	0	230
Pk Hr Factor	0.636	0.729	0.000	0.000	0.715	Pk Hr Factor	0.638	0.984	0.000	0.000	0.885

Prepared by NDS/ATD

VOLUME

Mission St between Pasadena Ave & Fair Oaks Ave

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,210	6,411	12,621

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		5		9		12:00			114		103		217	
00:15			5		3		8		12:15			123		117		240	
00:30			9		2		11		12:30			122		95		217	
00:45			3	21	5	15	8	36	12:45			116	475	102	417	218	892
01:00			3		5		8		13:00			106		112		218	
01:15			1		3		4		13:15			111		113		224	
01:30			4		3		7		13:30			113		106		219	
01:45			3	11	3	14	6	25	13:45			102	432	113	444	215	876
02:00			1		5		6		14:00			105		116		221	
02:15			2		1		3		14:15			106		92		198	
02:30			0		0		0		14:30			120		125		245	
02:45			2	5	1	7	3	12	14:45			109	440	92	425	201	865
03:00			1		3		4		15:00			125		113		238	
03:15			3		2		5		15:15			114		121		235	
03:30			4		1		5		15:30			118		136		254	
03:45			3	11	1	7	4	18	15:45			146	503	92	462	238	965
04:00			5		7		12		16:00			112		117		229	
04:15			0		1		1		16:15			124		129		253	
04:30			3		0		3		16:30			109		146		255	
04:45			5	13	4	12	9	25	16:45			127	472	131	523	258	995
05:00			1		4		5		17:00			125		107		232	
05:15			12		3		15		17:15			139		133		272	
05:30			8		19		27		17:30			112		132		244	
05:45			13	34	15	41	28	75	17:45			124	500	164	536	288	1036
06:00			11		24		35		18:00			116		110		226	
06:15			16		23		39		18:15			117		104		221	
06:30			27		28		55		18:30			103		132		235	
06:45			34	88	39	114	73	202	18:45			114	450	121	467	235	917
07:00			35		33		68		19:00			115		135		250	
07:15			43		58		101		19:15			97		86		183	
07:30			66		59		125		19:30			87		105		192	
07:45			81	225	62	212	143	437	19:45			95	394	112	438	207	832
08:00			74		77		151		20:00			72		116		188	
08:15			92		84		176		20:15			87		89		176	
08:30			82		87		169		20:30			67		73		140	
08:45			85	333	81	329	166	662	20:45			58	284	59	337	117	621
09:00			91		123		214		21:00			70		55		125	
09:15			81		85		166		21:15			54		33		87	
09:30			79		110		189		21:30			45		48		93	
09:45			99	350	103	421	202	771	21:45			36	205	45	181	81	386
10:00			102		100		202		22:00			49		46		95	
10:15			88		96		184		22:15			29		38		67	
10:30			96		125		221		22:30			21		38		59	
10:45			93	379	84	405	177	784	22:45			21	120	33	155	54	275
11:00			102		106		208		23:00			13		14		27	
11:15			92		101		193		23:15			12		9		21	
11:30			115		96		211		23:30			5		4		9	
11:45			117	426	116	419	233	845	23:45			9	39	3	30	12	69
TOTALS				1896		1996		3892	TOTALS				4314		4415		8729
SPLIT %				48.7%		51.3%		30.8%	SPLIT %				49.4%		50.6%		69.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,210	6,411	12,621

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			15:00	17:15	17:00
AM Pk Volume			476	432	907	PM Pk Volume			503	539	1036
Pk Hr Factor			0.967	0.923	0.945	Pk Hr Factor			0.861	0.822	0.899
7 - 9 Volume	0	0	558	541	1099	4 - 6 Volume	0	0	972	1059	2031
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	333	329	662	4 - 6 Pk Volume	0	0	503	536	1036
Pk Hr Factor	0.000	0.000	0.905	0.945	0.940	Pk Hr Factor	0.000	0.000	0.905	0.817	0.899

Prepared by NDS/ATD

VOLUME

Monterey Rd between Pasadena Ave & Fair Oaks Ave

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,201	10,927	22,128

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			16		16		32		12:00			173		177		350	
00:15			12		23		35		12:15			162		146		308	
00:30			12		21		33		12:30			134		153		287	
00:45			15	55	10	70	25	125	12:45			166	635	148	624	314	1259
01:00			10		7		17		13:00			143		169		312	
01:15			8		7		15		13:15			150		175		325	
01:30			8		10		18		13:30			164		169		333	
01:45			2	28	4	28	6	56	13:45			186	643	173	686	359	1329
02:00			10		5		15		14:00			158		154		312	
02:15			4		2		6		14:15			166		168		334	
02:30			3		3		6		14:30			167		171		338	
02:45			10	27	3	13	13	40	14:45			186	677	152	645	338	1322
03:00			2		5		7		15:00			175		174		349	
03:15			3		6		9		15:15			194		159		353	
03:30			3		5		8		15:30			213		187		400	
03:45			4	12	6	22	10	34	15:45			197	779	188	708	385	1487
04:00			8		7		15		16:00			215		211		426	
04:15			6		6		12		16:15			213		190		403	
04:30			9		6		15		16:30			213		193		406	
04:45			14	37	13	32	27	69	16:45			236	877	246	840	482	1717
05:00			20		15		35		17:00			244		241		485	
05:15			13		17		30		17:15			279		241		520	
05:30			25		11		36		17:30			252		221		473	
05:45			36	94	30	73	66	167	17:45			229	1004	251	954	480	1958
06:00			45		36		81		18:00			231		253		484	
06:15			63		56		119		18:15			225		237		462	
06:30			84		70		154		18:30			214		222		436	
06:45			102	294	83	245	185	539	18:45			198	868	215	927	413	1795
07:00			107		112		219		19:00			209		198		407	
07:15			170		121		291		19:15			141		209		350	
07:30			173		153		326		19:30			146		170		316	
07:45			164	614	137	523	301	1137	19:45			169	665	212	789	381	1454
08:00			184		138		322		20:00			138		167		305	
08:15			182		154		336		20:15			112		174		286	
08:30			192		140		332		20:30			118		139		257	
08:45			229	787	155	587	384	1374	20:45			90	458	139	619	229	1077
09:00			174		161		335		21:00			82		123		205	
09:15			185		150		335		21:15			102		118		220	
09:30			174		139		313		21:30			113		105		218	
09:45			160	693	128	578	288	1271	21:45			98	395	109	455	207	850
10:00			149		124		273		22:00			83		84		167	
10:15			154		142		296		22:15			64		78		142	
10:30			154		132		286		22:30			46		53		99	
10:45			149	606	131	529	280	1135	22:45			41	234	41	256	82	490
11:00			169		148		317		23:00			36		48		84	
11:15			162		151		313		23:15			30		40		70	
11:30			144		144		288		23:30			27		34		61	
11:45			132	607	134	577	266	1184	23:45			19	112	25	147	44	259
TOTALS				3854		3277		7131	TOTALS				7347		7650		14997
SPLIT %				54.0%		46.0%		32.2%	SPLIT %				49.0%		51.0%		67.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,201	10,927	22,128

AM Peak Hour			08:00	08:15	08:15	PM Peak Hour			16:45	17:15	16:45
AM Pk Volume			787	610	1387	PM Pk Volume			1011	966	1960
Pk Hr Factor			0.859	0.947	0.903	Pk Hr Factor			0.906	0.955	0.942
7 - 9 Volume	0	0	1401	1110	2511	4 - 6 Volume	0	0	1881	1794	3675
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	787	587	1374	4 - 6 Pk Volume	0	0	1011	954	1960
Pk Hr Factor	0.000	0.000	0.859	0.947	0.895	Pk Hr Factor	0.000	0.000	0.906	0.950	0.942

Prepared by NDS/ATD

VOLUME

Mission St between Orange Grove Ave & Indiana Ave

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,504	5,474	10,978

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		7		9		12:00			104		81		185	
00:15			4		3		7		12:15			111		109		220	
00:30			7		4		11		12:30			106		94		200	
00:45			3	16	2	16	5	32	12:45			95	416	84	368	179	784
01:00			1		6		7		13:00			85		119		204	
01:15			1		1		2		13:15			92		104		196	
01:30			2		3		5		13:30			102		103		205	
01:45			2	6	3	13	5	19	13:45			95	374	88	414	183	788
02:00			1		5		6		14:00			90		98		188	
02:15			0		2		2		14:15			99		73		172	
02:30			1		0		1		14:30			103		91		194	
02:45			2	4	2	9	4	13	14:45			86	378	91	353	177	731
03:00			1		1		2		15:00			110		87		197	
03:15			2		0		2		15:15			106		88		194	
03:30			1		0		1		15:30			110		111		221	
03:45			2	6	1	2	3	8	15:45			133	459	111	397	244	856
04:00			3		7		10		16:00			95		85		180	
04:15			1		5		6		16:15			95		130		225	
04:30			4		0		4		16:30			106		105		211	
04:45			3	11	0	12	3	23	16:45			109	405	115	435	224	840
05:00			2		2		4		17:00			116		115		231	
05:15			9		2		11		17:15			120		104		224	
05:30			10		5		15		17:30			99		139		238	
05:45			15	36	10	19	25	55	17:45			104	439	124	482	228	921
06:00			10		18		28		18:00			93		120		213	
06:15			13		25		38		18:15			109		91		200	
06:30			25		24		49		18:30			94		126		220	
06:45			30	78	33	100	63	178	18:45			107	403	79	416	186	819
07:00			29		43		72		19:00			102		120		222	
07:15			40		58		98		19:15			89		94		183	
07:30			59		49		108		19:30			80		72		152	
07:45			74	202	51	201	125	403	19:45			81	352	75	361	156	713
08:00			66		70		136		20:00			65		92		157	
08:15			85		91		176		20:15			76		78		154	
08:30			78		81		159		20:30			61		72		133	
08:45			70	299	64	306	134	605	20:45			52	254	70	312	122	566
09:00			77		92		169		21:00			63		45		108	
09:15			84		71		155		21:15			46		52		98	
09:30			73		67		140		21:30			40		39		79	
09:45			90	324	66	296	156	620	21:45			31	180	49	185	80	365
10:00			93		69		162		22:00			44		25		69	
10:15			82		82		164		22:15			26		33		59	
10:30			81		96		177		22:30			22		18		40	
10:45			89	345	60	307	149	652	22:45			18	110	14	90	32	200
11:00			86		90		176		23:00			9		11		20	
11:15			91		73		164		23:15			10		10		20	
11:30			102		72		174		23:30			7		12		19	
11:45			92	371	105	340	197	711	23:45			10	36	7	40	17	76
TOTALS				1698		1621		3319	TOTALS				3806		3853		7659
SPLIT %				51.2%		48.8%		30.2%	SPLIT %				49.7%		50.3%		69.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,504	5,474	10,978

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			15:00	17:15	17:00
AM Pk Volume			413	389	802	PM Pk Volume			459	487	921
Pk Hr Factor			0.930	0.892	0.911	Pk Hr Factor			0.863	0.876	0.967
7 - 9 Volume	0	0	501	507	1008	4 - 6 Volume	0	0	844	917	1761
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:30	17:00	17:00
7 - 9 Pk Volume	0	0	303	306	605	4 - 6 Pk Volume	0	0	451	482	921
Pk Hr Factor	0.000	0.000	0.891	0.841	0.859	Pk Hr Factor	0.000	0.000	0.940	0.867	0.967

Prepared by NDS/ATD

VOLUME

Monterey Rd between Orange Grove Ave & Indiana Ave

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,164	9,629	19,793

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			14		17		31		12:00			147		148		295	
00:15			12		20		32		12:15			143		127		270	
00:30			12		23		35		12:30			118		125		243	
00:45			18	56	9	69	27	125	12:45			138	546	138	538	276	1084
01:00			9		8		17		13:00			125		144		269	
01:15			5		6		11		13:15			127		161		288	
01:30			7		11		18		13:30			160		148		308	
01:45			3	24	3	28	6	52	13:45			154	566	155	608	309	1174
02:00			8		4		12		14:00			139		116		255	
02:15			4		2		6		14:15			157		148		305	
02:30			2		3		5		14:30			144		137		281	
02:45			10	24	3	12	13	36	14:45			161	601	135	536	296	1137
03:00			2		5		7		15:00			152		145		297	
03:15			3		6		9		15:15			177		132		309	
03:30			6		5		11		15:30			183		167		350	
03:45			2	13	3	19	5	32	15:45			175	687	156	600	331	1287
04:00			8		6		14		16:00			225		181		406	
04:15			5		9		14		16:15			194		160		354	
04:30			11		7		18		16:30			201		171		372	
04:45			14	38	14	36	28	74	16:45			209	829	214	726	423	1555
05:00			15		14		29		17:00			225		208		433	
05:15			15		17		32		17:15			262		206		468	
05:30			27		11		38		17:30			255		200		455	
05:45			33	90	29	71	62	161	17:45			221	963	211	825	432	1788
06:00			44		36		80		18:00			222		226		448	
06:15			60		58		118		18:15			220		212		432	
06:30			74		69		143		18:30			188		181		369	
06:45			98	276	78	241	176	517	18:45			189	819	190	809	379	1628
07:00			101		110		211		19:00			192		167		359	
07:15			144		124		268		19:15			151		171		322	
07:30			145		151		296		19:30			151		132		283	
07:45			161	551	121	506	282	1057	19:45			153	647	176	646	329	1293
08:00			167		129		296		20:00			123		147		270	
08:15			176		145		321		20:15			110		156		266	
08:30			172		128		300		20:30			110		128		238	
08:45			188	703	137	539	325	1242	20:45			83	426	123	554	206	980
09:00			145		131		276		21:00			78		112		190	
09:15			147		141		288		21:15			98		101		199	
09:30			151		129		280		21:30			82		93		175	
09:45			134	577	116	517	250	1094	21:45			78	336	100	406	178	742
10:00			117		115		232		22:00			86		70		156	
10:15			145		125		270		22:15			52		64		116	
10:30			142		117		259		22:30			50		59		109	
10:45			132	536	119	476	251	1012	22:45			38	226	51	244	89	470
11:00			130		122		252		23:00			33		41		74	
11:15			135		135		270		23:15			36		33		69	
11:30			129		122		251		23:30			30		32		62	
11:45			119	513	116	495	235	1008	23:45			18	117	22	128	40	245
TOTALS				3401		3009		6410	TOTALS				6763		6620		13383
SPLIT %				53.1%		46.9%		32.4%	SPLIT %				50.5%		49.5%		67.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,164	9,629	19,793

AM Peak Hour			08:00	07:30	08:00	PM Peak Hour			17:00	17:30	17:15
AM Pk Volume			703	546	1242	PM Pk Volume			963	849	1803
Pk Hr Factor			0.935	0.904	0.955	Pk Hr Factor			0.919	0.939	0.963
7 - 9 Volume	0	0	1254	1045	2299	4 - 6 Volume	0	0	1792	1551	3343
7 - 9 Peak Hour			08:00	07:30	08:00	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	703	546	1242	4 - 6 Pk Volume	0	0	963	828	1788
Pk Hr Factor	0.000	0.000	0.935	0.904	0.955	Pk Hr Factor	0.000	0.000	0.919	0.967	0.955

Prepared by NDS/ATD

VOLUME

Collis Ave S/o Hill Dr

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_014

DAILY TOTALS	NB	SB	EB	WB	Total
	2,433	2,392	0	0	4,825

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		12						15		12:00	28		32						60	
00:15	7		10						17		12:15	26		34						60	
00:30	3		8						11		12:30	34		23						57	
00:45	4	17	5	35					9	52	12:45	22	110	29	118					51	228
01:00	7		3						10		13:00	38		29						67	
01:15	1		2						3		13:15	32		26						58	
01:30	2		6						8		13:30	40		24						64	
01:45	1	11	2	13					3	24	13:45	26	136	32	111					58	247
02:00	1		3						4		14:00	38		27						65	
02:15	0		1						1		14:15	30		24						54	
02:30	2		8						10		14:30	32		37						69	
02:45	3	6	2	14					5	20	14:45	30	130	38	126					68	256
03:00	1		4						5		15:00	46		44						90	
03:15	2		4						6		15:15	38		52						90	
03:30	4		4						8		15:30	43		48						91	
03:45	4	11	1	13					5	24	15:45	49	176	48	192					97	368
04:00	1		3						4		16:00	49		37						86	
04:15	4		1						5		16:15	46		49						95	
04:30	2		2						4		16:30	40		60						100	
04:45	6	13	2	8					8	21	16:45	51	186	50	196					101	382
05:00	6		2						8		17:00	51		62						113	
05:15	7		1						8		17:15	47		61						108	
05:30	11		3						14		17:30	52		49						101	
05:45	12	36	5	11					17	47	17:45	62	212	65	237					127	449
06:00	19		10						29		18:00	34		42						76	
06:15	14		14						28		18:15	44		60						104	
06:30	21		10						31		18:30	56		38						94	
06:45	27	81	31	65					58	146	18:45	33	167	40	180					73	347
07:00	34		26						60		19:00	33		30						63	
07:15	49		42						91		19:15	33		25						58	
07:30	76		43						119		19:30	27		33						60	
07:45	74	233	55	166					129	399	19:45	30	123	36	124					66	247
08:00	47		50						97		20:00	28		23						51	
08:15	41		47						88		20:15	31		30						61	
08:30	45		42						87		20:30	14		20						34	
08:45	37	170	34	173					71	343	20:45	22	95	26	99					48	194
09:00	38		27						65		21:00	28		24						52	
09:15	26		32						58		21:15	17		29						46	
09:30	30		34						64		21:30	24		24						48	
09:45	29	123	26	119					55	242	21:45	10	79	15	92					25	171
10:00	36		21						57		22:00	15		20						35	
10:15	29		22						51		22:15	13		13						26	
10:30	29		27						56		22:30	11		15						26	
10:45	35	129	20	90					55	219	22:45	15	54	11	59					26	113
11:00	18		20						38		23:00	10		20						30	
11:15	33		28						61		23:15	5		7						12	
11:30	32		32						64		23:30	3		12						15	
11:45	30	113	25	105					55	218	23:45	4	22	7	46					11	68
TOTALS		943		812						1755	TOTALS		1490		1580						3070
SPLIT %		53.7%		46.3%						36.4%	SPLIT %		48.5%		51.5%						63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,433	2,392	0	0	4,825

AM Peak Hour	07:15	07:30			07:15	PM Peak Hour	17:00	17:00			17:00
AM Pk Volume	246	195			436	PM Pk Volume	212	237			449
Pk Hr Factor	0.809	0.886			0.845	Pk Hr Factor	0.855	0.912			0.884
7 - 9 Volume	403	339	0	0	742	4 - 6 Volume	398	433	0	0	831
7 - 9 Peak Hour	07:15	07:30			07:15	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	246	195	0	0	436	4 - 6 Pk Volume	212	237	0	0	449
Pk Hr Factor	0.809	0.886	0.000	0.000	0.845	Pk Hr Factor	0.855	0.912	0.000	0.000	0.884

Prepared by NDS/ATD

VOLUME

Monterey Rd N/o Via Marisol

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_015

DAILY TOTALS	NB	SB	EB	WB	Total
	3,280	3,683	0	0	6,963

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	10		7						17		12:00	36		38						74	
00:15	12		6						18		12:15	36		46						82	
00:30	3		3						6		12:30	39		50						89	
00:45	4	29	2	18					6	47	12:45	45	156	58	192					103	348
01:00	3		5						8		13:00	30		49						79	
01:15	2		4						6		13:15	33		54						87	
01:30	3		2						5		13:30	43		44						87	
01:45	3	11	3	14					6	25	13:45	46	152	45	192					91	344
02:00	2		1						3		14:00	46		46						92	
02:15	1		1						2		14:15	45		52						97	
02:30	10		5						15		14:30	44		49						93	
02:45	4	17	4	11					8	28	14:45	50	185	60	207					110	392
03:00	5		4						9		15:00	45		63						108	
03:15	5		2						7		15:15	69		68						137	
03:30	1		2						3		15:30	59		61						120	
03:45	2	13	5	13					7	26	15:45	74	247	49	241					123	488
04:00	6		4						10		16:00	71		59						130	
04:15	0		3						3		16:15	75		59						134	
04:30	4		3						7		16:30	71		60						131	
04:45	3	13	5	15					8	28	16:45	85	302	46	224					131	526
05:00	7		2						9		17:00	84		62						146	
05:15	8		6						14		17:15	104		74						178	
05:30	10		17						27		17:30	99		72						171	
05:45	7	32	11	36					18	68	17:45	100	387	72	280					172	667
06:00	7		23						30		18:00	96		54						150	
06:15	19		25						44		18:15	94		68						162	
06:30	16		44						60		18:30	74		50						124	
06:45	20	62	50	142					70	204	18:45	60	324	49	221					109	545
07:00	34		75						109		19:00	60		58						118	
07:15	41		81						122		19:15	46		56						102	
07:30	81		110						191		19:30	59		45						104	
07:45	47	203	82	348					129	551	19:45	43	208	43	202					86	410
08:00	46		106						152		20:00	40		34						74	
08:15	37		74						111		20:15	41		44						85	
08:30	30		100						130		20:30	31		41						72	
08:45	52	165	69	349					121	514	20:45	31	143	24	143					55	286
09:00	33		60						93		21:00	34		35						69	
09:15	32		67						99		21:15	32		25						57	
09:30	37		59						96		21:30	26		49						75	
09:45	31	133	38	224					69	357	21:45	29	121	25	134					54	255
10:00	25		51						76		22:00	14		24						38	
10:15	31		56						87		22:15	19		25						44	
10:30	33		47						80		22:30	22		19						41	
10:45	34	123	41	195					75	318	22:45	8	63	21	89					29	152
11:00	42		47						89		23:00	21		25						46	
11:15	29		31						60		23:15	13		10						23	
11:30	35		39						74		23:30	16		9						25	
11:45	28	134	29	146					57	280	23:45	7	57	3	47					10	104
TOTALS		935		1511						2446	TOTALS		2345		2172						4517
SPLIT %		38.2%		61.8%						35.1%	SPLIT %		51.9%		48.1%						64.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,280	3,683	0	0	6,963

AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	17:15	17:00			17:15
AM Pk Volume	215	379			594	PM Pk Volume	399	280			671
Pk Hr Factor	0.664	0.861			0.777	Pk Hr Factor	0.959	0.946			0.942
7 - 9 Volume	368	697	0	0	1065	4 - 6 Volume	689	504	0	0	1193
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	215	379	0	0	594	4 - 6 Pk Volume	387	280	0	0	667
Pk Hr Factor	0.664	0.861	0.000	0.000	0.777	Pk Hr Factor	0.930	0.946	0.000	0.000	0.937

Prepared by NDS/ATD

VOLUME

San Fernando Rd/Merced St between Elm St & Arvia St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_016

DAILY TOTALS	NB	SB	EB	WB	Total
	12,824	12,459	0	0	25,283

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	24		14						38		12:00	164		138						302	
00:15	18		18						36		12:15	159		172						331	
00:30	12		16						28		12:30	168		154						322	
00:45	18	72	19	67					37	139	12:45	175	666	178	642					353	1308
01:00	15		11						26		13:00	156		156						312	
01:15	10		13						23		13:15	180		136						316	
01:30	7		13						20		13:30	178		142						320	
01:45	10	42	16	53					26	95	13:45	193	707	146	580					339	1287
02:00	10		10						20		14:00	170		140						310	
02:15	6		8						14		14:15	195		156						351	
02:30	6		8						14		14:30	190		162						352	
02:45	8	30	11	37					19	67	14:45	190	745	175	633					365	1378
03:00	6		12						18		15:00	211		208						419	
03:15	11		17						28		15:15	261		152						413	
03:30	9		18						27		15:30	270		214						484	
03:45	12	38	11	58					23	96	15:45	237	979	238	812					475	1791
04:00	14		12						26		16:00	275		197						472	
04:15	24		9						33		16:15	311		174						485	
04:30	21		27						48		16:30	300		169						469	
04:45	44	103	30	78					74	181	16:45	328	1214	181	721					509	1935
05:00	43		35						78		17:00	350		186						536	
05:15	43		53						96		17:15	382		217						599	
05:30	54		61						115		17:30	385		215						600	
05:45	74	214	80	229					154	443	17:45	410	1527	171	789					581	2316
06:00	77		111						188		18:00	371		185						556	
06:15	96		135						231		18:15	341		176						517	
06:30	106		190						296		18:30	362		139						501	
06:45	107	386	265	701					372	1087	18:45	299	1373	123	623					422	1996
07:00	139		328						467		19:00	248		121						369	
07:15	166		362						528		19:15	162		115						277	
07:30	200		333						533		19:30	170		92						262	
07:45	178	683	338	1361					516	2044	19:45	136	716	80	408					216	1124
08:00	170		334						504		20:00	123		71						194	
08:15	136		352						488		20:15	105		87						192	
08:30	161		363						524		20:30	95		67						162	
08:45	127	594	358	1407					485	2001	20:45	95	418	80	305					175	723
09:00	124		345						469		21:00	81		45						126	
09:15	122		325						447		21:15	79		49						128	
09:30	118		292						410		21:30	85		50						135	
09:45	135	499	210	1172					345	1671	21:45	59	304	41	185					100	489
10:00	134		193						327		22:00	70		48						118	
10:15	127		157						284		22:15	45		43						88	
10:30	133		148						281		22:30	53		49						102	
10:45	139	533	144	642					283	1175	22:45	63	231	37	177					100	408
11:00	153		166						319		23:00	54		23						77	
11:15	138		195						333		23:15	38		26						64	
11:30	147		189						336		23:30	34		20						54	
11:45	155	593	147	697					302	1290	23:45	31	157	13	82					44	239
TOTALS		3787		6502						10289	TOTALS		9037		5957						14994
SPLIT %		36.8%		63.2%						40.7%	SPLIT %		60.3%		39.7%						59.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,824	12,459	0	0	25,283

AM Peak Hour	07:15	08:15			07:15	PM Peak Hour	17:15	15:30			17:15
AM Pk Volume	714	1418			2081	PM Pk Volume	1548	823			2336
Pk Hr Factor	0.893	0.977			0.976	Pk Hr Factor	0.944	0.864			0.973
7 - 9 Volume	1277	2768	0	0	4045	4 - 6 Volume	2741	1510	0	0	4251
7 - 9 Peak Hour	07:15	08:00			07:15	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	714	1407	0	0	2081	4 - 6 Pk Volume	1527	799	0	0	2316
Pk Hr Factor	0.893	0.969	0.000	0.000	0.976	Pk Hr Factor	0.931	0.921	0.000	0.000	0.965

Prepared by NDS/ATD

VOLUME

Cypress Ave between Elm St & Asbury St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_017

DAILY TOTALS	NB	SB	EB	WB	Total
	3,587	4,290	0	0	7,877

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	12		5						17		12:00	49		73						122	
00:15	5		2						7		12:15	48		72						120	
00:30	3		4						7		12:30	69		78						147	
00:45	4	24	2	13					6	37	12:45	79	245	64	287					143	532
01:00	3		1						4		13:00	57		63						120	
01:15	2		2						4		13:15	40		69						109	
01:30	4		0						4		13:30	68		74						142	
01:45	2	11	1	4					3	15	13:45	61	226	80	286					141	512
02:00	4		1						5		14:00	69		72						141	
02:15	7		3						10		14:15	89		76						165	
02:30	4		2						6		14:30	87		79						166	
02:45	8	23	4	10					12	33	14:45	96	341	82	309					178	650
03:00	2		3						5		15:00	81		85						166	
03:15	3		4						7		15:15	78		87						165	
03:30	2		7						9		15:30	70		84						154	
03:45	3	10	7	21					10	31	15:45	61	290	101	357					162	647
04:00	4		9						13		16:00	70		74						144	
04:15	3		10						13		16:15	57		55						112	
04:30	4		7						11		16:30	81		75						156	
04:45	4	15	6	32					10	47	16:45	65	273	62	266					127	539
05:00	3		17						20		17:00	59		70						129	
05:15	8		20						28		17:15	71		62						133	
05:30	8		13						21		17:30	78		56						134	
05:45	8	27	16	66					24	93	17:45	82	290	67	255					149	545
06:00	12		27						39		18:00	83		71						154	
06:15	13		34						47		18:15	75		53						128	
06:30	25		40						65		18:30	62		61						123	
06:45	21	71	42	143					63	214	18:45	39	259	62	247					101	506
07:00	25		72						97		19:00	43		56						99	
07:15	48		76						124		19:15	48		50						98	
07:30	72		110						182		19:30	37		44						81	
07:45	62	207	143	401					205	608	19:45	34	162	41	191					75	353
08:00	48		106						154		20:00	24		38						62	
08:15	32		99						131		20:15	26		32						58	
08:30	31		103						134		20:30	27		44						71	
08:45	38	149	66	374					104	523	20:45	36	113	27	141					63	254
09:00	33		63						96		21:00	30		25						55	
09:15	40		59						99		21:15	28		18						46	
09:30	32		50						82		21:30	22		21						43	
09:45	46	151	59	231					105	382	21:45	18	98	24	88					42	186
10:00	48		50						98		22:00	25		24						49	
10:15	60		56						116		22:15	20		22						42	
10:30	56		50						106		22:30	23		16						39	
10:45	54	218	57	213					111	431	22:45	14	82	12	74					26	156
11:00	49		57						106		23:00	15		10						25	
11:15	74		66						140		23:15	13		12						25	
11:30	75		62						137		23:30	8		12						20	
11:45	57	255	54	239					111	494	23:45	11	47	8	42					19	89
TOTALS		1161		1747						2908	TOTALS		2426		2543						4969
SPLIT %		39.9%		60.1%						36.9%	SPLIT %		48.8%		51.2%						63.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,587	4,290	0	0	7,877

AM Peak Hour	11:00	07:30			07:30	PM Peak Hour	14:15	15:00			14:15
AM Pk Volume	255	458			672	PM Pk Volume	353	357			675
Pk Hr Factor	0.850	0.801			0.820	Pk Hr Factor	0.919	0.884			0.948
7 - 9 Volume	356	775	0	0	1131	4 - 6 Volume	563	521	0	0	1084
7 - 9 Peak Hour	07:15	07:30			07:30	4 - 6 Peak Hour	17:00	16:30			16:30
7 - 9 Pk Volume	230	458	0	0	672	4 - 6 Pk Volume	290	269	0	0	545
Pk Hr Factor	0.799	0.801	0.000	0.000	0.820	Pk Hr Factor	0.884	0.897	0.000	0.000	0.873

Prepared by NDS/ATD

VOLUME

San Rafael Dr between Sea View Dr & Sea View Ln

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_018

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	852	910	1,762

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		1		2		12:00			7		11		18	
00:15			0		0		0		12:15			5		5		10	
00:30			1		1		2		12:30			8		10		18	
00:45			0	2	1	3	1	5	12:45			7	27	13	39	20	66
01:00			0		0		0		13:00			11		6		17	
01:15			0		1		1		13:15			11		14		25	
01:30			2		1		3		13:30			6		8		14	
01:45			0	2	2	4	2	6	13:45			7	35	12	40	19	75
02:00			0		0		0		14:00			15		19		34	
02:15			0		0		0		14:15			7		52		59	
02:30			0		0		0		14:30			34		27		61	
02:45			0		0		0		14:45			46	102	10	108	56	210
03:00			0		0		0		15:00			21		21		42	
03:15			0		0		0		15:15			26		26		52	
03:30			0		0		0		15:30			21		9		30	
03:45			0		1	1	1	1	15:45			24	92	22	78	46	170
04:00			0		0		0		16:00			19		18		37	
04:15			0		1		1		16:15			11		12		23	
04:30			1		0		1		16:30			19		16		35	
04:45			0	1	0	1	0	2	16:45			25	74	15	61	40	135
05:00			1		0		1		17:00			22		18		40	
05:15			1		1		2		17:15			20		19		39	
05:30			1		0		1		17:30			18		17		35	
05:45			2	5	0	1	2	6	17:45			13	73	10	64	23	137
06:00			0		1		1		18:00			14		14		28	
06:15			3		1		4		18:15			9		13		22	
06:30			6		3		9		18:30			7		10		17	
06:45			4	13	3	8	7	21	18:45			9	39	16	53	25	92
07:00			5		9		14		19:00			6		12		18	
07:15			15		15		30		19:15			9		10		19	
07:30			16		27		43		19:30			5		5		10	
07:45			28	64	63	114	91	178	19:45			2	22	7	34	9	56
08:00			32		86		118		20:00			5		6		11	
08:15			53		12		65		20:15			5		8		13	
08:30			26		9		35		20:30			4		6		10	
08:45			20	131	12	119	32	250	20:45			5	19	8	28	13	47
09:00			15		7		22		21:00			2		10		12	
09:15			14		4		18		21:15			3		6		9	
09:30			15		11		26		21:30			1		7		8	
09:45			13	57	11	33	24	90	21:45			3	9	2	25	5	34
10:00			13		11		24		22:00			1		5		6	
10:15			8		8		16		22:15			3		5		8	
10:30			7		7		14		22:30			0		2		2	
10:45			7	35	13	39	20	74	22:45			1	5	3	15	4	20
11:00			11		6		17		23:00			4		3		7	
11:15			6		12		18		23:15			2		2		4	
11:30			7		10		17		23:30			1		2		3	
11:45			14	38	6	34	20	72	23:45			0	7	1	8	1	15
TOTALS				348		357		705	TOTALS				504		553		1057
SPLIT %				49.4%		50.6%		40.0%	SPLIT %				47.7%		52.3%		60.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	852	910	1,762

AM Peak Hour			07:45	07:15	07:30	PM Peak Hour			14:30	13:45	14:15
AM Pk Volume			139	191	317	PM Pk Volume			127	110	218
Pk Hr Factor			0.656	0.555	0.672	Pk Hr Factor			0.690	0.529	0.893
7 - 9 Volume	0	0	195	233	428	4 - 6 Volume	0	0	147	125	272
7 - 9 Peak Hour			07:45	07:15	07:30	4 - 6 Peak Hour			16:30	16:45	16:30
7 - 9 Pk Volume	0	0	139	191	317	4 - 6 Pk Volume	0	0	86	69	154
Pk Hr Factor	0.000	0.000	0.656	0.555	0.672	Pk Hr Factor	0.000	0.000	0.860	0.908	0.963

Prepared by NDS/ATD

VOLUME

Avenue 50 between Aldama St & San Marcos Pl

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_019

DAILY TOTALS	NB	SB	EB	WB	Total
	6,527	6,982	0	0	13,509

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	19		24						43		12:00	78		100						178	
00:15	18		12						30		12:15	70		86						156	
00:30	13		12						25		12:30	63		101						164	
00:45	17	67	10	58					27	125	12:45	91	302	90	377					181	679
01:00	13		11						24		13:00	72		79						151	
01:15	10		12						22		13:15	86		108						194	
01:30	9		7						16		13:30	97		108						205	
01:45	6	38	4	34					10	72	13:45	80	335	111	406					191	741
02:00	13		7						20		14:00	75		80						155	
02:15	8		4						12		14:15	93		96						189	
02:30	17		7						24		14:30	119		111						230	
02:45	10	48	2	20					12	68	14:45	98	385	85	372					183	757
03:00	5		2						7		15:00	124		110						234	
03:15	6		6						12		15:15	129		88						217	
03:30	8		9						17		15:30	114		119						233	
03:45	7	26	6	23					13	49	15:45	131	498	141	458					272	956
04:00	4		7						11		16:00	155		135						290	
04:15	7		11						18		16:15	112		114						226	
04:30	10		13						23		16:30	132		127						259	
04:45	8	29	14	45					22	74	16:45	131	530	132	508					263	1038
05:00	5		21						26		17:00	156		143						299	
05:15	15		40						55		17:15	159		149						308	
05:30	21		33						54		17:30	128		136						264	
05:45	30	71	39	133					69	204	17:45	146	589	139	567					285	1156
06:00	26		45						71		18:00	140		115						255	
06:15	39		60						99		18:15	150		113						263	
06:30	45		69						114		18:30	152		112						264	
06:45	55	165	80	254					135	419	18:45	131	573	103	443					234	1016
07:00	72		115						187		19:00	120		116						236	
07:15	96		141						237		19:15	104		106						210	
07:30	117		148						265		19:30	99		89						188	
07:45	104	389	136	540					240	929	19:45	78	401	74	385					152	786
08:00	112		112						224		20:00	75		73						148	
08:15	75		122						197		20:15	66		64						130	
08:30	71		113						184		20:30	68		76						144	
08:45	63	321	110	457					173	778	20:45	61	270	75	288					136	558
09:00	82		98						180		21:00	84		55						139	
09:15	76		94						170		21:15	64		77						141	
09:30	70		97						167		21:30	62		54						116	
09:45	74	302	108	397					182	699	21:45	56	266	60	246					116	512
10:00	81		90						171		22:00	44		43						87	
10:15	88		80						168		22:15	52		43						95	
10:30	74		92						166		22:30	53		42						95	
10:45	85	328	75	337					160	665	22:45	44	193	35	163					79	356
11:00	76		94						170		23:00	34		38						72	
11:15	86		92						178		23:15	30		36						66	
11:30	63		87						150		23:30	23		23						46	
11:45	65	290	82	355					147	645	23:45	24	111	19	116					43	227
TOTALS		2074		2653						4727	TOTALS		4453		4329						8782
SPLIT %		43.9%		56.1%						35.0%	SPLIT %		50.7%		49.3%						65.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,527	6,982	0	0	13,509

AM Peak Hour	07:15	07:00			07:15	PM Peak Hour	17:00	17:00			17:00
AM Pk Volume	429	540			966	PM Pk Volume	589	567			1156
Pk Hr Factor	0.917	0.912			0.911	Pk Hr Factor	0.926	0.951			0.938
7 - 9 Volume	710	997	0	0	1707	4 - 6 Volume	1119	1075	0	0	2194
7 - 9 Peak Hour	07:15	07:00			07:15	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	429	540	0	0	966	4 - 6 Pk Volume	589	567	0	0	1156
Pk Hr Factor	0.917	0.912	0.000	0.000	0.911	Pk Hr Factor	0.926	0.951	0.000	0.000	0.938

Prepared by NDS/ATD

VOLUME

Avenue 54 between Irvington Pl & Raphael St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_020

DAILY TOTALS	NB	SB	EB	WB	Total
	2,993	3,072	0	0	6,065

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	2		2						4		12:00	47		28						75	
00:15	1		1						2		12:15	44		34						78	
00:30	5		1						6		12:30	64		29						93	
00:45	3	11	3	7					6	18	12:45	49	204	33	124					82	328
01:00	1		1						2		13:00	51		40						91	
01:15	3		2						5		13:15	49		51						100	
01:30	0		1						1		13:30	51		37						88	
01:45	2	6	0	4					2	10	13:45	62	213	39	167					101	380
02:00	1		6						7		14:00	56		40						96	
02:15	2		2						4		14:15	36		42						78	
02:30	0		2						2		14:30	39		56						95	
02:45	2	5	1	11					3	16	14:45	50	181	92	230					142	411
03:00	2		1						3		15:00	103		74						177	
03:15	0		4						4		15:15	48		96						144	
03:30	1		0						1		15:30	60		47						107	
03:45	0	3	1	6					1	9	15:45	58	269	63	280					121	549
04:00	5		0						5		16:00	43		54						97	
04:15	0		1						1		16:15	35		56						91	
04:30	4		0						4		16:30	43		56						99	
04:45	1	10	6	7					7	17	16:45	54	175	58	224					112	399
05:00	6		3						9		17:00	61		71						132	
05:15	5		2						7		17:15	37		69						106	
05:30	4		6						10		17:30	36		60						96	
05:45	9	24	0	11					9	35	17:45	51	185	74	274					125	459
06:00	15		20						35		18:00	74		64						138	
06:15	14		26						40		18:15	44		79						123	
06:30	42		37						79		18:30	44		60						104	
06:45	28	99	23	106					51	205	18:45	46	208	49	252					95	460
07:00	26		31						57		19:00	44		57						101	
07:15	67		56						123		19:15	34		42						76	
07:30	124		104						228		19:30	38		42						80	
07:45	113	330	105	296					218	626	19:45	30	146	32	173					62	319
08:00	51		50						101		20:00	24		29						53	
08:15	40		37						77		20:15	25		43						68	
08:30	44		39						83		20:30	29		37						66	
08:45	25	160	29	155					54	315	20:45	35	113	39	148					74	261
09:00	35		36						71		21:00	36		37						73	
09:15	33		26						59		21:15	22		21						43	
09:30	33		30						63		21:30	21		25						46	
09:45	33	134	33	125					66	259	21:45	16	95	23	106					39	201
10:00	46		31						77		22:00	6		8						14	
10:15	36		42						78		22:15	9		21						30	
10:30	65		26						91		22:30	6		12						18	
10:45	39	186	29	128					68	314	22:45	8	29	11	52					19	81
11:00	43		26						69		23:00	2		17						19	
11:15	43		45						88		23:15	6		10						16	
11:30	55		41						96		23:30	4		7						11	
11:45	49	190	35	147					84	337	23:45	5	17	5	39					10	56
TOTALS		1158		1003						2161	TOTALS		1835		2069						3904
SPLIT %		53.6%		46.4%						35.6%	SPLIT %		47.0%		53.0%						64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,993	3,072	0	0	6,065

AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	15:00	14:30			14:45
AM Pk Volume	355	315			670	PM Pk Volume	269	318			570
Pk Hr Factor	0.716	0.750			0.735	Pk Hr Factor	0.653	0.828			0.805
7 - 9 Volume	490	451	0	0	941	4 - 6 Volume	360	498	0	0	858
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	16:30	17:00			17:00
7 - 9 Pk Volume	355	315	0	0	670	4 - 6 Pk Volume	195	274	0	0	459
Pk Hr Factor	0.716	0.750	0.000	0.000	0.735	Pk Hr Factor	0.799	0.926	0.000	0.000	0.869

Prepared by NDS/ATD

VOLUME

York Blvd between Aldama St & Toledo St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,914	10,695	21,609

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			24		28		52		12:00			161		153		314	
00:15			28		30		58		12:15			172		153		325	
00:30			21		23		44		12:30			157		129		286	
00:45			14	87	13	94	27	181	12:45			158	648	149	584	307	1232
01:00			13		23		36		13:00			175		157		332	
01:15			18		18		36		13:15			136		143		279	
01:30			19		20		39		13:30			152		152		304	
01:45			17	67	15	76	32	143	13:45			166	629	125	577	291	1206
02:00			14		20		34		14:00			157		173		330	
02:15			14		4		18		14:15			178		171		349	
02:30			17		20		37		14:30			156		180		336	
02:45			18	63	11	55	29	118	14:45			178	669	185	709	363	1378
03:00			12		14		26		15:00			223		221		444	
03:15			3		8		11		15:15			196		158		354	
03:30			15		16		31		15:30			208		170		378	
03:45			15	45	16	54	31	99	15:45			205	832	196	745	401	1577
04:00			9		9		18		16:00			184		179		363	
04:15			16		8		24		16:15			202		198		400	
04:30			19		10		29		16:30			181		196		377	
04:45			30	74	16	43	46	117	16:45			201	768	194	767	395	1535
05:00			28		16		44		17:00			248		234		482	
05:15			27		19		46		17:15			223		214		437	
05:30			38		37		75		17:30			216		196		412	
05:45			51	144	37	109	88	253	17:45			205	892	220	864	425	1756
06:00			48		52		100		18:00			215		205		420	
06:15			61		52		113		18:15			166		209		375	
06:30			94		76		170		18:30			198		188		386	
06:45			108	311	82	262	190	573	18:45			167	746	174	776	341	1522
07:00			135		133		268		19:00			216		184		400	
07:15			163		154		317		19:15			154		182		336	
07:30			218		212		430		19:30			162		145		307	
07:45			220	736	201	700	421	1436	19:45			113	645	141	652	254	1297
08:00			186		184		370		20:00			131		133		264	
08:15			176		160		336		20:15			109		131		240	
08:30			144		157		301		20:30			121		111		232	
08:45			170	676	151	652	321	1328	20:45			92	453	102	477	194	930
09:00			125		136		261		21:00			99		117		216	
09:15			119		123		242		21:15			97		127		224	
09:30			144		158		302		21:30			98		98		196	
09:45			139	527	139	556	278	1083	21:45			61	355	86	428	147	783
10:00			125		143		268		22:00			90		83		173	
10:15			131		121		252		22:15			55		90		145	
10:30			150		136		286		22:30			74		71		145	
10:45			134	540	131	531	265	1071	22:45			46	265	45	289	91	554
11:00			159		130		289		23:00			40		54		94	
11:15			152		106		258		23:15			41		39		80	
11:30			140		146		286		23:30			42		46		88	
11:45			137	588	146	528	283	1116	23:45			31	154	28	167	59	321
TOTALS				3858		3660		7518	TOTALS				7056		7035		14091
SPLIT %				51.3%		48.7%		34.8%	SPLIT %				50.1%		49.9%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,914	10,695	21,609

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			17:00	17:00	17:00
AM Pk Volume			800	757	1557	PM Pk Volume			892	864	1756
Pk Hr Factor			0.909	0.893	0.905	Pk Hr Factor			0.899	0.923	0.911
7 - 9 Volume	0	0	1412	1352	2764	4 - 6 Volume	0	0	1660	1631	3291
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	800	757	1557	4 - 6 Pk Volume	0	0	892	864	1756
Pk Hr Factor	0.000	0.000	0.909	0.893	0.905	Pk Hr Factor	0.000	0.000	0.899	0.923	0.911

Prepared by NDS/ATD

VOLUME

Figueroa St N/o Meridian St

Day: Thursday
Date: 11/17/2011

City: Los Angeles
Project #: CA11_5446_022

DAILY TOTALS	NB	SB	EB	WB	Total
	12,436	13,573	0	0	26,009

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	25		26						51		12:00	150		185						335	
00:15	26		29						55		12:15	156		190						346	
00:30	21		22						43		12:30	159		203						362	
00:45	18	90	18	95					36	185	12:45	181	646	167	745					348	1391
01:00	15		15						30		13:00	161		185						346	
01:15	15		8						23		13:15	146		179						325	
01:30	14		16						30		13:30	206		180						386	
01:45	22	66	11	50					33	116	13:45	238	751	213	757					451	1508
02:00	10		7						17		14:00	220		194						414	
02:15	10		12						22		14:15	185		219						404	
02:30	7		8						15		14:30	187		249						436	
02:45	4	31	12	39					16	70	14:45	201	793	207	869					408	1662
03:00	9		10						19		15:00	223		239						462	
03:15	8		7						15		15:15	240		236						476	
03:30	6		10						16		15:30	234		226						460	
03:45	11	34	15	42					26	76	15:45	237	934	267	968					504	1902
04:00	5		12						17		16:00	223		262						485	
04:15	11		13						24		16:15	225		275						500	
04:30	20		24						44		16:30	236		263						499	
04:45	21	57	21	70					42	127	16:45	227	911	249	1049					476	1960
05:00	17		29						46		17:00	254		260						514	
05:15	23		48						71		17:15	241		261						502	
05:30	48		67						115		17:30	229		265						494	
05:45	58	146	73	217					131	363	17:45	256	980	244	1030					500	2010
06:00	76		87						163		18:00	219		229						448	
06:15	87		135						222		18:15	233		220						453	
06:30	130		148						278		18:30	228		199						427	
06:45	119	412	180	550					299	962	18:45	193	873	175	823					368	1696
07:00	155		164						319		19:00	211		179						390	
07:15	162		219						381		19:15	168		178						346	
07:30	238		272						510		19:30	178		157						335	
07:45	289	844	247	902					536	1746	19:45	163	720	155	669					318	1389
08:00	247		287						534		20:00	150		138						288	
08:15	242		238						480		20:15	127		119						246	
08:30	179		216						395		20:30	135		117						252	
08:45	185	853	222	963					407	1816	20:45	115	527	112	486					227	1013
09:00	167		207						374		21:00	103		113						216	
09:15	157		215						372		21:15	95		99						194	
09:30	150		193						343		21:30	104		96						200	
09:45	142	616	188	803					330	1419	21:45	87	389	95	403					182	792
10:00	163		194						357		22:00	96		94						190	
10:15	164		197						361		22:15	86		81						167	
10:30	138		210						348		22:30	69		68						137	
10:45	159	624	175	776					334	1400	22:45	49	300	74	317					123	617
11:00	157		184						341		23:00	70		59						129	
11:15	141		187						328		23:15	54		54						108	
11:30	170		188						358		23:30	38		43						81	
11:45	180	648	197	756					377	1404	23:45	29	191	38	194					67	385
TOTALS		4421		5263						9684	TOTALS		8015		8310						16325
SPLIT %		45.7%		54.3%						37.2%	SPLIT %		49.1%		50.9%						62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,436	13,573	0	0	26,009

AM Peak Hour	07:30	07:30			07:30	PM Peak Hour	17:00	15:45			17:00
AM Pk Volume	1016	1044			2060	PM Pk Volume	980	1067			2010
Pk Hr Factor	0.879	0.909			0.961	Pk Hr Factor	0.957	0.970			0.978
7 - 9 Volume	1697	1865	0	0	3562	4 - 6 Volume	1891	2079	0	0	3970
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	17:00	16:00			17:00
7 - 9 Pk Volume	1016	1044	0	0	2060	4 - 6 Pk Volume	980	1049	0	0	2010
Pk Hr Factor	0.879	0.909	0.000	0.000	0.961	Pk Hr Factor	0.957	0.954	0.000	0.000	0.978

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

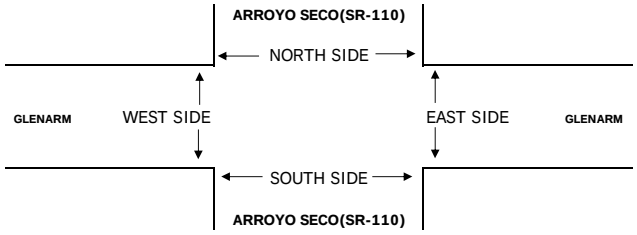
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110)	LOCATION #:	1
TUESDAY	EAST & WEST:	GLENARM	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110)			SOUTHBOUND ARROYO SECO(SR-110)			EASTBOUND GLENARM			WESTBOUND GLENARM				U-TURNS				
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	8	118	7	1	130	7	5	3	5	54	12	1	351					0
	6:15 AM	10	138	15	0	151	4	4	12	9	71	17	1	432					0
	6:30 AM	9	160	25	3	195	11	9	10	8	86	19	5	540					0
	6:45 AM	8	201	44	5	227	14	4	20	16	106	45	2	692					0
	7:00 AM	13	175	37	7	269	19	10	23	14	103	40	6	716					0
	7:15 AM	11	259	41	14	210	26	19	65	17	89	68	8	827					0
	7:30 AM	21	275	56	16	211	41	15	93	18	68	106	8	928					0
	7:45 AM	14	358	50	16	247	21	18	77	18	79	103	11	1,012					0
	8:00 AM	18	316	45	8	263	33	31	63	28	121	83	15	1,024					0
	8:15 AM	13	287	31	11	231	34	24	50	16	114	81	16	908					0
	8:30 AM	22	338	40	19	249	34	26	38	20	82	63	7	938					0
	8:45 AM	18	319	41	13	221	22	27	53	16	99	94	7	930					0
	VOLUMES	165	2,944	432	113	2,604	266	192	507	185	1,072	731	87	9,298	0	0	0	0	0
	APPROACH %	5%	83%	12%	4%	87%	9%	22%	57%	21%	57%	39%	5%						
	APP/DEPART	3,541	/	3,223	2,983	/	3,861	884	/	1,052	1,890	/	1,162	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	67	1,299	166	54	990	122	99	228	82	396	330	49	3,882					
	APPROACH %	4%	85%	11%	5%	85%	10%	24%	56%	20%	51%	43%	6%						
	PEAK HR FACTOR		0.908			0.959			0.838			0.885		0.948					
	APP/DEPART	1,532	/	1,447	1,166	/	1,468	409	/	448	775	/	519	0					
PM	3:00 PM	15	275	88	31	205	26	28	77	39	61	66	13	924					0
	3:15 PM	14	244	72	28	272	49	29	83	38	64	56	16	965					0
	3:30 PM	24	264	67	33	241	27	25	72	31	70	67	14	935					0
	3:45 PM	16	282	96	24	253	38	24	76	27	60	59	15	970					0
	4:00 PM	25	248	83	21	268	32	31	110	47	74	58	17	1,014					0
	4:15 PM	18	258	100	25	298	26	24	91	32	67	63	18	1,020					0
	4:30 PM	14	343	122	27	290	38	25	77	39	45	47	13	1,080					0
	4:45 PM	13	286	99	24	285	31	29	98	60	99	50	11	1,085					0
	5:00 PM	14	319	130	31	315	44	31	85	70	75	62	15	1,191					0
	5:15 PM	11	296	115	33	332	23	34	102	63	93	51	22	1,175					0
	5:30 PM	16	330	107	30	335	36	21	96	44	74	41	15	1,145					0
	5:45 PM	10	292	90	33	303	32	28	109	63	74	59	20	1,113					0
	VOLUMES	190	3,437	1,169	340	3,397	402	329	1,076	553	856	679	189	12,617	0	0	0	0	0
	APPROACH %	4%	72%	24%	8%	82%	10%	17%	55%	28%	50%	39%	11%						
	APP/DEPART	4,796	/	3,955	4,139	/	4,806	1,958	/	2,585	1,724	/	1,271	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	51	1,237	442	127	1,285	135	114	392	240	316	213	72	4,624					
	APPROACH %	3%	72%	26%	8%	83%	9%	15%	53%	32%	53%	35%	12%						
	PEAK HR FACTOR		0.934			0.964			0.933			0.905		0.971					
	APP/DEPART	1,730	/	1,423	1,547	/	1,841	746	/	961	601	/	399	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	6:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:30 AM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	6:45 AM	2	0	0	0	2	0	3	0	0	3	2	3	0	0	5
	7:00 AM	19	0	0	1	20	0	0	0	0	0	19	0	0	1	20
	7:15 AM	39	0	0	1	40	0	0	0	0	0	39	0	0	1	40
	7:30 AM	51	0	0	4	55	0	0	0	0	0	51	0	0	4	55
	7:45 AM	8	0	0	0	8	1	0	0	0	1	9	0	0	0	9
	8:00 AM	22	0	0	0	22	1	0	0	0	1	23	0	0	0	23
	8:15 AM	3	0	0	0	3	0	1	0	0	1	3	1	0	0	4
	8:30 AM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	8:45 AM	5	0	0	0	5	0	0	0	0	0	5	0	0	0	5
	TOTAL	157	0	1	6	164	2	4	0	0	6	159	4	1	6	170
PM	3:00 PM	56	0	0	0	56	1	1	0	0	2	57	1	0	0	58
	3:15 PM	54	0	0	0	54	0	1	0	0	1	54	1	0	0	55
	3:30 PM	15	0	0	0	15	1	1	0	0	2	16	1	0	0	17
	3:45 PM	27	0	0	0	27	0	1	0	0	1	27	1	0	0	28
	4:00 PM	15	0	0	0	15	0	0	0	0	0	15	0	0	0	15
	4:15 PM	19	0	2	0	21	0	0	0	1	1	19	0	2	1	22
	4:30 PM	3	0	0	1	4	0	0	0	0	0	3	0	0	1	4
	4:45 PM	8	0	0	1	9	1	0	0	0	1	9	0	0	1	10
	5:00 PM	11	0	0	1	12	0	0	0	0	0	11	0	0	1	12
	5:15 PM	8	0	0	0	8	0	0	0	0	0	8	0	0	0	8
	5:30 PM	10	0	2	3	15	0	0	0	0	0	10	0	2	3	15
	5:45 PM	4	0	0	1	5	2	0	0	0	2	6	0	0	1	7
	TOTAL	230	0	4	7	241	5	4	0	1	10	235	4	4	8	251

INTERSECTION TURNING MOVEMENT COUNTS

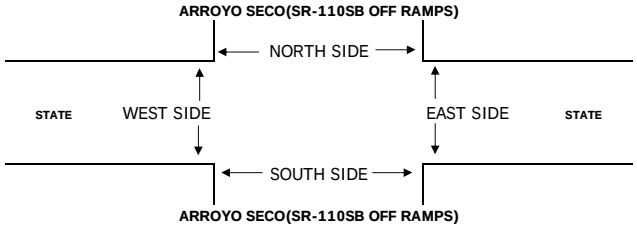
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMPS)	LOCATION #:	2
TUESDAY	EAST & WEST:	STATE	CONTROL:	1-WAY STOP: SB

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMPS)			EASTBOUND STATE			WESTBOUND STATE				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST X	SR 0.5	EL X	ET 1	ER X	WL X	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				6		0		2			1		9					0
	6:15 AM				10		0		3			1		14					0
	6:30 AM				10		1		4			2		17					0
	6:45 AM				13		0		6			1		20					0
	7:00 AM				15		0		3			1		19					0
	7:15 AM				13		1		6			2		22					0
	7:30 AM				19		0		4			1		24					0
	7:45 AM				15		0		7			2		24					0
	8:00 AM				26		0		4			0		30					0
	8:15 AM				24		2		4			1		31					0
	8:30 AM				24		5		2			2		33					0
	8:45 AM				23		1		7			4		35					0
	VOLUMES	0	0	0	198	0	10	0	52	0	0	18	0	278	0	0	0	0	0
	APPROACH %	0%	0%	0%	95%	0%	5%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	208	/	0	52	/	250	18	/	28	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	97	0	8	0	17	0	0	7	0	129					
	APPROACH %	0%	0%	0%	92%	0%	8%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.905			0.607			0.438		0.921					
	APP/DEPART	0	/	0	105	/	0	17	/	114	7	/	15	0					
PM	3:00 PM				27		0		2			2		31					0
	3:15 PM				30		0		2			2		34					0
	3:30 PM				44		1		3			0		48					0
	3:45 PM				45		0		7			2		54					0
	4:00 PM				42		1		4			4		51					0
	4:15 PM				47		2		4			4		57					0
	4:30 PM				39		0		0			0		39					0
	4:45 PM				45		0		3			0		48					0
	5:00 PM				55		1		3			3		62					0
	5:15 PM				60		3		1			0		64					0
	5:30 PM				49		1		2			6		58					0
	5:45 PM				54		3		7			1		65					0
	VOLUMES	0	0	0	537	0	12	0	38	0	0	24	0	611	0	0	0	0	0
	APPROACH %	0%	0%	0%	98%	0%	2%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	549	/	0	38	/	575	24	/	36	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	218	0	8	0	13	0	0	10	0	249					
	APPROACH %	0%	0%	0%	96%	0%	4%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.897			0.464			0.417		0.958					
	APP/DEPART	0	/	0	226	/	0	13	/	231	10	/	18	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:30 PM	0		0	0	0	1		0	0	1	1	0	0	0	1
	4:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:00 PM	0		0	1	1	0		0	0	0	0	0	0	1	1
	5:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	1	0	0	0	1	1	0	0	1	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

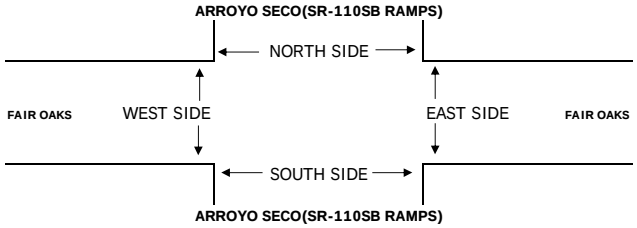
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	3
TUESDAY	EAST & WEST:	FAIR OAKS	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND FAIR OAKS			WESTBOUND FAIR OAKS				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1.5	ST 0.5	SR 1	EL 1	ET 1	ER 0	WL 2	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				8	7	5	0	77	32	98	116	10	353					0
	6:15 AM				14	12	9	0	66	22	89	165	9	386					0
	6:30 AM				18	17	4	0	78	38	112	168	10	445					0
	6:45 AM				18	19	10	0	92	50	117	183	28	517					0
	7:00 AM				36	21	14	1	126	39	117	210	27	591					0
	7:15 AM				43	20	3	2	147	34	100	243	24	616					0
	7:30 AM				73	18	10	0	181	38	86	300	7	713					0
	7:45 AM				63	26	9	1	184	38	78	373	12	784					0
	8:00 AM				64	23	17	0	169	39	94	315	31	752					0
	8:15 AM				46	13	8	0	171	39	89	324	12	702					0
	8:30 AM				42	10	13	0	157	36	100	291	8	657					0
	8:45 AM				63	11	9	2	136	21	92	305	10	649					0
	VOLUMES	0	0	0	488	197	111	6	1,584	426	1,172	2,993	188	7,165	0	0	0	0	0
	APPROACH %	0%	0%	0%	61%	25%	14%	0%	79%	21%	27%	69%	4%						
	APP/DEPART	0	/	194	796	/	1,795	2,016	/	2,072	4,353	/	3,104	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	246	80	44	1	705	154	347	1,312	62	2,951					
	APPROACH %	0%	0%	0%	66%	22%	12%	0%	82%	18%	20%	76%	4%						
	PEAK HR FACTOR		0.000			0.889			0.964			0.929		0.941					
	APP/DEPART	0	/	63	370	/	581	860	/	951	1,721	/	1,356	0					
PM	3:00 PM				65	15	11	3	165	34	60	270	33	656					0
	3:15 PM				55	16	10	0	199	43	61	302	22	708					0
	3:30 PM				64	14	7	1	177	46	44	288	14	655					0
	3:45 PM				44	11	6	2	225	50	45	327	15	725					0
	4:00 PM				53	13	13	2	214	48	60	221	20	644					0
	4:15 PM				67	11	3	2	207	37	57	265	26	675					0
	4:30 PM				63	10	8	2	194	33	43	233	23	609					0
	4:45 PM				57	9	16	3	188	55	57	269	19	673					0
	5:00 PM				65	11	7	1	202	44	55	302	24	711					0
	5:15 PM				60	11	6	3	225	52	60	304	26	747					0
	5:30 PM				55	8	11	2	213	47	56	291	22	705					0
	5:45 PM				58	10	6	2	204	44	50	274	20	668					0
	VOLUMES	0	0	0	706	139	104	23	2,413	533	648	3,346	264	8,176	0	0	0	0	0
	APPROACH %	0%	0%	0%	74%	15%	11%	1%	81%	18%	15%	79%	6%						
	APP/DEPART	0	/	287	949	/	1,320	2,969	/	3,119	4,258	/	3,450	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	237	39	40	9	828	198	228	1,166	91	2,836					
	APPROACH %	0%	0%	0%	75%	12%	13%	1%	80%	19%	15%	79%	6%						
	PEAK HR FACTOR		0.000			0.952			0.924			0.952		0.949					
	APP/DEPART	0	/	100	316	/	465	1,035	/	1,065	1,485	/	1,206	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	1	1	0	0	2	1	0	0	0	1	2	1	0	0	3
	6:30 AM	1	0	0	0	1	0	1	0	0	1	1	1	0	0	2
	6:45 AM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	7:00 AM	1	1	0	2	4	0	0	0	0	0	1	1	0	2	4
	7:15 AM	2	4	0	5	11	0	0	0	0	0	2	4	0	5	11
	7:30 AM	0	4	0	0	4	0	1	0	0	1	0	5	0	0	5
	7:45 AM	2	3	0	0	5	0	0	0	0	0	2	3	0	0	5
	8:00 AM	2	3	0	1	6	0	0	0	0	0	2	3	0	1	6
	8:15 AM	4	2	0	1	7	0	0	0	0	0	4	2	0	1	7
	8:30 AM	4	2	0	2	8	2	1	0	0	3	6	3	0	2	11
	8:45 AM	5	1	0	0	6	2	0	0	0	2	7	1	0	0	8
	TOTAL	22	21	0	11	54	5	4	0	0	9	27	25	0	11	63
PM	3:00 PM	0	0	0	1	1	0	3	0	0	3	0	3	0	1	4
	3:15 PM	1	2	0	2	5	1	1	0	0	2	2	3	0	2	7
	3:30 PM	2	3	0	4	9	1	0	0	0	1	3	3	0	4	10
	3:45 PM	3	3	0	1	7	0	0	0	0	0	3	3	0	1	7
	4:00 PM	3	2	0	2	7	0	1	0	0	1	3	3	0	2	8
	4:15 PM	0	1	0	2	3	1	2	0	0	3	1	3	0	2	6
	4:30 PM	2	2	0	5	9	1	2	0	0	3	3	4	0	5	12
	4:45 PM	1	3	0	4	8	0	3	0	0	3	1	6	0	4	11
	5:00 PM	0	0	0	1	1	2	3	0	0	5	2	3	0	1	6
	5:15 PM	0	2	0	0	2	0	2	0	0	2	0	4	0	0	4
	5:30 PM	1	1	0	1	3	2	3	0	0	5	3	4	0	1	8
	5:45 PM	2	2	0	0	4	1	1	0	0	2	3	3	0	0	6
	TOTAL	15	21	0	23	59	9	21	0	0	30	24	42	0	23	89

INTERSECTION TURNING MOVEMENT COUNTS

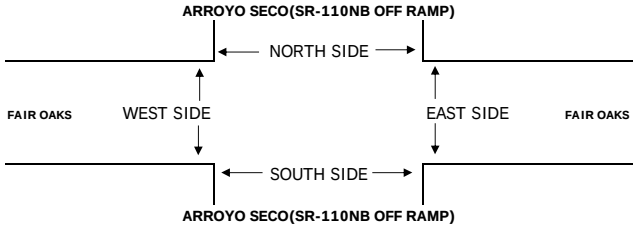
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB OFF RAMP)	LOCATION #:	4
TUESDAY	EAST & WEST:	FAIR OAKS	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			EASTBOUND FAIR OAKS			WESTBOUND FAIR OAKS				U-TURNS				
	LANES:	NL 0.5	NT 1	NR 0.5	SL 0.5	ST X	SR 1.5	EL 0	ET 2	ER X	WL X	WT 2.5	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	19	6	14	1		66	0	86			141	1	334					0
	6:15 AM	23	8	10	0		72	0	80			165	2	360					0
	6:30 AM	25	11	17	1		88	0	95			178	4	419					0
	6:45 AM	28	9	24	0		100	0	112			199	5	477					0
	7:00 AM	39	13	20	0		111	0	161			206	4	554					0
	7:15 AM	46	21	30	3		89	0	192			230	5	616					0
	7:30 AM	41	18	27	5		108	0	252			245	1	697					0
	7:45 AM	71	31	43	1		110	0	248			279	6	789					0
	8:00 AM	38	21	27	0		125	0	233			279	5	728					0
	8:15 AM	43	20	35	3		121	0	215			261	5	703					0
	8:30 AM	51	22	21	5		104	0	202			247	7	659					0
	8:45 AM	49	20	34	3		110	0	199			245	5	665					0
	VOLUMES	473	200	302	22	0	1,204	0	2,075	0	0	2,675	50	7,001	0	0	0	0	0
	APPROACH %	49%	21%	31%	2%	0%	98%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	975	/	250	1,226	/	0	2,075	/	2,399	2,725	/	4,352	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	193	90	132	9	0	464	0	948	0	0	1,064	17	2,917					
	APPROACH %	47%	22%	32%	2%	0%	98%	0%	100%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.716			0.946			0.940			0.948		0.924					
	APP/DEPART	415	/	107	473	/	0	948	/	1,089	1,081	/	1,721	0					
PM	3:00 PM	58	54	47	2		71	0	228			231	5	696					0
	3:15 PM	47	33	55	2		66	0	254			276	8	741					0
	3:30 PM	41	51	51	4		74	0	243			231	5	700					0
	3:45 PM	43	66	69	0		73	0	267			270	12	800					0
	4:00 PM	37	39	37	3		47	0	266			220	10	659					0
	4:15 PM	64	85	41	5		72	0	275			209	4	755					0
	4:30 PM	49	71	60	6		66	0	255			185	8	700					0
	4:45 PM	44	93	61	4		63	0	249			234	8	756					0
	5:00 PM	57	84	53	4		77	0	264			250	7	796					0
	5:15 PM	62	74	55	2		67	0	288			262	8	818					0
	5:30 PM	54	77	52	3		64	0	271			248	5	774					0
	5:45 PM	50	67	48	3		58	0	257			239	7	729					0
	VOLUMES	606	794	629	38	0	798	0	3,117	0	0	2,855	87	8,924	0	0	0	0	0
	APPROACH %	30%	39%	31%	5%	0%	95%	0%	100%	0%	0%	97%	3%						
	APP/DEPART	2,029	/	881	836	/	0	3,117	/	3,784	2,942	/	4,259	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	217	328	221	13	0	271	0	1,072	0	0	994	28	3,144					
	APPROACH %	28%	43%	29%	5%	0%	95%	0%	100%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.967			0.877			0.931			0.946		0.961					
	APP/DEPART	766	/	356	284	/	0	1,072	/	1,306	1,022	/	1,482	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	6:15 AM	1	1	2	0	4	1	0	0	0	1	2	1	2	0	5
	6:30 AM	1	0	0	0	1	0	1	0	0	1	1	1	0	0	2
	6:45 AM	0	0	1	0	1	0	1	0	0	1	0	1	1	0	2
	7:00 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	7:15 AM	2	5	4	0	11	0	0	0	0	0	2	5	4	0	11
	7:30 AM	0	3	0	0	3	0	1	0	0	1	0	4	0	0	4
	7:45 AM	2	3	0	0	5	0	0	0	0	0	2	3	0	0	5
	8:00 AM	3	3	2	0	8	0	0	0	0	0	3	3	2	0	8
	8:15 AM	3	2	1	0	6	0	0	0	0	0	3	2	1	0	6
	8:30 AM	4	3	3	0	10	3	1	0	0	4	7	4	3	0	14
	8:45 AM	5	0	6	0	11	2	0	0	0	2	7	0	6	0	13
	TOTAL	22	21	20	0	63	6	4	0	0	10	28	25	20	0	73
PM	3:00 PM	0	0	3	0	3	0	2	0	0	2	0	2	3	0	5
	3:15 PM	1	1	3	0	5	1	2	0	0	3	2	3	3	0	8
	3:30 PM	2	4	3	0	9	1	0	0	0	1	3	4	3	0	10
	3:45 PM	2	3	3	0	8	0	0	0	0	0	2	3	3	0	8
	4:00 PM	4	2	1	0	7	0	1	0	0	1	4	3	1	0	8
	4:15 PM	0	0	3	0	3	0	2	0	0	2	0	2	3	0	5
	4:30 PM	1	2	2	0	5	2	2	1	1	6	3	4	3	1	11
	4:45 PM	2	4	2	0	8	0	3	0	1	4	2	7	2	1	12
	5:00 PM	0	0	3	0	3	2	4	1	0	7	2	4	4	0	10
	5:15 PM	0	2	3	0	5	0	1	0	0	1	0	3	3	0	6
	5:30 PM	2	0	1	0	3	2	3	0	0	5	4	3	1	0	8
	5:45 PM	1	3	2	0	6	1	1	0	0	2	2	4	2	0	8
	TOTAL	15	21	29	0	65	9	21	2	2	34	24	42	31	2	99

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

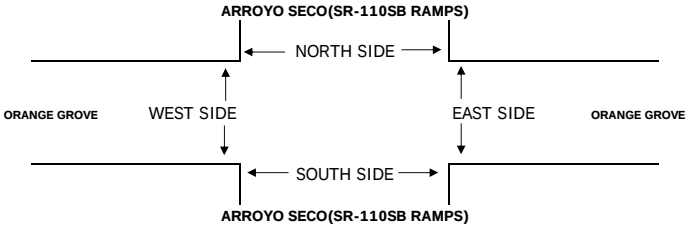
DATE:	LOCATION:	PASADENS	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	5
TUESDAY	EAST & WEST:	ORANGE GROVE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND ORANGE GROVE			WESTBOUND ORANGE GROVE				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST 0	SR 0.5	EL X	ET 1	ER 1	WL 1	WT 2	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				4		0		22	215	17	110		368					0
	6:15 AM				6		2		26	237	22	126		419					0
	6:30 AM				3		1		31	271	20	134		460					0
	6:45 AM				7		0		42	304	24	142		519					0
	7:00 AM				8		0		36	362	26	146		578					0
	7:15 AM				6		2		58	346	26	194		632					0
	7:30 AM				8		6		73	287	32	216		622					0
	7:45 AM				15		2		75	274	19	204		589					0
	8:00 AM				18		5		66	331	31	205		656					0
	8:15 AM				16		2		76	283	49	209		635					0
	8:30 AM				13		6		68	266	32	209		594					0
	8:45 AM				14		5		64	242	36	157		518					0
	VOLUMES	0	0	0	118	0	31	0	637	3,418	334	2,052	0	6,590	0	0	0	0	0
	APPROACH %	0%	0%	0%	79%	0%	21%	0%	16%	84%	14%	86%	0%						
	APP/DEPART	0	/	0	149	/	3,752	4,055	/	755	2,386	/	2,083	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	57	0	15	0	290	1,175	131	834	0	2,502					
	APPROACH %	0%	0%	0%	79%	0%	21%	0%	20%	80%	14%	86%	0%						
	PEAK HR FACTOR		0.000			0.783			0.923			0.935		0.954					
	APP/DEPART	0	/	0	72	/	1,306	1,465	/	347	965	/	849	0					
PM	3:00 PM				19		2		77	130	18	223		469					0
	3:15 PM				25		9		80	126	19	234		493					0
	3:30 PM				25		2		83	119	23	232		484					0
	3:45 PM				18		9		59	117	21	283		507					0
	4:00 PM				27		10		71	164	21	245		538					0
	4:15 PM				28		8		84	154	16	294		584					0
	4:30 PM				18		6		88	166	16	285		579					0
	4:45 PM				17		8		66	151	35	291		568					0
	5:00 PM				29		3		70	162	32	294		590					0
	5:15 PM				30		6		84	134	27	317		598					0
	5:30 PM				33		6		92	145	31	306		613					0
	5:45 PM				37		4		77	131	29	308		586					0
	VOLUMES	0	0	0	306	0	73	0	931	1,699	288	3,312	0	6,609	0	0	0	0	0
	APPROACH %	0%	0%	0%	81%	0%	19%	0%	35%	65%	8%	92%	0%						
	APP/DEPART	0	/	0	379	/	1,987	2,630	/	1,237	3,600	/	3,385	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	129	0	19	0	323	572	119	1,225	0	2,387					
	APPROACH %	0%	0%	0%	87%	0%	13%	0%	36%	64%	9%	91%	0%						
	PEAK HR FACTOR		0.000			0.902			0.944			0.977		0.973					
	APP/DEPART	0	/	0	148	/	691	895	/	452	1,344	/	1,244	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	0	0	2	2	0	2	0	2	4
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	0	0	3	0	0	0	2	2	1	2	0	2	5
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	3:30 PM	2	2	0	2	6	0	0	0	0	0	2	2	0	2	6
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	2	4	0	0	0	0	0	0	2	0	2	4
	4:15 PM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	4:30 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	4:45 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	7	0	5	19	1	0	0	0	1	8	7	0	5	20

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

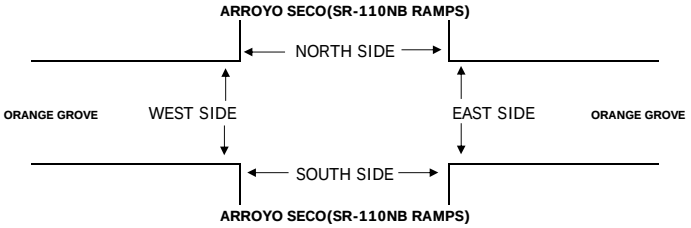
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	6
TUESDAY	EAST & WEST:	ORANGE GROVE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND ORANGE GROVE			WESTBOUND ORANGE GROVE				U-TURNS				
	LANES:	NL 1.5	NT 0	NR 0.5	SL X	ST X	SR X	EL 1	ET 1	ER X	WL X	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	58	1	8				0	27			71	7	172					0
	6:15 AM	76	0	11				2	29			70	10	198					0
	6:30 AM	82	0	14				4	31			73	6	210					0
	6:45 AM	89	1	10				2	46			76	8	232					0
	7:00 AM	99	0	13				2	43			75	8	240					0
	7:15 AM	141	0	14				6	59			79	10	309					0
	7:30 AM	149	1	16				5	74			98	28	371					0
	7:45 AM	133	1	14				5	85			92	25	355					0
	8:00 AM	134	0	19				3	80			101	22	359					0
	8:15 AM	120	0	14				4	89			137	22	386					0
	8:30 AM	121	1	19				0	82			120	17	360					0
	8:45 AM	117	0	26				6	70			77	20	316					0
	VOLUMES	1,319	5	178	0	0	0	39	715	0	0	1,069	183	3,508	0	0	0	0	0
	APPROACH %	88%	0%	12%	0%	0%	0%	5%	95%	0%	0%	85%	15%						
	APP/DEPART	1,502	/	227	0	/	0	754	/	893	1,252	/	2,388	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	536	2	63	0	0	0	17	328	0	0	428	97	1,471					
	APPROACH %	89%	0%	10%	0%	0%	0%	5%	95%	0%	0%	82%	18%						
	PEAK HR FACTOR		0.905			0.000			0.927			0.825		0.953					
	APP/DEPART	601	/	116	0	/	0	345	/	391	525	/	964	0					
PM	3:00 PM	160	0	29				2	95			80	23	389					0
	3:15 PM	172	0	37				4	100			81	11	405					0
	3:30 PM	173	0	29				1	108			83	11	405					0
	3:45 PM	186	0	38				3	74			118	18	437					0
	4:00 PM	198	2	41				2	95			70	17	425					0
	4:15 PM	213	0	58				8	104			95	17	495					0
	4:30 PM	217	1	40				4	102			84	11	459					0
	4:45 PM	227	1	48				7	77			101	13	474					0
	5:00 PM	213	1	29				4	94			112	26	479					0
	5:15 PM	243	1	47				3	110			100	22	526					0
	5:30 PM	236	1	52				3	123			103	18	536					0
	5:45 PM	246	0	56				3	110			89	14	518					0
	VOLUMES	2,484	7	504	0	0	0	44	1,192	0	0	1,116	201	5,548	0	0	0	0	0
	APPROACH %	83%	0%	17%	0%	0%	0%	4%	96%	0%	0%	85%	15%						
	APP/DEPART	2,995	/	252	0	/	0	1,236	/	1,696	1,317	/	3,600	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	938	3	184	0	0	0	13	437	0	0	404	80	2,059					
	APPROACH %	83%	0%	16%	0%	0%	0%	3%	97%	0%	0%	83%	17%						
	PEAK HR FACTOR		0.931			0.000			0.893			0.877		0.960					
	APP/DEPART	1,125	/	96	0	/	0	450	/	621	484	/	1,342	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	4:30 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	4:45 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	2	0	0	9	1	0	0	0	1	8	2	0	0	10

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

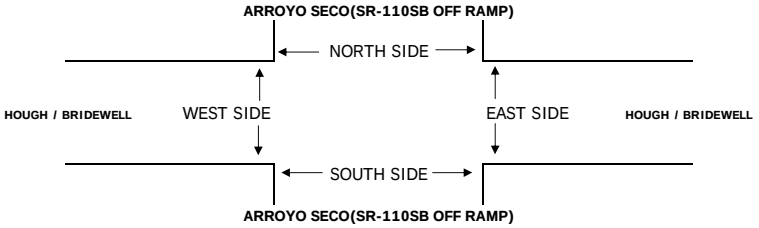
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMP)	LOCATION #:	7
TUESDAY	EAST & WEST:	HOUGH / BRIDEWELL	CONTROL:	1 WAY STOP: EB

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			EASTBOUND HOUGH / BRIDEWELL			WESTBOUND HOUGH / BRIDEWELL				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	0	0			1	2	0		2				5					0
	6:15 AM	0	0			2	4	1		3				10					0
	6:30 AM	0	0			2	0	0		1				3					0
	6:45 AM	1	0			2	3	0		2				8					0
	7:00 AM	0	0			3	3	0		2				8					0
	7:15 AM	0	1			4	6	0		1				12					0
	7:30 AM	2	0			13	9	2		0				26					0
	7:45 AM	2	2			10	13	0		1				28					0
	8:00 AM	0	1			6	6	3		2				18					0
	8:15 AM	0	0			3	5	1		3				12					0
	8:30 AM	0	1			3	6	0		1				11					0
	8:45 AM	0	0			4	7	0		2				13					0
	VOLUMES	5	5	0	0	53	64	7	0	20	0	0	0	154	0	0	0	0	0
	APPROACH %	50%	50%	0%	0%	45%	55%	26%	0%	74%	0%	0%	0%						
	APP/DEPART	10	/	12	117	/	73	27	/	0	0	/	69	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	4	3	0	0	32	33	6	0	6	0	0	0	84					
	APPROACH %	57%	43%	0%	0%	49%	51%	50%	0%	50%	0%	0%	0%						
	PEAK HR FACTOR		0.438			0.707			0.600			0.000		0.750					
	APP/DEPART	7	/	9	65	/	38	12	/	0	0	/	37	0					
PM	3:00 PM	1	1			3	6	1		4				16					0
	3:15 PM	0	2			11	16	0		3				32					0
	3:30 PM	2	0			3	6	1		1				13					0
	3:45 PM	0	0			6	6	0		4				16					0
	4:00 PM	0	0			7	6	0		0				13					0
	4:15 PM	1	0			10	7	0		0				18					0
	4:30 PM	0	0			11	10	2		3				26					0
	4:45 PM	0	0			9	6	1		2				18					0
	5:00 PM	0	0			5	13	1		3				22					0
	5:15 PM	1	0			9	11	1		1				23					0
	5:30 PM	0	0			10	7	2		1				20					0
	5:45 PM	0	0			10	5	1		0				16					0
	VOLUMES	5	3	0	0	94	99	10	0	22	0	0	0	233	0	0	0	0	0
	APPROACH %	63%	38%	0%	0%	49%	51%	31%	0%	69%	0%	0%	0%						
	APP/DEPART	8	/	13	193	/	116	32	/	0	0	/	104	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	1	0	0	0	34	40	5	0	9	0	0	0	89					
	APPROACH %	100%	0%	0%	0%	46%	54%	36%	0%	64%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.881			0.700			0.000		0.856					
	APP/DEPART	1	/	5	74	/	43	14	/	0	0	/	41	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	6:15 AM	0	0		1	1	0	0		0	0	0	0	0	1	1
	6:30 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	6:45 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:00 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:15 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:30 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:45 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:00 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:15 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:30 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:45 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
PM	3:00 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	3:15 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	3:30 PM	0	0		0	0	0	0		1	1	0	0	0	1	1
	3:45 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	4:00 PM	0	0		1	1	0	0		0	0	0	0	0	1	1
	4:15 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	4:30 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	4:45 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:00 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:15 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:30 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:45 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	0	0	0	1	1	0	0	0	2	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	8
TUESDAY	EAST & WEST:	SALONICA / BRIDEWELL	CONTROL:	2 WAY STOP NS

NOTES:

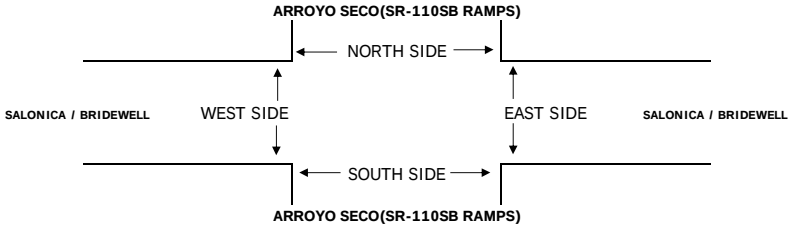
OFF RAMP = ALL WB

ON RAMP = NR, SL & ET

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND SALONICA / BRIDEWELL			WESTBOUND SALONICA / BRIDEWELL				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	0	0	2	7	0	0	0	31	1	0	2	0	43					0
	6:15 AM	3	0	5	11	0	0	0	51	1	0	2	0	73					0
	6:30 AM	0	0	5	12	0	1	0	46	2	0	1	0	67					0
	6:45 AM	3	0	0	6	0	0	0	37	1	0	8	1	56					0
	7:00 AM	4	0	5	7	0	2	1	80	1	1	13	0	114					0
	7:15 AM	2	0	5	11	0	4	0	50	1	0	12	0	85					0
	7:30 AM	4	1	4	8	0	4	0	61	2	1	7	0	92					0
	7:45 AM	5	0	3	10	0	0	1	52	2	0	11	0	84					0
	8:00 AM	5	0	2	9	0	0	0	44	5	1	22	0	88					0
	8:15 AM	2	0	3	3	0	0	1	49	2	1	12	0	73					0
	8:30 AM	3	0	4	3	0	2	1	37	1	0	16	0	67					0
	8:45 AM	2	1	4	5	0	2	0	43	1	0	16	0	74					0
	VOLUMES	33	2	42	92	0	15	4	581	20	4	122	1	916	0	0	0	0	0
	APPROACH %	43%	3%	55%	86%	0%	14%	1%	96%	3%	3%	96%	1%						
	APP/DEPART	77	/	7	107	/	24	605	/	715	127	/	170	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	15	1	17	36	0	10	2	243	6	2	43	0	375					
	APPROACH %	45%	3%	52%	78%	0%	22%	1%	97%	2%	4%	96%	0%						
	PEAK HR FACTOR		0.917			0.767			0.765			0.804		0.822					
	APP/DEPART	33	/	3	46	/	8	251	/	296	45	/	68	0					
PM	3:00 PM	0	0	1	4	1	0	1	28	1	1	34	1	72					0
	3:15 PM	3	0	0	1	0	1	0	25	2	3	37	1	73					0
	3:30 PM	6	0	1	3	0	0	1	25	5	0	25	1	67					0
	3:45 PM	2	0	1	5	0	3	0	24	2	1	28	0	66					0
	4:00 PM	4	0	0	2	1	2	0	21	3	1	43	0	77					0
	4:15 PM	6	0	0	5	0	0	0	21	3	1	27	0	63					0
	4:30 PM	0	0	2	3	0	0	0	32	5	1	23	0	66					0
	4:45 PM	3	0	2	5	0	2	0	28	7	0	41	0	88					0
	5:00 PM	2	0	0	5	0	4	1	36	2	3	48	0	101					0
	5:15 PM	3	0	0	8	0	0	1	32	3	2	48	2	99					0
	5:30 PM	1	1	0	3	2	0	0	17	6	0	34	3	67					0
	5:45 PM	3	0	1	5	0	2	1	31	5	1	41	1	91					0
	VOLUMES	33	1	8	49	4	14	5	320	44	14	429	9	930	0	0	0	0	0
	APPROACH %	79%	2%	19%	73%	6%	21%	1%	87%	12%	3%	95%	2%						
	APP/DEPART	42	/	15	67	/	62	369	/	377	452	/	476	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	9	1	1	21	2	6	3	116	16	6	171	6	358					
	APPROACH %	82%	9%	9%	72%	7%	21%	2%	86%	12%	3%	93%	3%						
	PEAK HR FACTOR		0.688			0.806			0.865			0.880		0.886					
	APP/DEPART	11	/	10	29	/	24	135	/	138	183	/	186	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB OFF RAMP)	LOCATION #:	9
TUESDAY	EAST & WEST:	MARMION	CONTROL:	2-WAY STOP: EB & WB

NOTES:

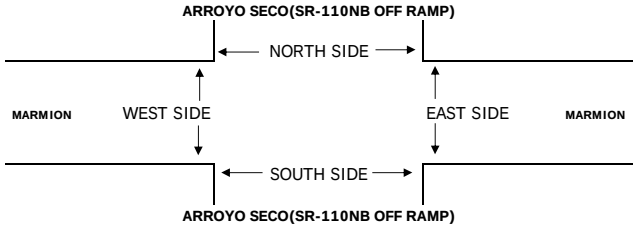
OFF RAMP = ALL NB

ON RAMP = NONE

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			EASTBOUND MARMION			WESTBOUND MARMION				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 1	ER X	WL X	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	31		7					2			14		54					0
	6:15 AM	40		6					0			17		63					0
	6:30 AM	45		6					2			20		73					0
	6:45 AM	71		8					6			22		107					0
	7:00 AM	64		14					4			28		110					0
	7:15 AM	121		18					14			24		177					0
	7:30 AM	136		21					11			32		200					0
	7:45 AM	102		26					4			39		171					0
	8:00 AM	87		22					5			29		143					0
	8:15 AM	61		10					7			19		97					0
	8:30 AM	73		30					2			25		130					0
	8:45 AM	60		26					8			26		120					0
	VOLUMES	891	0	194	0	0	0	0	65	0	0	295	0	1,445	0	0	0	0	0
	APPROACH %	82%	0%	18%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1,085	/	0	0	/	0	65	/	259	295	/	1,186	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	446	0	87	0	0	0	0	34	0	0	124	0	691					
	APPROACH %	84%	0%	16%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.849			0.000			0.607			0.795		0.864					
	APP/DEPART	533	/	0	0	/	0	34	/	121	124	/	570	0					
PM	3:00 PM	113		38					9			16		176					0
	3:15 PM	144		39					7			17		207					0
	3:30 PM	138		40					2			19		199					0
	3:45 PM	110		51					3			12		176					0
	4:00 PM	137		51					5			17		210					0
	4:15 PM	151		70					6			12		239					0
	4:30 PM	142		71					6			26		245					0
	4:45 PM	159		74					3			12		248					0
	5:00 PM	147		76					7			22		252					0
	5:15 PM	165		70					2			24		261					0
	5:30 PM	196		77					8			29		310					0
	5:45 PM	165		78					7			21		271					0
	VOLUMES	1,767	0	735	0	0	0	0	65	0	0	227	0	2,794	0	0	0	0	0
	APPROACH %	71%	0%	29%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	2,502	/	0	0	/	0	65	/	800	227	/	1,994	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	673	0	301	0	0	0	0	24	0	0	96	0	1,094					
	APPROACH %	69%	0%	31%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.892			0.000			0.750			0.828		0.882					
	APP/DEPART	974	/	0	0	/	0	24	/	325	96	/	769	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	6:15 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	6:30 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	6:45 AM		0	0	2	2		0	0	0	0	0	0	0	2	2
	7:00 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	7:15 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	7:30 AM		0	0	1	1		0	0	0	0	0	0	0	1	1
	7:45 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:00 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:15 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:30 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:45 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3
PM	3:00 PM		0	0	3	3		0	0	0	0	0	0	0	3	3
	3:15 PM		0	0	2	2		0	0	0	0	0	0	0	2	2
	3:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	3:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:00 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:15 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:00 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:15 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	5	5	0	0	0	0	0	0	0	0	5	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	LA RIBA / AVENUE 66	LOCATION #:	10
TUESDAY	EAST & WEST:	ARROYO SECO(SR-110SB ON RAMP)	CONTROL:	2-WAY STOP: S&W

NOTES:

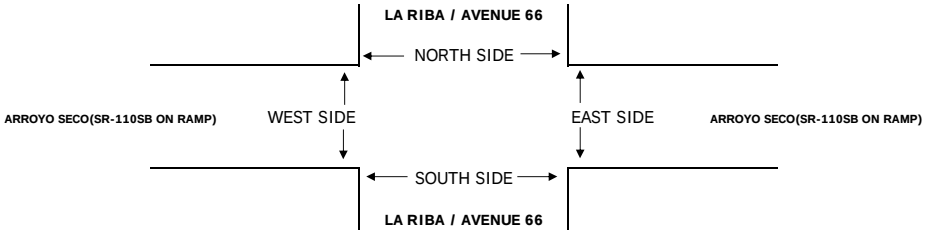
SR = SR-110SB ON RAMP

WT = SR-110SB ON RAMP

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND LA RIBA / AVENUE 66			SOUTHBOUND LA RIBA / AVENUE 66			EASTBOUND ARROYO SECO(SR-110SB ON RAMP)			WESTBOUND ARROYO SECO(SR-110SB ON RAMP)				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL X	ET X	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				0		7					151	3	161					0
	6:15 AM				2		4					137	3	146					0
	6:30 AM				4		6					201	2	213					0
	6:45 AM				6		4					163	1	174					0
	7:00 AM				3		13					149	5	170					0
	7:15 AM				9		14					168	6	197					0
	7:30 AM				16		5					128	16	165					0
	7:45 AM				13		5					125	11	154					0
	8:00 AM				5		3					96	17	121					0
	8:15 AM				4		5					96	20	125					0
	8:30 AM				10		4					92	11	117					0
	8:45 AM				6		2					75	23	106					0
	VOLUMES	0	0	0	78	0	72	0	0	0	0	1,581	118	1,849	0	0	0	0	0
	APPROACH %	0%	0%	0%	52%	0%	48%	0%	0%	0%	0%	93%	7%						
	APP/DEPART	0	/	118	150	/	0	0	/	78	1,699	/	1,653	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	22	0	37	0	0	0	0	681	14	754					
	APPROACH %	0%	0%	0%	37%	0%	63%	0%	0%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.641			0.000			0.856		0.885					
	APP/DEPART	0	/	14	59	/	0	0	/	22	695	/	718	0					
PM	3:00 PM				3		5					126	16	150					0
	3:15 PM				6		8					102	18	134					0
	3:30 PM				3		4					115	12	134					0
	3:45 PM				7		3					98	13	121					0
	4:00 PM				5		6					105	10	126					0
	4:15 PM				6		5					97	13	121					0
	4:30 PM				2		8					93	14	117					0
	4:45 PM				4		9					84	13	110					0
	5:00 PM				8		6					120	11	145					0
	5:15 PM				4		7					132	15	158					0
	5:30 PM				8		2					99	14	123					0
	5:45 PM				3		1					102	12	118					0
	VOLUMES	0	0	0	59	0	64	0	0	0	0	1,273	161	1,557	0	0	0	0	0
	APPROACH %	0%	0%	0%	48%	0%	52%	0%	0%	0%	0%	89%	11%						
	APP/DEPART	0	/	161	123	/	0	0	/	59	1,434	/	1,337	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	23	0	16	0	0	0	0	453	52	544					
	APPROACH %	0%	0%	0%	59%	0%	41%	0%	0%	0%	0%	90%	10%						
	PEAK HR FACTOR		0.000			0.696			0.000			0.859		0.861					
	APP/DEPART	0	/	52	39	/	0	0	/	23	505	/	469	0					



		PEDESTRIAN CROSSINGS					BICYCLE ACTIVATIONS					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:15 AM	0		0	0	0	0		0	1	1	0	0	0	1	1
	8:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
PM	3:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:30 PM	0		0	0	0	0		1	0	1	0	0	1	0	1
	4:45 PM	0		0	0	0	0		1	0	1	0	0	1	0	1
	5:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	2	0	2	0	0	2	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	11
TUESDAY	EAST & WEST:	SHULTS / ARROYO	CONTROL:	3-WAY STOP: NB, SB, WB

NOTES:

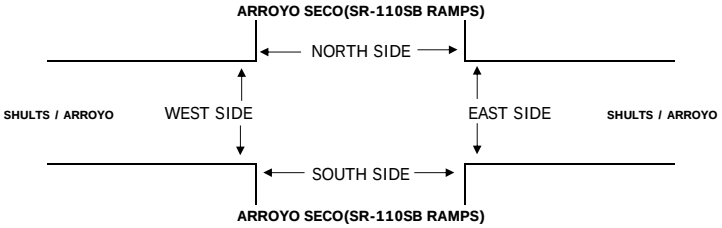
OFF RAMP = ALL EB

ON RAMP = NL, SR & WT

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND SHULTS / ARROYO			WESTBOUND SHULTS / ARROYO				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0.3	WT 0.3	WR 0.3	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	1	0	0	2	1	0	1	49	0	0	11	0	65					0
	6:15 AM	2	0	1	3	0	0	0	56	0	0	6	0	68					0
	6:30 AM	1	1	1	1	0	0	0	60	1	2	5	0	72					0
	6:45 AM	3	1	0	0	1	0	2	57	2	0	20	0	86					0
	7:00 AM	1	0	0	0	0	1	1	65	2	0	18	0	88					0
	7:15 AM	4	0	2	0	0	1	1	54	1	1	11	0	75					0
	7:30 AM	4	0	0	1	0	2	1	61	3	2	15	1	90					0
	7:45 AM	3	1	0	0	1	1	1	49	4	3	15	0	78					0
	8:00 AM	1	1	1	1	2	3	4	38	2	1	17	0	71					0
	8:15 AM	0	0	1	0	1	1	1	50	1	1	20	0	76					0
	8:30 AM	0	0	1	1	0	1	3	40	4	0	14	0	64					0
	8:45 AM	0	0	0	1	0	0	2	41	0	0	10	0	54					0
	VOLUMES	20	4	7	10	6	10	17	620	20	10	162	1	887	0	0	0	0	0
	APPROACH %	65%	13%	23%	38%	23%	38%	3%	94%	3%	6%	94%	1%						
	APP/DEPART	31	/	22	26	/	36	657	/	637	173	/	192	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	12	1	2	1	1	4	5	237	8	3	64	1	339					
	APPROACH %	80%	7%	13%	17%	17%	67%	2%	95%	3%	4%	94%	1%						
	PEAK HR FACTOR		0.625			0.500			0.919			0.850		0.942					
	APP/DEPART	15	/	7	6	/	12	250	/	240	68	/	80	0					
PM	3:00 PM	2	0	0	0	0	2	0	46	1	2	34	0	87					0
	3:15 PM	4	0	0	1	1	3	3	42	3	0	42	0	99					0
	3:30 PM	2	1	1	2	1	3	4	33	5	3	26	0	81					0
	3:45 PM	2	0	1	1	0	3	6	23	6	1	34	2	79					0
	4:00 PM	0	0	0	0	2	3	2	40	0	3	32	1	83					0
	4:15 PM	2	1	0	0	1	1	0	26	3	0	22	0	56					0
	4:30 PM	0	0	1	0	0	3	2	29	4	0	25	0	64					0
	4:45 PM	2	0	0	0	0	0	0	21	1	1	29	0	54					0
	5:00 PM	2	0	0	0	0	1	0	33	3	3	35	0	77					0
	5:15 PM	0	1	0	0	0	0	3	30	2	0	34	0	70					0
	5:30 PM	1	0	0	0	0	2	3	36	4	0	16	0	62					0
	5:45 PM	8	0	1	0	0	1	1	32	5	4	24	0	76					0
	VOLUMES	25	3	4	4	5	22	24	391	37	17	353	3	888	0	0	0	0	0
	APPROACH %	78%	9%	13%	13%	16%	71%	5%	87%	8%	5%	95%	1%						
	APP/DEPART	32	/	30	31	/	59	452	/	399	373	/	400	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	10	1	2	4	2	11	13	144	15	6	136	2	346					
	APPROACH %	77%	8%	15%	24%	12%	65%	8%	84%	9%	4%	94%	1%						
	PEAK HR FACTOR		0.813			0.708			0.896			0.857		0.874					
	APP/DEPART	13	/	16	17	/	23	172	/	150	144	/	157	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	3:30 PM	1	0	0	2	3	0	0	0	0	0	1	0	0	2	3
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	5:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	7	8	0	0	0	1	1	1	0	0	8	9

INTERSECTION TURNING MOVEMENT COUNTS

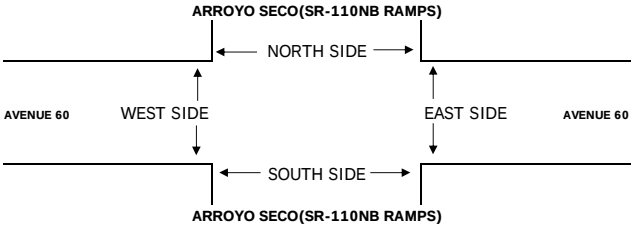
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	12
TUESDAY	EAST & WEST:	AVENUE 60	CONTROL:	1-WAY STOP: SB

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND AVENUE 60			WESTBOUND AVENUE 60				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST X	SR 0.5	EL 1	ET 1	ER X	WL X	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				1		1	7	20			48	7	84					0
	6:15 AM				6		13	4	30			53	16	122					0
	6:30 AM				1		9	4	24			55	20	113					0
	6:45 AM				3		16	7	61			68	26	181					0
	7:00 AM				2		21	5	64			72	29	193					0
	7:15 AM				7		9	13	90			88	41	248					0
	7:30 AM				2		10	16	153			126	56	363					0
	7:45 AM				3		13	11	125			96	44	292					0
	8:00 AM				5		17	15	133			104	37	311					0
	8:15 AM				2		15	9	139			92	47	304					0
	8:30 AM				6		11	13	127			88	44	289					0
	8:45 AM				3		14	8	122			90	39	276					0
	VOLUMES	0	0	0	41	0	149	112	1,088	0	0	980	406	2,776	0	0	0	0	0
	APPROACH %	0%	0%	0%	22%	0%	78%	9%	91%	0%	0%	71%	29%						
	APP/DEPART	0	/	518	190	/	0	1,200	/	1,129	1,386	/	1,129	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	12	0	55	51	550	0	0	418	184	1,270					
	APPROACH %	0%	0%	0%	18%	0%	82%	8%	92%	0%	0%	69%	31%						
	PEAK HR FACTOR		0.000			0.761			0.889			0.827		0.875					
	APP/DEPART	0	/	235	67	/	0	601	/	562	602	/	473	0					
PM	3:00 PM				6		27	10	90			84	23	240					0
	3:15 PM				8		20	11	82			85	20	226					0
	3:30 PM				10		26	12	93			88	18	247					0
	3:45 PM				7		27	17	86			79	26	242					0
	4:00 PM				5		24	16	93			91	23	252					0
	4:15 PM				10		28	11	86			86	23	244					0
	4:30 PM				9		26	12	91			91	20	249					0
	4:45 PM				9		24	13	104			79	24	253					0
	5:00 PM				11		22	5	99			101	28	266					0
	5:15 PM				8		19	15	124			106	40	312					0
	5:30 PM				4		19	14	88			96	36	257					0
	5:45 PM				14		27	17	127			85	25	295					0
	VOLUMES	0	0	0	101	0	289	153	1,163	0	0	1,071	306	3,083	0	0	0	0	0
	APPROACH %	0%	0%	0%	26%	0%	74%	12%	88%	0%	0%	78%	22%						
	APP/DEPART	0	/	459	390	/	0	1,316	/	1,264	1,377	/	1,360	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	37	0	87	51	438	0	0	388	129	1,130					
	APPROACH %	0%	0%	0%	30%	0%	70%	10%	90%	0%	0%	75%	25%						
	PEAK HR FACTOR		0.000			0.756			0.849			0.885		0.905					
	APP/DEPART	0	/	180	124	/	0	489	/	475	517	/	475	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	6:30 AM	1		0	0	1	1		0	0	1	2	0	0	0	2
	6:45 AM	4		0	0	4	0		0	0	0	4	0	0	0	4
	7:00 AM	1		0	0	1	2		0	0	2	3	0	0	0	3
	7:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	7:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:45 AM	2		0	0	2	1		0	0	1	3	0	0	0	3
	8:00 AM	1		0	0	1	0		0	0	0	1	0	0	0	1
	8:15 AM	1		0	0	1	0		0	0	0	1	0	0	0	1
	8:30 AM	0		0	0	0	1		0	0	1	1	0	0	0	1
	8:45 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	TOTAL	16	0	0	0	16	5	0	0	0	5	21	0	0	0	21
PM	3:00 PM	5		0	0	5	1		0	0	1	6	0	0	0	6
	3:15 PM	9		0	0	9	0		0	0	0	9	0	0	0	9
	3:30 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	3:45 PM	4		0	0	4	1		0	0	1	5	0	0	0	5
	4:00 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	4:15 PM	1		0	0	1	0		0	0	0	1	0	0	0	1
	4:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:00 PM	1		0	1	2	1		0	0	1	2	0	0	1	3
	5:15 PM	4		0	0	4	0		0	0	0	4	0	0	0	4
	5:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:45 PM	3		0	0	3	1		0	0	1	4	0	0	0	4
	TOTAL	33	0	0	1	34	4	0	0	0	4	37	0	0	1	38

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

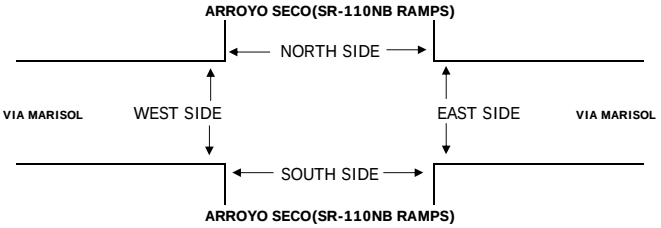
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	13
TUESDAY	EAST & WEST:	VIA MARISOL	CONTROL:	3-WAY STOP: NB, EB & WB

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND VIA MARISOL			WESTBOUND VIA MARISOL				U-TURNS				
	LANES:	NL 0.5	NT 0	NR 0.5	SL X	ST X	SR X	EL 0	ET 2	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	8	0	10				1	11			62	2	94					0
	6:15 AM	7	0	12				5	11			44	3	82					0
	6:30 AM	5	0	32				3	8			68	3	119					0
	6:45 AM	11	0	21				3	13			86	12	146					0
	7:00 AM	6	0	21				5	35			72	11	150					0
	7:15 AM	12	0	35				12	39			94	16	208					0
	7:30 AM	17	0	55				16	58			114	23	283					0
	7:45 AM	20	0	48				9	83			120	14	294					0
	8:00 AM	16	0	47				16	60			119	9	267					0
	8:15 AM	15	1	35				5	36			102	13	207					0
	8:30 AM	15	0	28				6	41			71	19	180					0
	8:45 AM	16	0	29				6	22			76	13	162					0
	VOLUMES	148	1	373	0	0	0	87	417	0	0	1,028	138	2,192	0	0	0	0	0
	APPROACH %	28%	0%	71%	0%	0%	0%	17%	83%	0%	0%	88%	12%						
	APP/DEPART	522	/	226	0	/	0	504	/	790	1,166	/	1,176	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	65	0	185	0	0	0	53	240	0	0	447	62	1,052					
	APPROACH %	26%	0%	74%	0%	0%	0%	18%	82%	0%	0%	88%	12%						
	PEAK HR FACTOR		0.868			0.000			0.796			0.929		0.895					
	APP/DEPART	250	/	115	0	/	0	293	/	425	509	/	512	0					
PM	3:00 PM	23	0	50				6	40			54	7	180					0
	3:15 PM	39	0	62				10	48			80	8	247					0
	3:30 PM	26	0	78				2	44			65	7	222					0
	3:45 PM	36	0	74				11	40			69	13	243					0
	4:00 PM	30	0	60				9	44			61	6	210					0
	4:15 PM	41	0	94				9	45			52	15	256					0
	4:30 PM	29	0	78				5	56			75	5	248					0
	4:45 PM	34	0	91				9	45			61	13	253					0
	5:00 PM	34	0	81				7	54			67	10	253					0
	5:15 PM	32	0	83				11	65			79	17	287					0
	5:30 PM	28	0	62				13	71			72	9	255					0
	5:45 PM	29	0	80				6	55			56	7	233					0
	VOLUMES	381	0	893	0	0	0	98	607	0	0	791	117	2,887	0	0	0	0	0
	APPROACH %	30%	0%	70%	0%	0%	0%	14%	86%	0%	0%	87%	13%						
	APP/DEPART	1,274	/	215	0	/	0	705	/	1,500	908	/	1,172	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	128	0	317	0	0	0	40	235	0	0	279	49	1,048					
	APPROACH %	29%	0%	71%	0%	0%	0%	15%	85%	0%	0%	85%	15%						
	PEAK HR FACTOR		0.890			0.000			0.818			0.854		0.913					
	APP/DEPART	445	/	89	0	/	0	275	/	552	328	/	407	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	7:00 AM	1	1	0	0	2	1	1	0	0	2	2	2	0	0	4
	7:15 AM	2	5	0	0	7	0	1	0	0	1	2	6	0	0	8
	7:30 AM	7	3	0	0	10	0	0	0	0	0	7	3	0	0	10
	7:45 AM	4	18	0	0	22	0	0	0	0	0	4	18	0	0	22
	8:00 AM	3	13	0	0	16	0	0	0	0	0	3	13	0	0	16
	8:15 AM	8	10	0	0	18	0	0	0	0	0	8	10	0	0	18
	8:30 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	8:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	28	53	0	0	81	1	2	0	0	3	29	55	0	0	84
PM	3:00 PM	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6
	3:15 PM	3	4	0	0	7	0	1	0	0	1	3	5	0	0	8
	3:30 PM	3	2	0	0	5	0	1	0	0	1	3	3	0	0	6
	3:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	4:00 PM	1	9	0	3	13	0	1	0	0	1	1	10	0	3	14
	4:15 PM	1	1	0	0	2	0	1	0	0	1	1	2	0	0	3
	4:30 PM	8	0	0	0	8	0	0	0	0	0	8	0	0	0	8
	4:45 PM	2	4	0	2	8	1	0	0	0	1	3	4	0	2	9
	5:00 PM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	5:45 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	TOTAL	23	32	0	5	60	1	4	0	0	5	24	36	0	5	65

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	14
TUESDAY	EAST & WEST:	AVENUE 57 / CARLOTA	CONTROL:	2-WAY STOP: SB & EB

NOTES:

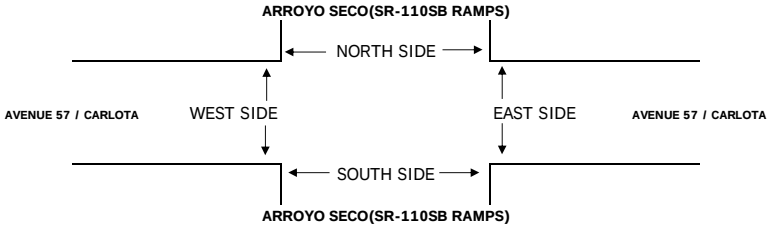
OFF RAMP = ALL NB

ON RAMP = ALL ST

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 57 / CARLOTA			WESTBOUND AVENUE 57 / CARLOTA				U-TURNS				
	LANES:	NL X	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM		6			87	0	0		0				93					0
	6:15 AM		8			60	1	0		0				69					0
	6:30 AM		3			95	3	0		1				102					0
	6:45 AM		8			101	3	0		0				112					0
	7:00 AM		20			73	2	0		1				96					0
	7:15 AM		11			90	1	1		0				103					0
	7:30 AM		16			93	3	0		0				112					0
	7:45 AM		14			96	1	0		0				111					0
	8:00 AM		15			79	2	1		0				97					0
	8:15 AM		15			89	2	0		0				106					0
	8:30 AM		23			85	0	0		0				108					0
	8:45 AM		11			68	2	0		0				81					0
	VOLUMES	0	150	0	0	1,016	20	2	0	2	0	0	0	1,190	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	98%	2%	50%	0%	50%	0%	0%	0%						
	APP/DEPART	150	/	152	1,036	/	1,018	4	/	0	0	/	20	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	60	0	0	357	8	1	0	0	0	0	0	426					
	APPROACH %	0%	100%	0%	0%	98%	2%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.938			0.941			0.250			0.000		0.951					
	APP/DEPART	60	/	61	365	/	357	1	/	0	0	/	8	0					
PM	3:00 PM		33			24	0	1		0				58					0
	3:15 PM		47			29	2	0		0				78					0
	3:30 PM		38			22	1	0		1				62					0
	3:45 PM		43			31	1	1		0				76					0
	4:00 PM		48			30	0	1		0				79					0
	4:15 PM		57			22	3	0		0				82					0
	4:30 PM		59			36	1	2		0				98					0
	4:45 PM		60			24	0	1		0				85					0
	5:00 PM		59			33	1	0		0				93					0
	5:15 PM		66			30	2	1		0				99					0
	5:30 PM		49			26	2	0		0				77					0
	5:45 PM		53			25	1	1		0				80					0
	VOLUMES	0	612	0	0	332	14	8	0	1	0	0	0	967	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	96%	4%	89%	0%	11%	0%	0%	0%						
	APP/DEPART	612	/	620	346	/	333	9	/	0	0	/	14	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	244	0	0	123	4	4	0	0	0	0	0	375					
	APPROACH %	0%	100%	0%	0%	97%	3%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.924			0.858			0.500			0.000		0.947					
	APP/DEPART	244	/	248	127	/	123	4	/	0	0	/	4	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	15
TUESDAY	EAST & WEST:	AVENUE 52 / GLEN ELLEN	CONTROL:	3 WAY STOP: SB, EB & WB

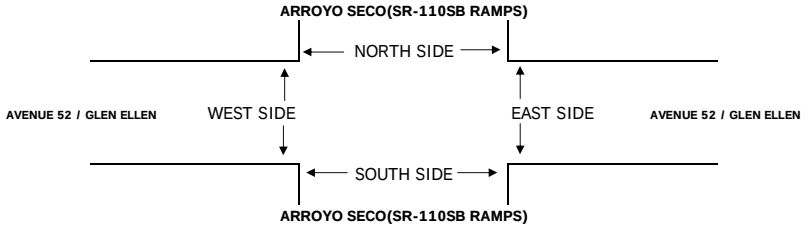
NOTES:

ON RAMP: ST, ER & WL

OFF RAMP: SEE TMC15-B

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 52 / GLEN ELLEN			WESTBOUND AVENUE 52 / GLEN ELLEN				RIGHT TURNS EXITING GLEN ELLEN NB				
	LANES:	NL X	NT X	NR X	SL 0	ST 1	SR 0	EL 0	ET 1	ER 1	WL 0	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				1	3	8	0	18	99	1	36	0	166		0			0
	6:15 AM				3	13	5	0	13	113	1	48	0	196		0			0
	6:30 AM				10	8	12	2	30	121	3	44	0	230		0			0
	6:45 AM				6	10	22	1	46	105	5	56	3	254		1			1
	7:00 AM				9	7	15	1	41	97	0	65	2	237		1			1
	7:15 AM				35	9	14	1	72	99	1	88	4	323		0			0
	7:30 AM				31	6	25	2	101	73	1	87	1	327		0			0
	7:45 AM				21	8	28	3	58	66	0	91	3	278		0			0
	8:00 AM				17	5	16	4	74	74	1	71	3	265		0			0
	8:15 AM				23	7	23	2	52	81	0	63	2	253		1			1
	8:30 AM				20	4	24	0	46	76	1	78	0	249		0			0
	8:45 AM				18	9	19	1	54	69	1	75	1	247		0			0
	VOLUMES	0	0	0	194	89	211	17	605	1,073	15	802	19	3,025	0	3	0	0	3
	APPROACH %	0%	0%	0%	39%	18%	43%	1%	36%	63%	2%	96%	2%						
	APP/DEPART	0	/	36	494	/	1,177	1,695	/	799	836	/	1,013	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	104	28	83	10	305	312	3	337	11	1,193					
	APPROACH %	0%	0%	0%	48%	13%	39%	2%	49%	50%	1%	96%	3%						
	PEAK HR FACTOR		0.000			0.867			0.891			0.934		0.912					
	APP/DEPART	0	/	21	215	/	343	627	/	409	351	/	420	0					
PM	3:00 PM				12	3	33	1	44	85	4	122	7	311		2			2
	3:15 PM				11	5	35	2	46	71	2	126	6	304		3			3
	3:30 PM				6	2	23	0	47	69	0	125	4	276		1			1
	3:45 PM				14	7	26	1	52	82	5	125	6	318		3			3
	4:00 PM				8	3	37	4	44	81	3	116	2	298		2			2
	4:15 PM				14	3	25	3	39	75	1	135	15	310		4			4
	4:30 PM				8	3	30	4	53	72	2	149	2	323		2			2
	4:45 PM				11	2	46	1	52	82	3	121	7	325		3			3
	5:00 PM				14	5	39	6	56	83	2	118	5	328		3			3
	5:15 PM				13	1	33	1	45	69	2	143	3	310		2			2
	5:30 PM				11	4	32	3	45	59	3	127	6	290		2			2
	5:45 PM				15	4	24	5	44	73	1	123	9	298		1			1
	VOLUMES	0	0	0	137	42	383	31	567	901	28	1,530	72	3,691	0	28	0	0	28
	APPROACH %	0%	0%	0%	24%	7%	68%	2%	38%	60%	2%	94%	4%						
	APP/DEPART	0	/	103	562	/	971	1,499	/	704	1,630	/	1,913	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	46	11	148	12	206	306	9	531	17	1,286					
	APPROACH %	0%	0%	0%	22%	5%	72%	2%	39%	58%	2%	95%	3%						
	PEAK HR FACTOR		0.000			0.869			0.903			0.910		0.980					
	APP/DEPART	0	/	29	205	/	326	524	/	252	557	/	679	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:45 AM	0	2	0	0	2	0	0	1	0	1	0	2	1	0	3
	7:00 AM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	7:45 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	8:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:15 AM	0	4	0	0	4	0	0	0	1	1	0	4	0	1	5
	8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	TOTAL	2	16	0	3	21	0	0	1	1	2	2	16	1	4	23
PM	3:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	3:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	3:30 PM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	3:45 PM	3	2	0	0	5	0	0	0	0	0	3	2	0	0	5
	4:00 PM	0	3	1	3	7	0	0	0	0	0	0	3	1	3	7
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	4:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	TOTAL	5	15	3	3	26	0	0	0	0	0	5	15	3	3	26

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	15-B
TUESDAY	EAST & WEST:	AVENUE 52 / GLEN ELLEN	CONTROL:	3 WAY STOP: SB, EB & WB

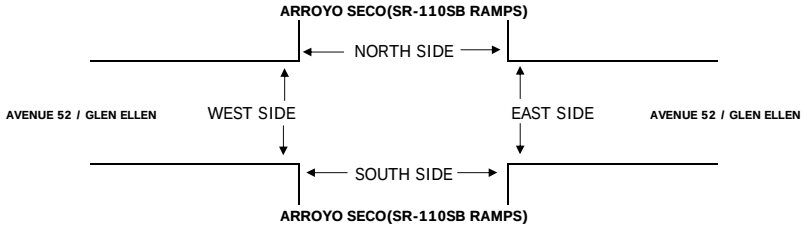
NOTES:

OFF RAMP TRAFFIC ONLY

SB U TURNS = SR ONTO GLEN ELLEN

AM		▲ N	
PM			
MD	◄ W		E ►
OTHER		S ▼	
OTHER			

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 52 / GLEN ELLEN			WESTBOUND AVENUE 52 / GLEN ELLEN				RIGHT TURNS EXITING GLEN ELLEN NB				
	LANES:	NL X	NT X	NR X	SL 0.5	ST 0	SR 0.5	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				0	0	8							8		0			0
	6:15 AM				1	0	5							6		0			0
	6:30 AM				3	0	9							12		0			0
	6:45 AM				6	0	22							28		1			1
	7:00 AM				7	0	15							22		1			1
	7:15 AM				20	0	14							34		0			0
	7:30 AM				17	0	24							41		0			0
	7:45 AM				6	0	24							30		0			0
	8:00 AM				6	0	16							22		0			0
	8:15 AM				6	0	14							20		1			1
	8:30 AM				3	0	11							14		0			0
	8:45 AM				10	0	13							23		0			0
	VOLUMES	0	0	0	85	0	175	0	0	0	0	0	0	260	0	3	0	0	3
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	260	/	0	0	/	85	0	/	175	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	49	0	78	0	0	0	0	0	0	127					
	APPROACH %	0%	0%	0%	39%	0%	61%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.774			0.000			0.000		0.774					
	APP/DEPART	0	/	0	127	/	0	0	/	49	0	/	78	0					
PM	3:00 PM				10	0	25							35		2			2
	3:15 PM				6	0	35							41		3			3
	3:30 PM				6	0	23							29		1			1
	3:45 PM				9	0	26							35		3			3
	4:00 PM				7	0	37							44		2			2
	4:15 PM				10	0	21							31		4			4
	4:30 PM				4	0	18							22		2			2
	4:45 PM				10	0	39							49		3			3
	5:00 PM				10	0	39							49		3			3
	5:15 PM				10	0	33							43		2			2
	5:30 PM				8	0	28							36		2			2
	5:45 PM				8	0	28							36		1			1
	VOLUMES	0	0	0	98	0	352	0	0	0	0	0	0	450	0	28	0	0	28
	APPROACH %	0%	0%	0%	22%	0%	78%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	450	/	0	0	/	98	0	/	352	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	38	0	139	0	0	0	0	0	0	177					
	APPROACH %	0%	0%	0%	21%	0%	79%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.903			0.000			0.000		0.903					
	APP/DEPART	0	/	0	177	/	0	0	/	38	0	/	139	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM					0					0	0	0	0	0	0
	6:15 AM					0					0	0	0	0	0	0
	6:30 AM					0					0	0	0	0	0	0
	6:45 AM					0					0	0	0	0	0	0
	7:00 AM					0					0	0	0	0	0	0
	7:15 AM					0					0	0	0	0	0	0
	7:30 AM					0					0	0	0	0	0	0
	7:45 AM					0					0	0	0	0	0	0
	8:00 AM					0					0	0	0	0	0	0
	8:15 AM					0					0	0	0	0	0	0
	8:30 AM					0					0	0	0	0	0	0
	8:45 AM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM					0					0	0	0	0	0	0
	3:15 PM					0					0	0	0	0	0	0
	3:30 PM					0					0	0	0	0	0	0
	3:45 PM					0					0	0	0	0	0	0
	4:00 PM					0					0	0	0	0	0	0
	4:15 PM					0					0	0	0	0	0	0
	4:30 PM					0					0	0	0	0	0	0
	4:45 PM					0					0	0	0	0	0	0
	5:00 PM					0					0	0	0	0	0	0
	5:15 PM					0					0	0	0	0	0	0
	5:30 PM					0					0	0	0	0	0	0
	5:45 PM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

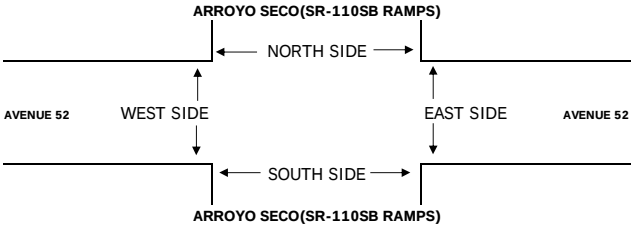
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	16
TUESDAY	EAST & WEST:	AVENUE 52	CONTROL:	3 WAY STOP

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 52			WESTBOUND AVENUE 52				U-TURNS				
	LANES:	NL 0.5	NT X	NR 0.5	SL X	ST X	SR X	EL 0	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	30	0	0				14	5			5	3	57					0
	6:15 AM	37	0	0				8	9			11	4	69					0
	6:30 AM	42	1	1				23	20			8	2	97					0
	6:45 AM	52	1	1				26	21			9	5	115					0
	7:00 AM	61	0	1				27	25			10	6	130					0
	7:15 AM	72	0	2				43	66			15	6	204					0
	7:30 AM	72	0	0				65	68			24	15	244					0
	7:45 AM	70	2	1				49	29			22	13	186					0
	8:00 AM	57	0	1				46	42			20	10	176					0
	8:15 AM	48	1	0				44	31			15	10	149					0
	8:30 AM	63	0	0				29	39			16	3	150					0
	8:45 AM	57	1	2				32	40			18	8	158					0
	VOLUMES	661	6	9	0	0	0	406	395	0	0	173	85	1,735	0	0	0	0	0
	APPROACH %	98%	1%	1%	0%	0%	0%	51%	49%	0%	0%	67%	33%						
	APP/DEPART	676	/	497	0	/	0	801	/	404	258	/	834	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	271	2	4	0	0	0	203	205	0	0	81	44	810					
	APPROACH %	98%	1%	1%	0%	0%	0%	50%	50%	0%	0%	65%	35%						
	PEAK HR FACTOR		0.936			0.000			0.767			0.801		0.830					
	APP/DEPART	277	/	249	0	/	0	408	/	209	125	/	352	0					
PM	3:00 PM	114	0	1				34	24			21	8	202					0
	3:15 PM	116	0	1				27	29			15	12	200					0
	3:30 PM	102	1	2				30	27			29	7	198					0
	3:45 PM	106	1	1				37	25			28	6	204					0
	4:00 PM	87	0	2				23	28			33	12	185					0
	4:15 PM	123	0	3				23	26			28	18	221					0
	4:30 PM	124	0	2				28	37			32	9	232					0
	4:45 PM	100	1	1				23	38			28	11	202					0
	5:00 PM	102	1	1				24	47			25	14	214					0
	5:15 PM	109	0	0				26	32			36	14	217					0
	5:30 PM	100	0	3				28	27			35	12	205					0
	5:45 PM	108	2	0				20	41			28	20	219					0
	VOLUMES	1,291	6	17	0	0	0	323	381	0	0	338	143	2,499	0	0	0	0	0
	APPROACH %	98%	0%	1%	0%	0%	0%	46%	54%	0%	0%	70%	30%						
	APP/DEPART	1,314	/	472	0	/	0	704	/	398	481	/	1,629	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	449	2	7	0	0	0	98	148	0	0	113	52	869					
	APPROACH %	98%	0%	2%	0%	0%	0%	40%	60%	0%	0%	68%	32%						
	PEAK HR FACTOR		0.909			0.000			0.866			0.897		0.936					
	APP/DEPART	458	/	152	0	/	0	246	/	155	165	/	562	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	2	0	2	4	0	0	0	0	0	0	2	0	2	4
	7:00 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
	8:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	TOTAL	1	16	0	2	19	0	0	0	0	0	1	16	0	2	19
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	3:30 PM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	3:45 PM	3	2	0	0	5	0	0	0	0	0	3	2	0	0	5
	4:00 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	4:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	TOTAL	5	16	0	0	21	0	0	0	0	0	5	16	0	0	21

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

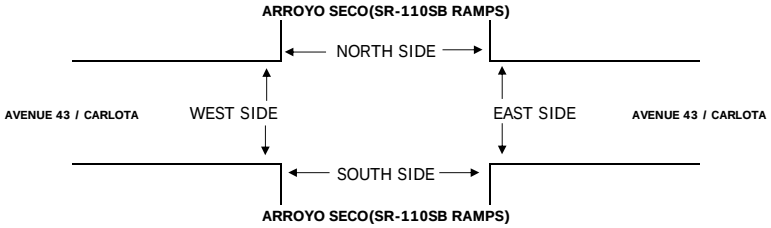
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	17
TUESDAY	EAST & WEST:	AVENUE 43 / CARLOTA	CONTROL:	4 WAY STOP

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 43 / CARLOTA			WESTBOUND AVENUE 43 / CARLOTA				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	1	12	2	3	1	5	34	10	1	1	15	18	103					0
	6:15 AM	0	6	4	2	0	5	40	16	0	4	10	27	114					0
	6:30 AM	1	8	3	4	2	8	44	20	0	4	21	27	142					0
	6:45 AM	0	7	4	5	12	11	28	20	1	2	31	22	143					0
	7:00 AM	0	3	5	15	14	17	29	28	2	10	40	18	181					0
	7:15 AM	2	3	8	16	18	24	37	42	3	12	60	36	261					0
	7:30 AM	2	10	20	13	11	24	55	77	3	10	57	35	317					0
	7:45 AM	2	7	11	21	18	33	39	63	3	13	82	32	324					0
	8:00 AM	2	2	10	17	16	17	41	51	2	6	56	27	247					0
	8:15 AM	2	6	3	31	18	40	44	50	3	12	45	14	268					0
	8:30 AM	0	4	4	26	22	30	32	43	2	8	32	21	224					0
	8:45 AM	1	3	2	19	14	34	33	51	1	8	24	18	208					0
	VOLUMES	13	71	76	172	146	248	456	471	21	90	473	295	2,532	0	0	0	0	0
	APPROACH %	8%	44%	48%	30%	26%	44%	48%	50%	2%	10%	55%	34%						
	APP/DEPART	160	/	822	566	/	257	948	/	719	858	/	734	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	8	25	44	82	63	114	179	241	11	41	240	108	1,156					
	APPROACH %	10%	32%	57%	32%	24%	44%	42%	56%	3%	11%	62%	28%						
	PEAK HR FACTOR		0.602			0.728			0.798			0.766		0.892					
	APP/DEPART	77	/	312	259	/	115	431	/	367	389	/	362	0					
PM	3:00 PM	1	7	6	8	3	29	29	42	4	14	52	13	208					0
	3:15 PM	1	4	7	13	7	29	18	49	1	8	53	22	212					0
	3:30 PM	1	9	8	15	9	27	26	49	1	8	70	17	240					0
	3:45 PM	0	8	6	9	8	29	33	46	4	16	77	13	249					0
	4:00 PM	3	8	7	8	5	24	32	35	4	13	66	23	228					0
	4:15 PM	0	6	10	13	7	24	20	38	3	12	85	16	234					0
	4:30 PM	0	4	7	14	8	29	14	47	2	11	74	26	236					0
	4:45 PM	1	7	5	9	3	25	23	54	1	9	77	14	228					0
	5:00 PM	1	5	5	13	6	27	19	48	1	6	72	20	223					0
	5:15 PM	0	3	6	11	7	26	26	44	3	10	71	18	225					0
	5:30 PM	2	6	8	11	4	26	20	37	2	8	63	16	203					0
	5:45 PM	1	6	4	14	5	29	18	40	2	13	56	23	211					0
	VOLUMES	11	73	79	138	72	324	278	529	28	128	816	221	2,697	0	0	0	0	0
	APPROACH %	7%	45%	48%	26%	13%	61%	33%	63%	3%	11%	70%	19%						
	APP/DEPART	163	/	572	534	/	228	835	/	746	1,165	/	1,151	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	4	31	31	45	29	104	111	168	12	49	298	69	951					
	APPROACH %	6%	47%	47%	25%	16%	58%	38%	58%	4%	12%	72%	17%						
	PEAK HR FACTOR		0.917			0.873			0.877			0.920		0.955					
	APP/DEPART	66	/	211	178	/	90	291	/	244	416	/	406	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	6:30 AM	3	4	0	0	7	1	0	0	0	1	4	4	0	0	8
	6:45 AM	3	1	0	0	4	0	0	0	0	0	3	1	0	0	4
	7:00 AM	7	7	0	0	14	1	0	0	0	1	8	7	0	0	15
	7:15 AM	13	9	0	0	22	0	0	0	0	0	13	9	0	0	22
	7:30 AM	23	10	0	0	33	0	0	0	0	0	23	10	0	0	33
	7:45 AM	10	6	1	0	17	0	2	0	0	2	10	8	1	0	19
	8:00 AM	7	4	0	1	12	1	0	0	0	1	8	4	0	1	13
	8:15 AM	7	3	0	0	10	0	0	0	0	0	7	3	0	0	10
	8:30 AM	7	6	1	0	14	2	1	0	0	3	9	7	1	0	17
	8:45 AM	6	2	0	1	9	5	1	0	2	8	11	3	0	3	17
	TOTAL	88	52	2	2	144	10	4	0	2	16	98	56	2	4	160
PM	3:00 PM	15	7	0	0	22	0	0	0	0	0	15	7	0	0	22
	3:15 PM	8	2	0	1	11	0	6	0	0	6	8	8	0	1	17
	3:30 PM	10	6	0	0	16	0	1	0	0	1	10	7	0	0	17
	3:45 PM	5	2	0	0	7	5	4	1	0	10	10	6	1	0	17
	4:00 PM	10	2	2	0	14	0	0	0	0	0	10	2	2	0	14
	4:15 PM	13	10	0	0	23	1	1	0	0	2	14	11	0	0	25
	4:30 PM	8	8	0	0	16	0	2	0	0	2	8	10	0	0	18
	4:45 PM	11	4	0	0	15	2	0	1	0	3	13	4	1	0	18
	5:00 PM	6	7	1	0	14	1	0	0	0	1	7	7	1	0	15
	5:15 PM	9	7	0	0	16	0	1	0	1	2	9	8	0	1	18
	5:30 PM	10	2	0	0	12	0	1	0	0	1	10	3	0	0	13
	5:45 PM	7	1	0	0	8	0	0	0	0	0	7	1	0	0	8
	TOTAL	112	58	3	1	174	9	16	2	1	28	121	74	5	2	202

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	18
TUESDAY	EAST & WEST:	AVENUE 43 / HOMER	CONTROL:	4 WAY STOP

NOTES:

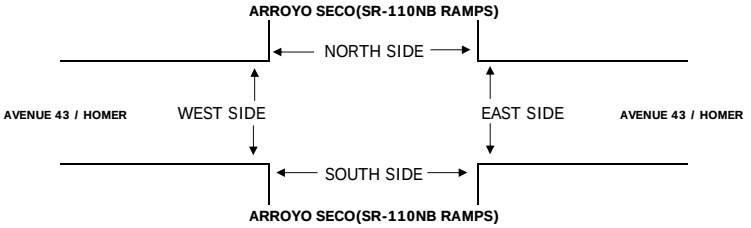
SOUTH LEG TRAFFIC IS HOMER & NB RAMPS COMBINED

SEE TMC18-B FOR RAMP TRAFFIC ONLY

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND AVENUE 43 / HOMER			WESTBOUND AVENUE 43 / HOMER				RIGHT TURNS EXITING HOMER SB				
	LANES:	NL 0.3	NT 1.3	NR 0.3	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	24	0	5	0	2	3	1	8	7	4	24	0	78	1				1
	6:15 AM	16	0	2	0	0	2	0	8	13	3	22	1	67	0				0
	6:30 AM	14	0	8	0	1	3	1	13	13	7	33	0	93	0				0
	6:45 AM	26	0	6	0	0	1	0	9	17	4	24	1	88	1				1
	7:00 AM	30	1	11	0	1	6	0	26	21	9	34	1	140	1				1
	7:15 AM	30	0	19	3	1	5	1	45	22	12	69	0	207	2				2
	7:30 AM	27	0	17	4	3	4	2	65	46	13	70	2	253	0				0
	7:45 AM	38	0	16	1	1	9	1	55	44	16	75	1	257	1				1
	8:00 AM	38	3	21	1	2	6	3	43	36	19	49	0	221	1				1
	8:15 AM	26	1	12	2	3	4	1	41	33	13	37	3	176	0				0
	8:30 AM	21	0	8	1	0	3	1	44	38	18	42	0	176	1				1
	8:45 AM	23	0	10	0	2	3	4	29	36	14	26	1	148	1				1
	VOLUMES	313	5	135	12	16	49	15	386	326	132	505	10	1,904	9	0	0	0	9
	APPROACH %	69%	1%	30%	16%	21%	64%	2%	53%	45%	20%	78%	2%						
	APP/DEPART	453	/	30	77	/	474	727	/	533	647	/	867	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	133	3	73	9	7	24	7	208	148	60	263	3	938					
	APPROACH %	64%	1%	35%	23%	18%	60%	2%	57%	41%	18%	81%	1%						
	PEAK HR FACTOR		0.843			0.909			0.803			0.886		0.912					
	APP/DEPART	209	/	13	40	/	215	363	/	290	326	/	420	0					
PM	3:00 PM	49	1	32	1	1	4	2	22	28	7	32	1	180	7				7
	3:15 PM	49	4	24	1	2	2	3	26	22	5	28	1	167	1				1
	3:30 PM	60	4	18	2	0	3	5	26	24	14	32	1	189	3				3
	3:45 PM	58	5	22	1	0	2	3	18	24	12	23	4	172	2				2
	4:00 PM	55	5	23	3	0	1	5	28	27	13	40	2	202	4				4
	4:15 PM	50	0	25	3	1	1	1	19	20	8	29	0	157	4				4
	4:30 PM	46	3	36	0	0	2	3	27	27	7	29	2	182	2				2
	4:45 PM	48	4	19	2	0	3	1	30	20	18	38	0	183	2				2
	5:00 PM	63	1	23	0	1	1	2	39	27	6	32	1	196	4				4
	5:15 PM	51	0	16	2	1	2	1	31	27	12	29	2	174	2				2
	5:30 PM	52	1	26	2	1	4	1	32	24	11	23	2	179	1				1
	5:45 PM	62	2	18	2	0	2	5	29	33	10	36	4	203	0				0
	VOLUMES	643	30	282	19	7	27	32	327	303	123	371	20	2,184	32	0	0	0	32
	APPROACH %	67%	3%	30%	36%	13%	51%	5%	49%	46%	24%	72%	4%						
	APP/DEPART	955	/	82	53	/	433	662	/	628	514	/	1,041	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	228	4	83	6	3	9	9	131	111	39	120	9	752					
	APPROACH %	72%	1%	26%	33%	17%	50%	4%	52%	44%	23%	71%	5%						
	PEAK HR FACTOR		0.905			0.643			0.923			0.840		0.926					
	APP/DEPART	315	/	22	18	/	153	251	/	220	168	/	357	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:30 AM	2	3	0	0	5	0	1	0	0	1	2	4	0	0	6
	6:45 AM	4	1	0	0	5	0	0	0	0	0	4	1	0	0	5
	7:00 AM	3	5	0	0	8	1	0	0	0	1	4	5	0	0	9
	7:15 AM	9	13	0	0	22	1	0	0	0	1	10	13	0	0	23
	7:30 AM	29	6	4	0	39	0	0	0	0	0	29	6	4	0	39
	7:45 AM	15	5	2	0	22	0	2	0	0	2	15	7	2	0	24
	8:00 AM	2	6	1	1	10	0	0	0	0	0	2	6	1	1	10
	8:15 AM	4	3	0	0	7	0	0	0	0	0	4	3	0	0	7
	8:30 AM	4	6	0	0	10	0	0	0	0	0	4	6	0	0	10
	8:45 AM	2	2	0	1	5	1	1	0	0	2	3	3	0	1	7
	TOTAL	76	50	7	2	135	3	4	0	0	7	79	54	7	2	142
PM	3:00 PM	5	2	1	0	8	0	0	0	0	0	5	2	1	0	8
	3:15 PM	2	0	0	0	2	0	1	0	0	1	2	1	0	0	3
	3:30 PM	3	3	0	0	6	0	0	0	0	0	3	3	0	0	6
	3:45 PM	0	1	1	0	2	2	0	0	0	2	2	1	1	0	4
	4:00 PM	6	1	1	0	8	0	0	1	0	1	6	1	2	0	9
	4:15 PM	7	3	0	3	13	0	1	1	0	2	7	4	1	3	15
	4:30 PM	1	5	5	0	11	1	0	0	0	1	2	5	5	0	12
	4:45 PM	5	5	0	0	10	0	1	2	0	3	5	6	2	0	13
	5:00 PM	4	2	0	0	6	0	0	0	0	0	4	2	0	0	6
	5:15 PM	6	2	2	0	10	0	0	0	0	0	6	2	2	0	10
	5:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:45 PM	5	1	0	0	6	0	0	0	0	0	5	1	0	0	6
	TOTAL	45	25	10	3	83	3	3	4	0	10	48	28	14	3	93

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

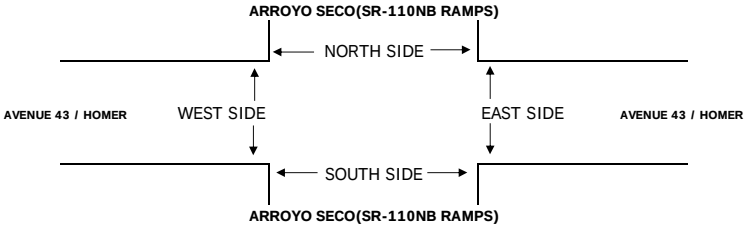
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	18-B
TUESDAY	EAST & WEST:	AVENUE 43 / HOMER	CONTROL:	4 WAY STOP

NOTES:
ON / OFF RAMP TRAFFIC ONLY
ON RAMP: ST, ER & WL
OFF RAMP: ALL NORTH

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND AVENUE 43 / HOMER			WESTBOUND AVENUE 43 / HOMER				RIGHT TURN EXITING HOMER SB				
	LANES:	NL 0.3	NT 0.3	NR 0.3	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	18	0	5		1				6	4			34	1				1
	6:15 AM	10	0	2		0				13	3			28	0				0
	6:30 AM	11	0	5		1				10	6			33	0				0
	6:45 AM	24	0	6		0				18	4			52	1				1
	7:00 AM	24	1	10		1				20	8			64	1				1
	7:15 AM	24	0	16		1				19	12			72	2				2
	7:30 AM	19	0	12		3				44	13			91	0				0
	7:45 AM	37	0	16		1				39	12			105	1				1
	8:00 AM	30	3	15		0				35	17			100	1				1
	8:15 AM	24	1	8		2				31	11			77	0				0
	8:30 AM	17	0	8		0				33	16			74	1				1
	8:45 AM	16	0	8		1				33	12			70	1				1
	VOLUMES	254	5	111	0	11	0	0	0	301	118	0	0	800	9	0	0	0	9
	APPROACH %	69%	1%	30%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	APP/DEPART	370	/	5	11	/	430	301	/	111	118	/	254	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	110	4	51	0	6	0	0	0	149	53	0	0	373					
	APPROACH %	67%	2%	31%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	PEAK HR FACTOR		0.778			0.500			0.847			0.779		0.888					
	APP/DEPART	165	/	4	6	/	208	149	/	51	53	/	110	0					
PM	3:00 PM	44	1	32		1				26	6			110	7				7
	3:15 PM	46	4	24		2				18	4			98	1				1
	3:30 PM	56	3	15		0				25	13			112	3				3
	3:45 PM	55	4	19		0				24	9			111	2				2
	4:00 PM	47	5	23		0				24	11			110	4				4
	4:15 PM	44	0	23		1				17	6			91	4				4
	4:30 PM	41	3	33		0				25	5			107	2				2
	4:45 PM	47	5	18		0				19	14			103	2				2
	5:00 PM	59	1	20		1				23	5			109	4				4
	5:15 PM	48	0	14		1				25	9			97	2				2
	5:30 PM	49	1	23		1				24	9			107	1				1
	5:45 PM	57	2	17		0				27	7			110	0				0
	VOLUMES	593	29	261	0	7	0	0	0	277	98	0	0	1,265	32	0	0	0	32
	APPROACH %	67%	3%	30%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	APP/DEPART	883	/	29	7	/	382	277	/	261	98	/	593	0					
	BEGIN PEAK HR		3:15 PM																
	VOLUMES	204	16	81	0	2	0	0	0	91	37	0	0	431					
	APPROACH %	68%	5%	27%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	PEAK HR FACTOR		0.965			0.250			0.875			0.712		0.962					
	APP/DEPART	301	/	16	2	/	130	91	/	81	37	/	204	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM					0					0	0	0	0	0	0
	6:15 AM					0					0	0	0	0	0	0
	6:30 AM					0					0	0	0	0	0	0
	6:45 AM					0					0	0	0	0	0	0
	7:00 AM					0					0	0	0	0	0	0
	7:15 AM					0					0	0	0	0	0	0
	7:30 AM					0					0	0	0	0	0	0
	7:45 AM					0					0	0	0	0	0	0
	8:00 AM					0					0	0	0	0	0	0
	8:15 AM					0					0	0	0	0	0	0
	8:30 AM					0					0	0	0	0	0	0
	8:45 AM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM					0					0	0	0	0	0	0
	3:15 PM					0					0	0	0	0	0	0
	3:30 PM					0					0	0	0	0	0	0
	3:45 PM					0					0	0	0	0	0	0
	4:00 PM					0					0	0	0	0	0	0
	4:15 PM					0					0	0	0	0	0	0
	4:30 PM					0					0	0	0	0	0	0
	4:45 PM					0					0	0	0	0	0	0
	5:00 PM					0					0	0	0	0	0	0
	5:15 PM					0					0	0	0	0	0	0
	5:30 PM					0					0	0	0	0	0	0
	5:45 PM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

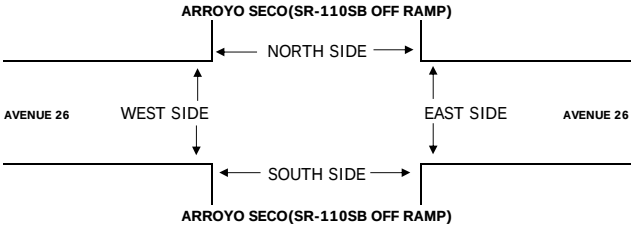
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMP)	LOCATION #:	19
TUESDAY	EAST & WEST:	AVENUE 26	CONTROL:	1 WAY STOP SB

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			EASTBOUND AVENUE 26			WESTBOUND AVENUE 26				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 0	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				6		16		144			132		298					0
	6:15 AM				12		17		200			144		373					0
	6:30 AM				24		25		245			131		425					0
	6:45 AM				82		44		279			159		564					0
	7:00 AM				44		34		349			170		597					0
	7:15 AM				53		30		344			219		646					0
	7:30 AM				51		19		366			234		670					0
	7:45 AM				59		40		372			197		668					0
	8:00 AM				73		16		341			169		599					0
	8:15 AM				41		19		323			163		546					0
	8:30 AM				30		22		303			181		536					0
	8:45 AM				46		31		298			152		527					0
	VOLUMES	0	0	0	521	0	313	0	3,564	0	0	2,051	0	6,449	0	0	0	0	0
	APPROACH %	0%	0%	0%	62%	0%	38%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	834	/	0	3,564	/	4,085	2,051	/	2,364	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	236	0	105	0	1,423	0	0	819	0	2,583					
	APPROACH %	0%	0%	0%	69%	0%	31%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.861			0.956			0.875		0.964					
	APP/DEPART	0	/	0	341	/	0	1,423	/	1,659	819	/	924	0					
PM	3:00 PM				10		30		268			226		534					0
	3:15 PM				7		26		232			196		461					0
	3:30 PM				20		28		247			213		508					0
	3:45 PM				5		20		232			207		464					0
	4:00 PM				11		28		257			226		522					0
	4:15 PM				10		36		244			229		519					0
	4:30 PM				8		26		197			245		476					0
	4:45 PM				10		29		233			231		503					0
	5:00 PM				35		31		230			242		538					0
	5:15 PM				53		36		263			249		601					0
	5:30 PM				49		29		266			238		582					0
	5:45 PM				30		37		228			237		532					0
	VOLUMES	0	0	0	248	0	356	0	2,897	0	0	2,739	0	6,240	0	0	0	0	0
	APPROACH %	0%	0%	0%	41%	0%	59%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	604	/	0	2,897	/	3,145	2,739	/	3,095	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	167	0	133	0	987	0	0	966	0	2,253					
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.843			0.928			0.970		0.937					
	APP/DEPART	0	/	0	300	/	0	987	/	1,154	966	/	1,099	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	1		0	0	1	1		0	0	1	2	0	0	0	2
	6:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM	4		0	0	4	0		0	0	0	4	0	0	0	4
	6:45 AM	7		0	0	7	1		0	0	1	8	0	0	0	8
	7:00 AM	9		0	0	9	4		0	0	4	13	0	0	0	13
	7:15 AM	7		0	0	7	2		0	0	2	9	0	0	0	9
	7:30 AM	3		0	0	3	1		0	0	1	4	0	0	0	4
	7:45 AM	4		0	0	4	2		0	0	2	6	0	0	0	6
	8:00 AM	3		0	0	3	1		0	0	1	4	0	0	0	4
	8:15 AM	9		0	0	9	0		0	0	0	9	0	0	0	9
	8:30 AM	5		0	0	5	0		0	0	0	5	0	0	0	5
	8:45 AM	6		0	0	6	0		0	0	0	6	0	0	0	6
	TOTAL	58	0	0	0	58	12	0	0	0	12	70	0	0	0	70
PM	3:00 PM	9		0	0	9	4		0	0	4	13	0	0	0	13
	3:15 PM	10		1	0	11	1		0	0	1	11	0	1	0	12
	3:30 PM	4		0	0	4	1		0	0	1	5	0	0	0	5
	3:45 PM	14		0	0	14	0		0	0	0	14	0	0	0	14
	4:00 PM	19		0	0	19	4		0	0	4	23	0	0	0	23
	4:15 PM	19		0	0	19	2		0	0	2	21	0	0	0	21
	4:30 PM	13		0	0	13	2		0	0	2	15	0	0	0	15
	4:45 PM	18		0	0	18	0		0	0	0	18	0	0	0	18
	5:00 PM	12		0	1	13	2		0	0	2	14	0	0	1	15
	5:15 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	5:30 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	5:45 PM	8		1	0	9	1		0	0	1	9	0	1	0	10
	TOTAL	132	0	2	1	135	17	0	0	0	17	149	0	2	1	152

INTERSECTION TURNING MOVEMENT COUNTS

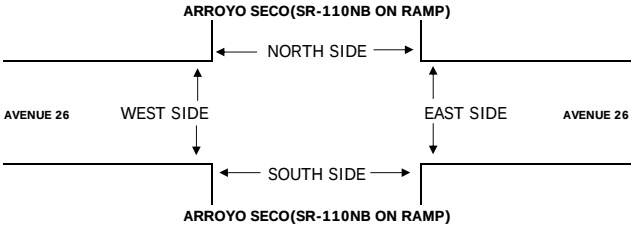
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB ON RAMP)	LOCATION #:	20
TUESDAY	EAST & WEST:	AVENUE 26	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB ON RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB ON RAMP)			EASTBOUND AVENUE 26			WESTBOUND AVENUE 26				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR X	EL 0.5	ET 2.5	ER X	WL X	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM							8	61			143	7	219					0
	6:15 AM							4	110			141	9	264					0
	6:30 AM							14	149			136	8	307					0
	6:45 AM							10	206			172	9	397					0
	7:00 AM							14	194			176	12	396					0
	7:15 AM							16	221			242	15	494					0
	7:30 AM							28	253			252	28	561					0
	7:45 AM							22	304			198	25	549					0
	8:00 AM							15	300			173	12	500					0
	8:15 AM							22	240			173	20	455					0
	8:30 AM							23	178			184	14	399					0
	8:45 AM							15	224			188	28	455					0
	VOLUMES	0	0	0	0	0	0	191	2,440	0	0	2,178	187	4,996	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	7%	93%	0%	0%	92%	8%						
	APP/DEPART	0	/	378	0	/	0	2,631	/	2,440	2,365	/	2,178	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	81	1,078	0	0	865	80	2,104					
	APPROACH %	0%	0%	0%	0%	0%	0%	7%	93%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.000			0.000			0.889			0.844		0.938					
	APP/DEPART	0	/	161	0	/	0	1,159	/	1,078	945	/	865	0					
PM	3:00 PM							24	147			236	31	438					0
	3:15 PM							18	138			210	32	398					0
	3:30 PM							21	150			237	40	448					0
	3:45 PM							29	135			246	29	439					0
	4:00 PM							29	152			248	48	477					0
	4:15 PM							39	128			217	32	416					0
	4:30 PM							26	132			238	27	423					0
	4:45 PM							28	145			252	38	463					0
	5:00 PM							28	178			260	37	503					0
	5:15 PM							22	213			246	41	522					0
	5:30 PM							34	206			250	32	522					0
	5:45 PM							21	163			227	37	448					0
	VOLUMES	0	0	0	0	0	0	319	1,887	0	0	2,867	424	5,497	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	14%	86%	0%	0%	87%	13%						
	APP/DEPART	0	/	743	0	/	0	2,206	/	1,887	3,291	/	2,867	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	112	742	0	0	1,008	148	2,010					
	APPROACH %	0%	0%	0%	0%	0%	0%	13%	87%	0%	0%	87%	13%						
	PEAK HR FACTOR		0.000			0.000			0.890			0.973		0.963					
	APP/DEPART	0	/	260	0	/	0	854	/	742	1,156	/	1,008	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	2		0	0	2	1		0	0	1	3	0	0	0	3
	6:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	6:30 AM	7		0	0	7	0		0	0	0	7	0	0	0	7
	6:45 AM	6		0	0	6	1		0	0	1	7	0	0	0	7
	7:00 AM	16		0	0	16	3		0	0	3	19	0	0	0	19
	7:15 AM	15		0	0	15	1		0	0	1	16	0	0	0	16
	7:30 AM	9		0	0	9	0		0	0	0	9	0	0	0	9
	7:45 AM	11		0	0	11	2		0	0	2	13	0	0	0	13
	8:00 AM	12		0	0	12	1		0	0	1	13	0	0	0	13
	8:15 AM	8		0	0	8	0		0	0	0	8	0	0	0	8
	8:30 AM	9		0	0	9	0		0	0	0	9	0	0	0	9
	8:45 AM	5		0	1	6	1		0	0	1	6	0	0	1	7
	TOTAL	102	0	0	1	103	10	0	0	0	10	112	0	0	1	113
PM	3:00 PM	9		0	0	9	5		0	0	5	14	0	0	0	14
	3:15 PM	8		0	0	8	2		0	0	2	10	0	0	0	10
	3:30 PM	11		0	0	11	2		0	0	2	13	0	0	0	13
	3:45 PM	15		0	0	15	3		0	0	3	18	0	0	0	18
	4:00 PM	15		1	0	16	0		0	0	0	15	0	1	0	16
	4:15 PM	8		0	0	8	4		0	0	4	12	0	0	0	12
	4:30 PM	11		0	0	11	2		0	0	2	13	0	0	0	13
	4:45 PM	13		0	0	13	1		0	0	1	14	0	0	0	14
	5:00 PM	7		0	0	7	2		0	0	2	9	0	0	0	9
	5:15 PM	10		0	0	10	0		0	0	0	10	0	0	0	10
	5:30 PM	2		0	0	2	0		0	0	0	2	0	0	0	2
	5:45 PM	7		0	0	7	1		0	0	1	8	0	0	0	8
	TOTAL	116	0	1	0	117	22	0	0	0	22	138	0	1	0	139

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

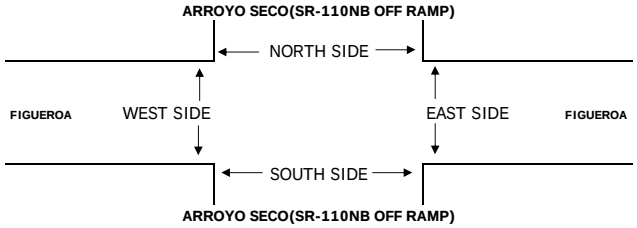
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB OFF RAMP)	LOCATION #:	21
TUESDAY	EAST & WEST:	FIGUEROA	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

		NORTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			EASTBOUND FIGUEROA			WESTBOUND FIGUEROA				U-TURNS				
	LANES:	NL X	NT X	NR 2	SL X	ST X	SR X	EL X	ET 2	ER X	WL X	WT 3	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM			53					41			186		280					0
	6:15 AM			77					50			216		343					0
	6:30 AM			81					61			240		382					0
	6:45 AM			101					69			331		501					0
	7:00 AM			85					84			341		510					0
	7:15 AM			109					80			374		563					0
	7:30 AM			139					101			359		599					0
	7:45 AM			117					97			403		617					0
	8:00 AM			92					76			440		608					0
	8:15 AM			81					98			379		558					0
	8:30 AM			80					95			383		558					0
	8:45 AM			81					83			363		527					0
	VOLUMES	0	0	1,096	0	0	0	0	935	0	0	4,015	0	6,046	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1,096	/	0	0	/	0	935	/	2,031	4,015	/	4,015	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	457	0	0	0	0	354	0	0	1,576	0	2,387					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.822			0.000			0.876			0.895		0.967					
	APP/DEPART	457	/	0	0	/	0	354	/	811	1,576	/	1,576	0					
PM	3:00 PM			101					139			220		460					0
	3:15 PM			127					130			235		492					0
	3:30 PM			106					126			241		473					0
	3:45 PM			105					132			210		447					0
	4:00 PM			102					127			239		468					0
	4:15 PM			111					145			237		493					0
	4:30 PM			99					149			203		451					0
	4:45 PM			95					155			216		466					0
	5:00 PM			105					149			228		482					0
	5:15 PM			92					179			245		516					0
	5:30 PM			96					202			197		495					0
	5:45 PM			101					192			222		515					0
	VOLUMES	0	0	1,240	0	0	0	0	1,825	0	0	2,693	0	5,758	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1,240	/	0	0	/	0	1,825	/	3,065	2,693	/	2,693	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	394	0	0	0	0	722	0	0	892	0	2,008					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.938			0.000			0.894			0.910		0.973					
	APP/DEPART	394	/	0	0	/	0	722	/	1,116	892	/	892	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM		2			2		0			0	0	2	0	0	2
	6:15 AM		4			4		0			0	0	4	0	0	4
	6:30 AM		3			3		0			0	0	3	0	0	3
	6:45 AM		3			3		0			0	0	3	0	0	3
	7:00 AM		2			2		0			0	0	2	0	0	2
	7:15 AM		4			4		0			0	0	4	0	0	4
	7:30 AM		2			2		1			1	0	3	0	0	3
	7:45 AM		5			5		0			0	0	5	0	0	5
	8:00 AM		5			5		0			0	0	5	0	0	5
	8:15 AM		1			1		0			0	0	1	0	0	1
	8:30 AM		3			3		1			1	0	4	0	0	4
	8:45 AM		4			4		2			2	0	6	0	0	6
	TOTAL	0	38	0	0	38	0	4	0	0	4	0	42	0	0	42
PM	3:00 PM		2			2		0			0	0	2	0	0	2
	3:15 PM		3			3		1			1	0	4	0	0	4
	3:30 PM		1			1		6			6	0	7	0	0	7
	3:45 PM		2			2		0			0	0	2	0	0	2
	4:00 PM		3			3		3			3	0	6	0	0	6
	4:15 PM		4			4		0			0	0	4	0	0	4
	4:30 PM		5			5		1			1	0	6	0	0	6
	4:45 PM		2			2		2			2	0	4	0	0	4
	5:00 PM		2			2		0			0	0	2	0	0	2
	5:15 PM		2			2		0			0	0	2	0	0	2
	5:30 PM		0			0		0			0	0	0	0	0	0
	5:45 PM		6			6		4			4	0	10	0	0	10
	TOTAL	0	32	0	0	32	0	17	0	0	17	0	49	0	0	49

INTERSECTION TURNING MOVEMENT COUNTS

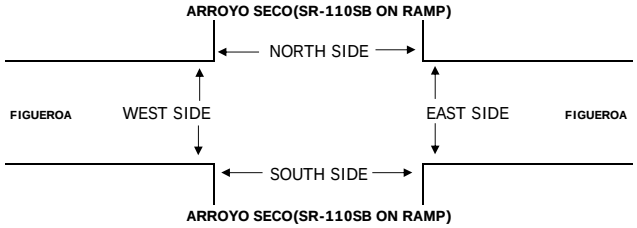
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB ON RAMP)	LOCATION #:	22
TUESDAY	EAST & WEST:	FIGUEROA	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB ON RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB ON RAMP)			EASTBOUND FIGUEROA			WESTBOUND FIGUEROA				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST 1	SR 0	EL 0	ET 2	ER 0	WL 2	WT 0.5	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				3	1	1	0	37	54	111	59	15	281					0
	6:15 AM				2	6	2	0	50	39	126	70	22	317					0
	6:30 AM				10	10	1	0	49	28	123	95	20	336					0
	6:45 AM				3	1	2	0	67	18	144	155	34	424					0
	7:00 AM				15	5	0	0	67	27	154	152	34	454					0
	7:15 AM				10	4	5	0	72	31	159	182	35	498					0
	7:30 AM				17	4	2	0	85	34	156	163	39	500					0
	7:45 AM				22	7	3	0	74	41	174	194	33	548					0
	8:00 AM				13	6	6	0	64	38	199	202	41	569					0
	8:15 AM				18	10	7	0	79	46	159	154	65	538					0
	8:30 AM				28	10	2	0	65	29	159	172	54	519					0
	8:45 AM				22	10	1	0	63	35	145	157	59	492					0
	VOLUMES	0	0	0	163	74	32	0	772	420	1,809	1,755	451	5,476	0	0	0	0	0
	APPROACH %	0%	0%	0%	61%	28%	12%	0%	65%	35%	45%	44%	11%						
	APP/DEPART	0	/	451	269	/	2,303	1,192	/	935	4,015	/	1,787	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	81	33	18	0	282	154	691	722	193	2,174					
	APPROACH %	0%	0%	0%	61%	25%	14%	0%	65%	35%	43%	45%	12%						
	PEAK HR FACTOR		0.000			0.825			0.872			0.908		0.955					
	APP/DEPART	0	/	193	132	/	878	436	/	363	1,606	/	740	0					
PM	3:00 PM				28	5	1	0	108	21	86	78	54	381					0
	3:15 PM				33	2	6	0	100	15	95	95	47	393					0
	3:30 PM				21	1	0	0	104	35	107	98	35	401					0
	3:45 PM				24	7	8	0	107	19	77	90	44	376					0
	4:00 PM				31	6	1	0	98	20	98	94	46	394					0
	4:15 PM				30	4	3	0	113	25	100	87	49	411					0
	4:30 PM				33	6	5	1	118	10	88	86	30	377					0
	4:45 PM				26	5	4	1	126	11	92	88	34	387					0
	5:00 PM				24	4	5	0	126	12	102	90	38	401					0
	5:15 PM				28	2	2	2	153	9	83	111	52	442					0
	5:30 PM				30	4	3	0	174	10	83	79	33	416					0
	5:45 PM				24	7	6	0	166	14	89	100	35	441					0
	VOLUMES	0	0	0	332	53	44	4	1,493	201	1,100	1,096	497	4,820	0	0	0	0	0
	APPROACH %	0%	0%	0%	77%	12%	10%	0%	88%	12%	41%	41%	18%						
	APP/DEPART	0	/	501	429	/	1,354	1,698	/	1,825	2,693	/	1,140	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	106	17	16	2	619	45	357	380	158	1,700					
	APPROACH %	0%	0%	0%	76%	12%	12%	0%	93%	7%	40%	42%	18%						
	PEAK HR FACTOR		0.000			0.939			0.905			0.910		0.962					
	APP/DEPART	0	/	160	139	/	419	666	/	725	895	/	396	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	2	2		0	4	0	0		0	0	2	2	0	0	4
	6:15 AM	4	4		0	8	1	0		0	1	5	4	0	0	9
	6:30 AM	5	6		4	15	0	0		0	0	5	6	0	4	15
	6:45 AM	6	2		0	8	1	0		0	1	7	2	0	0	9
	7:00 AM	7	2		3	12	1	0		0	1	8	2	0	3	13
	7:15 AM	0	3		2	5	2	0		0	2	2	3	0	2	7
	7:30 AM	1	2		4	7	3	1		0	4	4	3	0	4	11
	7:45 AM	0	4		3	7	1	0		0	1	1	4	0	3	8
	8:00 AM	4	5		5	14	3	0		0	3	7	5	0	5	17
	8:15 AM	1	1		0	2	2	0		0	2	3	1	0	0	4
	8:30 AM	6	2		2	10	1	1		0	2	7	3	0	2	12
	8:45 AM	2	4		3	9	1	1		0	2	3	5	0	3	11
	TOTAL	38	37	0	26	101	16	3	0	0	19	54	40	0	26	120
PM	3:00 PM	2	1		1	4	1	0		0	1	3	1	0	1	5
	3:15 PM	1	3		1	5	1	1		2	4	2	4	0	3	9
	3:30 PM	3	0		3	6	1	5		0	6	4	5	0	3	12
	3:45 PM	2	2		0	4	2	2		0	4	4	4	0	0	8
	4:00 PM	6	3		1	10	2	2		0	4	8	5	0	1	14
	4:15 PM	2	3		2	7	2	1		0	3	4	4	0	2	10
	4:30 PM	1	5		3	9	1	0		0	1	2	5	0	3	10
	4:45 PM	4	4		1	9	0	2		0	2	4	6	0	1	11
	5:00 PM	6	2		1	9	0	0		0	0	6	2	0	1	9
	5:15 PM	3	2		0	5	1	0		0	1	4	2	0	0	6
	5:30 PM	3	0		0	3	1	1		0	2	4	1	0	0	5
	5:45 PM	2	6		3	11	0	3		0	3	2	9	0	3	14
	TOTAL	35	31	0	16	82	12	17	0	2	31	47	48	0	18	113

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

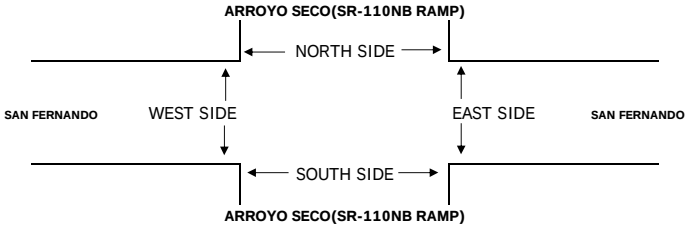
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMP)	LOCATION #:	23
TUESDAY	EAST & WEST:	SAN FERNANDO	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB RAMP)			EASTBOUND SAN FERNANDO			WESTBOUND SAN FERNANDO				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR X	EL 0	ET 2	ER X	WL X	WT 3	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM							9	62			119	2	192					0
	6:15 AM							8	87			125	3	223					0
	6:30 AM							15	102			133	6	256					0
	6:45 AM							9	135			135	10	289					0
	7:00 AM							4	163			151	17	335					0
	7:15 AM							25	158			218	17	418					0
	7:30 AM							16	160			265	26	467					0
	7:45 AM							18	192			222	20	452					0
	8:00 AM							18	154			198	11	381					0
	8:15 AM							18	145			158	17	338					0
	8:30 AM							20	142			151	19	332					0
	8:45 AM							20	163			133	21	337					0
	VOLUMES	0	0	0	0	0	0	180	1,663	0	0	2,008	169	4,020	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	10%	90%	0%	0%	92%	8%						
	APP/DEPART	0	/	349	0	/	0	1,843	/	1,663	2,177	/	2,008	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	77	664	0	0	903	74	1,718					
	APPROACH %	0%	0%	0%	0%	0%	0%	10%	90%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.000			0.000			0.882			0.839		0.920					
	APP/DEPART	0	/	151	0	/	0	741	/	664	977	/	903	0					
PM	3:00 PM							7	81			115	19	222					0
	3:15 PM							4	74			103	21	202					0
	3:30 PM							6	86			134	20	246					0
	3:45 PM							4	76			128	14	222					0
	4:00 PM							7	81			133	20	241					0
	4:15 PM							4	81			143	11	239					0
	4:30 PM							7	87			159	31	284					0
	4:45 PM							11	74			174	24	283					0
	5:00 PM							7	75			211	26	319					0
	5:15 PM							6	73			186	28	293					0
	5:30 PM							5	92			189	17	303					0
	5:45 PM							10	75			207	12	304					0
	VOLUMES	0	0	0	0	0	0	78	955	0	0	1,882	243	3,158	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	8%	92%	0%	0%	89%	11%						
	APP/DEPART	0	/	321	0	/	0	1,033	/	955	2,125	/	1,882	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	0	0	0	28	315	0	0	793	83	1,219					
	APPROACH %	0%	0%	0%	0%	0%	0%	8%	92%	0%	0%	91%	9%						
	PEAK HR FACTOR		0.000			0.000			0.884			0.924		0.955					
	APP/DEPART	0	/	111	0	/	0	343	/	315	876	/	793	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	6:30 AM	8		0	0	8	0		0	0	0	8	0	0	0	8
	6:45 AM	3		0	0	3	0		0	0	0	3	0	0	0	3
	7:00 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	7:15 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	7:30 AM	5		0	0	5	1		0	0	1	6	0	0	0	6
	7:45 AM	6		0	0	6	3		0	0	3	9	0	0	0	9
	8:00 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	8:15 AM	12		0	0	12	0		0	0	0	12	0	0	0	12
	8:30 AM	7		2	0	9	1		0	0	1	8	0	2	0	10
	8:45 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	TOTAL	79	0	2	0	81	9	0	0	0	9	88	0	2	0	90
PM	3:00 PM	3		0	0	3	1		0	0	1	4	0	0	0	4
	3:15 PM	5		0	0	5	2		0	0	2	7	0	0	0	7
	3:30 PM	1		0	0	1	0		0	0	0	1	0	0	0	1
	3:45 PM	1		0	0	1	0		0	0	0	1	0	0	0	1
	4:00 PM	2		1	0	3	12		0	0	12	14	0	1	0	15
	4:15 PM	4		0	0	4	1		0	0	1	5	0	0	0	5
	4:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:45 PM	1		0	0	1	6		0	0	6	7	0	0	0	7
	5:00 PM	2		0	0	2	0		0	0	0	2	0	0	0	2
	5:15 PM	1		0	0	1	1		0	0	1	2	0	0	0	2
	5:30 PM	2		0	0	2	1		0	0	1	3	0	0	0	3
	5:45 PM	2		0	0	2	4		0	0	4	6	0	0	0	6
	TOTAL	24	0	1	0	25	28	0	0	0	28	52	0	1	0	53

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	24
TUESDAY	EAST & WEST:	SOLANO / CASANOVA	CONTROL:	1-WAY STOP: WB

NOTES:

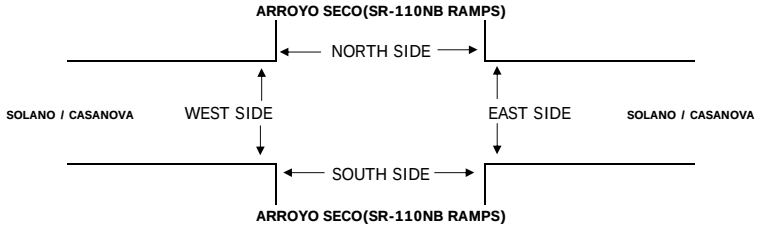
OFF RAMP = ALL NB

ON RAMP = NT & WR

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND SOLANO / CASANOVA			WESTBOUND SOLANO / CASANOVA				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM		2	0	2	10					0		0	14					0
	6:15 AM		2	0	0	7					1		2	12					0
	6:30 AM		1	1	0	16					2		2	22					0
	6:45 AM		6	0	0	12					1		1	20					0
	7:00 AM		6	0	1	20					1		0	28					0
	7:15 AM		5	0	0	26					1		2	34					0
	7:30 AM		12	1	1	31					5		2	52					0
	7:45 AM		5	2	0	37					10		1	55					0
	8:00 AM		2	1	2	20					4		1	30					0
	8:15 AM		6	4	1	21					2		2	36					0
	8:30 AM		7	0	2	27					6		2	44					0
	8:45 AM		14	0	0	21					8		2	45					0
	VOLUMES	0	68	9	9	248	0	0	0	0	41	0	17	392	0	0	0	0	0
	APPROACH %	0%	88%	12%	4%	96%	0%	0%	0%	0%	71%	0%	29%						
	APP/DEPART	77	/	85	257	/	289	0	/	18	58	/	0	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	25	8	4	109	0	0	0	0	21	0	6	173					
	APPROACH %	0%	76%	24%	4%	96%	0%	0%	0%	0%	78%	0%	22%						
	PEAK HR FACTOR		0.635			0.764			0.000			0.614		0.786					
	APP/DEPART	33	/	31	113	/	130	0	/	12	27	/	0	0					
PM	3:00 PM		17	1	0	30					1		1	50					0
	3:15 PM		19	3	0	17					2		0	41					0
	3:30 PM		16	3	1	18					1		4	43					0
	3:45 PM		20	0	4	21					1		0	46					0
	4:00 PM		15	0	2	19					5		1	42					0
	4:15 PM		18	3	1	13					1		1	37					0
	4:30 PM		20	5	1	9					4		3	42					0
	4:45 PM		26	2	1	11					4		0	44					0
	5:00 PM		24	2	1	11					1		2	41					0
	5:15 PM		27	4	2	7					1		2	43					0
	5:30 PM		28	3	0	7					0		0	38					0
	5:45 PM		28	2	2	9					2		0	43					0
	VOLUMES	0	258	28	15	172	0	0	0	0	23	0	14	510	0	0	0	0	0
	APPROACH %	0%	90%	10%	8%	92%	0%	0%	0%	0%	62%	0%	38%						
	APP/DEPART	286	/	272	187	/	195	0	/	43	37	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	72	7	5	86	0	0	0	0	5	0	5	180					
	APPROACH %	0%	91%	9%	5%	95%	0%	0%	0%	0%	50%	0%	50%						
	PEAK HR FACTOR		0.898			0.758			0.000			0.500		0.900					
	APP/DEPART	79	/	77	91	/	91	0	/	12	10	/	0	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	1		1	0	0	0		0	0	0	1	0	1
	6:15 AM	0	0	1		1	0	0	1		1	0	0	2	0	2
	6:30 AM	0	0	2		2	0	0	0		0	0	0	2	0	2
	6:45 AM	0	0	4		4	0	0	1		1	0	0	5	0	5
	7:00 AM	0	0	7		7	0	0	0		0	0	0	7	0	7
	7:15 AM	1	0	7		8	0	0	0		0	1	0	7	0	8
	7:30 AM	3	3	14		20	0	0	0		0	3	3	14	0	20
	7:45 AM	0	0	67		67	0	0	0		0	0	0	67	0	67
	8:00 AM	0	0	19		19	0	0	0		0	0	0	19	0	19
	8:15 AM	0	2	17		19	0	0	0		0	0	2	17	0	19
	8:30 AM	0	0	13		13	0	0	0		0	0	0	13	0	13
	8:45 AM	0	0	7		7	0	0	0		0	0	0	7	0	7
	TOTAL	4	5	159	0	168	0	0	2	0	2	4	5	161	0	170
PM	3:00 PM	0	0	9		9	0	0	0		0	0	0	9	0	9
	3:15 PM	0	0	12		12	0	0	0		0	0	0	12	0	12
	3:30 PM	0	0	4		4	0	0	0		0	0	0	4	0	4
	3:45 PM	0	0	6		6	0	0	0		0	0	0	6	0	6
	4:00 PM	2	0	6		8	0	0	1		1	2	0	7	0	9
	4:15 PM	0	0	6		6	0	0	0		0	0	0	6	0	6
	4:30 PM	0	0	4		4	0	0	0		0	0	0	4	0	4
	4:45 PM	0	0	6		6	0	0	0		0	0	0	6	0	6
	5:00 PM	0	0	4		4	0	0	0		0	0	0	4	0	4
	5:15 PM	0	0	1		1	0	0	0		0	0	0	1	0	1
	5:30 PM	0	0	1		1	0	0	0		0	0	0	1	0	1
	5:45 PM	0	0	2		2	0	0	0		0	0	0	2	0	2
	TOTAL	2	0	61	0	63	0	0	1	0	1	2	0	62	0	64

INTERSECTION TURNING MOVEMENT COUNTS

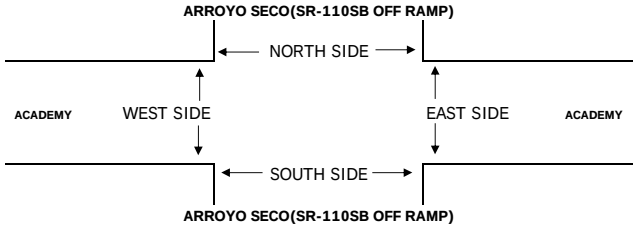
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMP)	LOCATION #:	25
TUESDAY	EAST & WEST:	ACADEMY	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			EASTBOUND ACADEMY			WESTBOUND ACADEMY				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 1	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM						2							2					0
	6:15 AM						3							3					0
	6:30 AM						5							5					0
	6:45 AM						2							2					0
	7:00 AM						9							9					0
	7:15 AM						8							8					0
	7:30 AM						9							9					0
	7:45 AM						6							6					0
	8:00 AM						7							7					0
	8:15 AM						4							4					0
	8:30 AM						7							7					0
	8:45 AM						6							6					0
	VOLUMES	0	0	0	0	0	68	0	0	0	0	0	0	68	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	68	/	0	0	/	0	0	/	68	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	0	32	0	0	0	0	0	0	32					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.889			0.000			0.000		0.889					
	APP/DEPART	0	/	0	32	/	0	0	/	0	0	/	32	0					
PM	3:00 PM						12							12					0
	3:15 PM						3							3					0
	3:30 PM						11							11					0
	3:45 PM						11							11					0
	4:00 PM						4							4					0
	4:15 PM						6							6					0
	4:30 PM						8							8					0
	4:45 PM						13							13					0
	5:00 PM						5							5					0
	5:15 PM						10							10					0
	5:30 PM						4							4					0
	5:45 PM						5							5					0
	VOLUMES	0	0	0	0	0	92	0	0	0	0	0	0	92	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	92	/	0	0	/	0	0	/	92	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	37	0	0	0	0	0	0	37					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.771			0.000			0.000		0.771					
	APP/DEPART	0	/	0	37	/	0	0	/	0	0	/	37	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0			0	0	0			0	0	0	0	0	0	0
	6:15 AM	0			0	0	0			0	0	0	0	0	0	0
	6:30 AM	0			0	0	0			0	0	0	0	0	0	0
	6:45 AM	0			0	0	0			0	0	0	0	0	0	0
	7:00 AM	0			0	0	0			0	0	0	0	0	0	0
	7:15 AM	0			0	0	0			0	0	0	0	0	0	0
	7:30 AM	0			0	0	0			0	0	0	0	0	0	0
	7:45 AM	0			0	0	0			0	0	0	0	0	0	0
	8:00 AM	0			0	0	0			0	0	0	0	0	0	0
	8:15 AM	0			0	0	0			0	0	0	0	0	0	0
	8:30 AM	0			0	0	0			0	0	0	0	0	0	0
	8:45 AM	0			0	0	0			0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0			0	0	0			0	0	0	0	0	0	0
	3:15 PM	0			0	0	0			0	0	0	0	0	0	0
	3:30 PM	0			0	0	0			0	0	0	0	0	0	0
	3:45 PM	0			0	0	0			0	0	0	0	0	0	0
	4:00 PM	0			0	0	0			0	0	0	0	0	0	0
	4:15 PM	0			0	0	0			0	0	0	0	0	0	0
	4:30 PM	0			0	0	0			0	0	0	0	0	0	0
	4:45 PM	0			0	0	0			0	0	0	0	0	0	0
	5:00 PM	0			0	0	0			0	0	0	0	0	0	0
	5:15 PM	0			0	0	0			0	0	0	0	0	0	0
	5:30 PM	0			0	0	0			0	0	0	0	0	0	0
	5:45 PM	0			0	0	0			0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

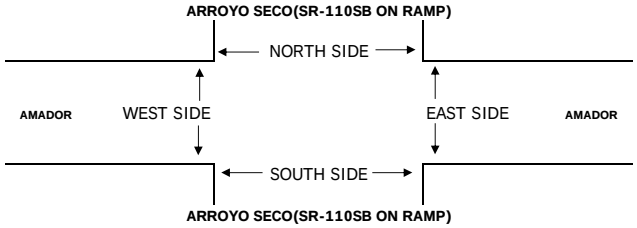
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB ON RAMP)	LOCATION #:	26
TUESDAY	EAST & WEST:	AMADOR	CONTROL:	1 WAY STOP: SB

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB ON RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB ON RAMP)			EASTBOUND AMADOR			WESTBOUND AMADOR				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST 1	SR 0	EL 0	ET 1	ER 1	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				1	0	0	0	5	8	9	16	2	41					0
	6:15 AM				1	0	0	0	8	24	7	5	1	46					0
	6:30 AM				0	0	0	0	13	18	7	14	1	53					0
	6:45 AM				0	0	0	0	17	23	7	12	1	60					0
	7:00 AM				1	1	0	0	23	32	5	17	5	84					0
	7:15 AM				3	3	0	2	21	32	16	21	9	107					0
	7:30 AM				6	5	0	6	44	54	18	22	31	186					0
	7:45 AM				3	2	6	7	40	62	16	29	48	213					0
	8:00 AM				3	0	2	6	23	50	21	20	15	140					0
	8:15 AM				7	1	2	1	38	63	22	15	1	150					0
	8:30 AM				5	0	0	1	34	78	11	25	4	158					0
	8:45 AM				1	1	1	1	28	56	12	28	1	129					0
	VOLUMES	0	0	0	31	13	11	24	294	500	151	224	119	1,367	0	0	0	0	0
	APPROACH %	0%	0%	0%	56%	24%	20%	3%	36%	61%	31%	45%	24%						
	APP/DEPART	0	/	143	55	/	664	818	/	325	494	/	235	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	19	8	10	20	145	229	77	86	95	689					
	APPROACH %	0%	0%	0%	51%	22%	27%	5%	37%	58%	30%	33%	37%						
	PEAK HR FACTOR		0.000			0.841			0.904			0.694		0.809					
	APP/DEPART	0	/	115	37	/	314	394	/	164	258	/	96	0					
PM	3:00 PM				3	0	1	0	33	26	5	21	3	92					0
	3:15 PM				3	1	0	0	26	11	3	20	5	69					0
	3:30 PM				2	1	0	1	20	11	4	27	2	68					0
	3:45 PM				7	1	0	0	21	8	3	19	6	65					0
	4:00 PM				4	1	0	1	15	10	6	27	5	69					0
	4:15 PM				4	0	2	0	19	6	3	30	3	67					0
	4:30 PM				5	0	0	0	20	12	2	15	6	60					0
	4:45 PM				8	1	0	1	25	13	3	28	7	86					0
	5:00 PM				6	0	1	0	23	15	5	18	2	70					0
	5:15 PM				4	0	0	2	26	13	2	19	7	73					0
	5:30 PM				4	1	1	0	22	14	4	26	4	76					0
	5:45 PM				1	1	0	0	20	16	5	23	3	69					0
	VOLUMES	0	0	0	51	7	5	5	270	155	45	273	53	864	0	0	0	0	0
	APPROACH %	0%	0%	0%	81%	11%	8%	1%	63%	36%	12%	74%	14%						
	APP/DEPART	0	/	58	63	/	207	430	/	321	371	/	278	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	22	2	2	3	96	55	14	91	20	305					
	APPROACH %	0%	0%	0%	85%	8%	8%	2%	62%	36%	11%	73%	16%						
	PEAK HR FACTOR		0.000			0.722			0.939			0.822		0.887					
	APP/DEPART	0	/	23	26	/	71	154	/	118	125	/	93	0					



		PEDESTRIAN CROSSINGS					BICYCLE ACTIVATIONS					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	7:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:45 AM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	8:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:15 AM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	8:30 AM	2	0	0	0	2	0	1	0	0	1	2	1	0	0	3
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	0	0	1	7	1	2	0	0	3	7	2	0	1	10
PM	3:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	4:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	4:30 PM	4	0	0	1	5	0	0	0	0	0	4	0	0	1	5
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	3	0	0	1	4	0	0	0	0	0	3	0	0	1	4
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	8	0	0	5	13	0	0	0	0	0	8	0	0	5	13

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	S PASADENA	LOCATION #:	1
WEDNESDAY	EAST & WEST:	GLENARM	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND S PASADENA			SOUTHBOUND S PASADENA			EASTBOUND GLENARM			WESTBOUND GLENARM				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL X	NT 2	NR 0	SL 0	ST 2	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM		57	0	6	164					0		5	232	0	0	0		0	0	0	0		0	0	0	0	0	0
	6:15 AM		117	0	22	220					1		9	369	1	0	0		1	0	0	0		0	1	0	0	0	1
	6:30 AM		135	2	22	257					2		14	432	0	0	0		0	0	0	0		0	0	0	0	0	0
	6:45 AM		175	3	17	265					1		21	482	1	0	0		1	0	0	0		0	1	0	0	0	1
	7:00 AM		176	1	26	297					0		16	516	1	0	1		2	0	0	0		0	1	0	1	0	2
	7:15 AM		235	4	51	298					17		33	638	2	0	0		2	0	0	0		0	2	0	0	0	2
	7:30 AM		261	6	49	293					36		55	700	2	0	0		2	0	0	0		0	2	0	0	0	2
	7:45 AM		237	4	34	250					17		42	584	1	0	0		1	0	0	0		0	1	0	0	0	1
	8:00 AM		274	4	22	227					9		51	587	1	0	1		2	0	0	0		0	1	0	1	0	2
	8:15 AM		229	3	25	216					16		49	538	0	0	0		0	0	0	0		0	0	0	0	0	0
	8:30 AM		194	2	37	236					17		31	517	0	0	0		0	0	0	0		0	0	0	0	0	0
	8:45 AM		198	6	42	216					7		41	510	2	0	1		3	0	0	1		1	2	0	2	0	4
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	2,288	35	353	2,939	0	0	0	0	123	0	367	6,105	11	0	3	0	14	0	0	1	0	1	11	0	4	0	15
	APPROACH %	0%	98%	2%	11%	89%	0%	0%	0%	0%	25%	0%	75%																
	APP/DEPART	2,323	/	2,655	3,292	/	3,062	0	/	388	490	/	0	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	0	1,007	18	156	1,068	0	0	0	0	79	0	181	2,509															
	APPROACH %	0%	98%	2%	13%	87%	0%	0%	0%	0%	30%	0%	70%																
	PEAK HR FACTOR		0.922			0.877			0.000			0.714		0.896															
	APP/DEPART	1,025	/	1,188	1,224	/	1,147	0	/	174	260	/	0	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM		236	5	46	174					16		52	529	0	0	0		0	2	0	1		3	2	0	1	0	3
	3:15 PM		227	4	28	182					11		49	501	2	0	0		2	0	0	0		0	2	0	0	0	2
	3:30 PM		230	4	37	191					11		45	518	0	0	9		9	0	0	1		1	0	0	10	0	10
	3:45 PM		232	1	36	172					10		41	492	1	0	0		1	0	0	0		0	1	0	0	0	1
	4:00 PM		226	5	40	133					12		42	458	2	0	1		3	0	0	0		0	2	0	1	0	3
	4:15 PM		236	4	37	186					13		46	522	0	0	0		0	0	0	1		1	0	0	1	0	1
	4:30 PM		232	5	43	195					5		60	540	1	0	0		1	1	0	0		1	2	0	0	0	2
	4:45 PM		230	5	40	220					9		60	564	1	0	1		2	0	0	1		1	1	0	2	0	3
	5:00 PM		222	6	44	204					12		51	539	0	0	1		1	0	0	0		0	0	0	1	0	1
	5:15 PM		264	1	36	240					10		36	587	0	0	1		1	1	0	0		1	1	0	1	0	2
	5:30 PM		271	5	38	228					8		35	585	0	0	0		0	0	0	0		0	0	0	0	0	0
	5:45 PM		247	4	39	207					6		47	550	0	0	0		0	0	0	0		0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	2,853	49	464	2,332	0	0	0	0	123	0	564	6,385	7	0	13	0	20	4	0	4	0	8	11	0	17	0	28
	APPROACH %	0%	98%	2%	17%	83%	0%	0%	0%	0%	18%	0%	82%																
	APP/DEPART	2,902	/	3,417	2,796	/	2,455	0	/	513	687	/	0	0															
	BEGIN PEAK HR		4:45 PM																										
	VOLUMES	0	987	17	158	892	0	0	0	0	39	0	182	2,275															
	APPROACH %	0%	98%	2%	15%	85%	0%	0%	0%	0%	18%	0%	82%																
	PEAK HR FACTOR		0.909			0.951			0.000			0.801		0.969															
	APP/DEPART	1,004	/	1,169	1,050	/	931	0	/	175	221	/	0	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	S PASADENA	LOCATION #:	1
WEDNESDAY	EAST & WEST:	GLENARM	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND S PASADENA			SOUTHBOUND S PASADENA			EASTBOUND GLENARM			WESTBOUND GLENARM				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
LANES:	NL X	NT 2	NR 0	SL 0	ST 2	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WE X	TTL	NS X	SS X	ES X	WS X	TTL
AM																													
5:00 AM													0					0					0	0	0	0	0	0
5:15 AM													0					0					0	0	0	0	0	0
5:30 AM													0					0					0	0	0	0	0	0
5:45 AM													0					0					0	0	0	0	0	0
6:00 AM		57	0	6	164					0		5	232	0	0	0		0	0	0	0		0	0	0	0	0	0
6:15 AM		117	0	22	220					1		9	369	1	0	0		1	0	0	0		0	1	0	0	0	1
6:30 AM		135	2	22	257					2		14	432	0	0	0		0	0	0	0		0	0	0	0	0	0
6:45 AM		175	3	17	265					1		21	482	1	0	0		1	0	0	0		0	1	0	0	0	1
7:00 AM		176	1	26	297					0		16	516	1	0	1		2	0	0	0		0	1	0	1	0	2
7:15 AM		235	4	51	298					17		33	638	2	0	0		2	0	0	0		0	2	0	0	0	2
7:30 AM		261	6	49	293					36		55	700	2	0	0		2	0	0	0		0	2	0	0	0	2
7:45 AM		237	4	34	250					17		42	584	1	0	0		1	0	0	0		0	1	0	0	0	1
8:00 AM		274	4	22	227					9		51	587	1	0	1		2	0	0	0		0	1	0	1	0	2
8:15 AM		229	3	25	216					16		49	538	0	0	0		0	0	0	0		0	0	0	0	0	0
8:30 AM		194	2	37	236					17		31	517	0	0	0		0	0	0	0		0	0	0	0	0	0
8:45 AM		198	6	42	216					7		41	510	2	0	1		3	0	0	1		1	2	0	2	0	4
9:00 AM													0					0					0	0	0	0	0	0
9:15 AM													0					0					0	0	0	0	0	0
9:30 AM													0					0					0	0	0	0	0	0
9:45 AM													0					0					0	0	0	0	0	0
VOLUMES	0	2,288	35	353	2,939	0	0	0	0	123	0	367	6,105	11	0	3	0	14	0	0	1	0	1	11	0	4	0	15
APPROACH %	0%	98%	2%	11%	89%	0%	0%	0%	0%	25%	0%	75%																
APP/DEPART	2,323	/	2,655	3,292	/	3,062	0	/	388	490	/	0	0															
BEGIN PEAK HR		7:15 AM																										
VOLUMES	0	1,007	18	156	1,068	0	0	0	0	79	0	181	2,509															
APPROACH %	0%	98%	2%	13%	87%	0%	0%	0%	0%	30%	0%	70%																
PEAK HR FACTOR		0.922			0.877			0.000			0.714		0.896															
APP/DEPART	1,025	/	1,188	1,224	/	1,147	0	/	174	260	/	0	0															
PM																												
2:00 PM													0					0					0	0	0	0	0	0
2:15 PM													0					0					0	0	0	0	0	0
2:30 PM													0					0					0	0	0	0	0	0
2:45 PM													0					0					0	0	0	0	0	0
3:00 PM		236	5	46	174					16		52	529	0	0	0		0	2	0	1		3	2	0	1	0	3
3:15 PM		227	4	28	182					11		49	501	2	0	0		2	0	0	0		0	2	0	0	0	2
3:30 PM		230	4	37	191					11		45	518	0	0	9		9	0	0	1		1	0	0	10	0	10
3:45 PM		232	1	36	172					10		41	492	1	0	0		1	0	0	0		0	1	0	0	0	1
4:00 PM		226	5	40	133					12		42	458	2	0	1		3	0	0	0		0	2	0	1	0	3
4:15 PM		236	4	37	186					13		46	522	0	0	0		0	0	0	1		1	0	0	1	0	1
4:30 PM		232	5	43	195					5		60	540	1	0	0		1	1	0	0		1	2	0	0	0	2
4:45 PM		230	5	40	220					9		60	564	1	0	1		2	0	0	1		1	1	0	2	0	3
5:00 PM		222	6	44	204					12		51	539	0	0	1		1	0	0	0		0	0	0	1	0	1
5:15 PM		264	1	36	240					10		36	587	0	0	1		1	1	0	0		1	1	0	1	0	2
5:30 PM		271	5	38	228					8		35	585	0	0	0		0	0	0	0		0	0	0	0	0	0
5:45 PM		247	4	39	207					6		47	550	0	0	0		0	0	0	0		0	0	0	0	0	0
6:00 PM													0					0					0	0	0	0	0	0
6:15 PM													0					0					0	0	0	0	0	0
6:30 PM													0					0					0	0	0	0	0	0
6:45 PM													0					0					0	0	0	0	0	0
VOLUMES	0	2,853	49	464	2,332	0	0	0	0	123	0	564	6,385	7	0	13	0	20	4	0	4	0	8	11	0	17	0	28
APPROACH %	0%	98%	2%	17%	83%	0%	0%	0%	0%	18%	0%	82%																
APP/DEPART	2,902	/	3,417	2,796	/	2,455	0	/	513	687	/	0	0															
BEGIN PEAK HR		4:45 PM																										
VOLUMES	0	987	17	158	892	0	0	0	0	39	0	182	2,275															
APPROACH %	0%	98%	2%	15%	85%	0%	0%	0%	0%	18%	0%	82%																
PEAK HR FACTOR		0.909			0.951			0.000			0.801		0.969															
APP/DEPART	1,004	/	1,169	1,050	/	931	0	/	175	221	/	0	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	ORANGE GROVE	LOCATION #:	2
WEDNESDAY	EAST & WEST:	COLUMBIA ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ORANGE GROVE			SOUTHBOUND ORANGE GROVE			EASTBOUND COLUMBIA ST			WESTBOUND COLUMBIA ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 0	NT 2	NR 1	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	80	0	3	1	1	1	0	43	15	4	194	1	343	1	0	1	2	4	0	0	0	0	0	1	0	1	2	4
	6:15 AM	96	1	6	2	6	2	0	51	24	11	225	1	425	0	1	1	1	3	0	0	0	1	1	0	1	1	2	4
	6:30 AM	109	3	3	2	6	5	0	83	33	9	264	2	519	1	0	2	0	3	0	0	0	0	0	1	0	2	0	3
	6:45 AM	102	4	7	4	3	2	0	80	44	20	263	2	531	0	2	4	0	6	0	0	0	0	0	0	2	4	0	6
	7:00 AM	109	2	9	5	5	4	0	120	46	22	330	1	653	1	0	0	0	1	1	0	1	0	2	2	0	1	0	3
	7:15 AM	96	3	8	2	9	5	0	159	57	21	304	2	666	1	0	3	0	4	1	0	3	0	4	2	0	6	0	8
	7:30 AM	67	4	17	7	16	6	1	185	79	29	300	3	714	1	0	2	0	3	0	0	0	0	0	1	0	2	0	3
	7:45 AM	86	10	9	6	12	0	0	181	94	30	326	9	763	0	1	4	0	5	0	0	0	0	0	0	1	4	0	5
	8:00 AM	94	11	16	4	10	6	2	180	69	19	331	4	746	0	2	1	2	5	0	0	1	1	2	0	2	2	3	7
	8:15 AM	91	4	10	5	13	1	0	183	68	18	250	5	648	0	0	4	0	4	0	0	0	0	0	0	0	4	0	4
	8:30 AM	76	4	21	2	10	6	0	139	47	40	280	5	630	1	0	2	1	4	0	0	0	0	0	1	0	2	1	4
	8:45 AM	97	8	15	2	7	7	5	144	48	17	244	5	599	3	0	4	1	8	0	0	0	1	1	3	0	4	2	9
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	1,103	54	124	42	98	45	8	1,548	624	240	3,311	40	7,237	9	6	28	7	50	2	0	5	3	10	11	6	33	10	60
	APPROACH %	86%	4%	10%	23%	53%	24%	0%	71%	29%	7%	92%	1%																
	APP/DEPART	1,281	/	102	185	/	962	2,180	/	1,714	3,591	/	4,459	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	343	28	50	19	47	17	3	705	299	99	1,261	18	2,889															
	APPROACH %	81%	7%	12%	23%	57%	20%	0%	70%	30%	7%	92%	1%																
	PEAK HR FACTOR		0.870			0.716			0.915			0.944		0.947															
	APP/DEPART	421	/	49	83	/	445	1,007	/	774	1,378	/	1,621	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	42	9	28	5	14	3	3	191	99	13	152	6	565	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:15 PM	47	10	10	4	5	5	1	168	78	15	163	8	514	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:30 PM	62	9	18	2	8	0	3	196	76	18	159	9	560	0	0	0	0	0	0	0	1	1	2	0	0	1	1	2
	3:45 PM	57	10	19	8	6	5	1	199	68	18	165	6	562	1	1	0	1	3	0	0	0	0	0	1	1	0	1	3
	4:00 PM	44	6	18	3	8	1	1	195	95	26	162	10	569	0	2	0	1	3	0	0	0	0	0	0	2	0	1	3
	4:15 PM	64	9	20	8	10	4	3	222	96	21	173	8	638	0	1	6	0	7	0	0	0	0	0	0	1	6	0	7
	4:30 PM	60	4	17	3	10	1	3	229	90	25	183	10	635	2	0	0	0	2	0	0	2	0	2	2	0	2	0	4
	4:45 PM	62	18	9	6	7	1	3	246	75	15	181	7	630	3	1	3	0	7	0	1	0	2	3	3	2	3	2	10
	5:00 PM	58	13	12	7	12	4	1	258	85	22	186	9	667	0	0	3	0	3	0	1	0	0	1	0	1	3	0	4
	5:15 PM	86	19	19	7	5	3	3	229	88	27	211	7	704	0	0	4	0	4	0	1	0	1	2	0	1	4	1	6
	5:30 PM	78	10	10	12	12	2	1	247	118	21	184	6	701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	62	9	10	1	15	3	1	249	102	18	173	10	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	722	126	190	66	112	32	24	2,629	1,070	239	2,092	96	7,398	6	7	16	2	31	0	3	3	4	10	6	10	19	6	41
	APPROACH %	70%	12%	18%	31%	53%	15%	1%	71%	29%	10%	86%	4%																
	APP/DEPART	1,038	/	246	210	/	1,421	3,723	/	2,885	2,427	/	2,846	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	284	51	51	27	44	12	6	983	393	88	754	32	2,725															
	APPROACH %	74%	13%	13%	33%	53%	14%	0%	71%	28%	10%	86%	4%																
	PEAK HR FACTOR		0.778			0.798			0.944			0.892		0.968															
	APP/DEPART	386	/	89	83	/	525	1,382	/	1,061	874	/	1,050	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	ORANGE GROVE	LOCATION #:	2
WEDNESDAY	EAST & WEST:	COLUMBIA ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ORANGE GROVE			SOUTHBOUND ORANGE GROVE			EASTBOUND COLUMBIA ST			WESTBOUND COLUMBIA ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 0	NT 2	NR 1	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	0	43	15	4	194	1	1	1	1	80	0	3	343	1	0	1	2	4	0	0	0	0	0	1	0	1	2	4
	6:15 AM	0	51	24	11	225	1	2	6	2	96	1	6	425	0	1	1	1	3	0	0	0	1	1	0	1	1	2	4
	6:30 AM	0	83	33	9	264	2	2	6	5	109	3	3	519	1	0	2	0	3	0	0	0	0	0	1	0	2	0	3
	6:45 AM	0	80	44	20	263	2	4	3	2	102	4	7	531	0	2	4	0	6	0	0	0	0	0	0	2	4	0	6
	7:00 AM	0	120	46	22	330	1	5	5	4	109	2	9	653	1	0	0	0	1	1	0	1	0	2	2	0	1	0	3
	7:15 AM	0	159	57	21	304	2	2	9	5	96	3	8	666	1	0	3	0	4	1	0	3	0	4	2	0	6	0	8
	7:30 AM	1	185	79	29	300	3	7	16	6	67	4	17	714	1	0	2	0	3	0	0	0	0	0	1	0	2	0	3
	7:45 AM	0	181	94	30	326	9	6	12	0	86	10	9	763	0	1	4	0	5	0	0	0	0	0	0	1	4	0	5
	8:00 AM	2	180	69	19	331	4	4	10	6	94	11	16	746	0	2	1	2	5	0	0	1	1	2	0	2	2	3	7
	8:15 AM	0	183	68	18	250	5	5	13	1	91	4	10	648	0	0	4	0	4	0	0	0	0	0	0	0	4	0	4
	8:30 AM	0	139	47	40	280	5	2	10	6	76	4	21	630	1	0	2	1	4	0	0	0	0	0	1	0	2	1	4
	8:45 AM	5	144	48	17	244	5	2	7	7	97	8	15	599	3	0	4	1	8	0	0	0	1	1	3	0	4	2	9
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	8	1,548	624	240	3,311	40	42	98	45	1,103	54	124	7,237	9	6	28	7	50	2	0	5	3	10	11	6	33	10	60
	APPROACH %	0%	71%	29%	7%	92%	1%	23%	53%	24%	86%	4%	10%																
	APP/DEPART	2,180	/	1,714	3,591	/	4,459	185	/	962	1,281	/	102	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	3	705	299	99	1,261	18	19	47	17	343	28	50	2,889															
	APPROACH %	0%	70%	30%	7%	92%	1%	23%	57%	20%	81%	7%	12%																
	PEAK HR FACTOR		0.915			0.944			0.716			0.870		0.947															
	APP/DEPART	1,007	/	774	1,378	/	1,621	83	/	445	421	/	49	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	3	191	99	13	152	6	5	14	3	42	9	28	565	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:15 PM	1	168	78	15	163	8	4	5	5	47	10	10	514	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:30 PM	3	196	76	18	159	9	2	8	0	62	9	18	560	0	0	0	0	0	0	0	1	1	2	0	0	1	1	2
	3:45 PM	1	199	68	18	165	6	8	6	5	57	10	19	562	1	1	0	1	3	0	0	0	0	0	1	1	0	1	3
	4:00 PM	1	195	95	26	162	10	3	8	1	44	6	18	569	0	2	0	1	3	0	0	0	0	0	0	2	0	1	3
	4:15 PM	3	222	96	21	173	8	8	10	4	64	9	20	638	0	1	6	0	7	0	0	0	0	0	0	1	6	0	7
	4:30 PM	3	229	90	25	183	10	3	10	1	60	4	17	635	2	0	0	0	2	0	0	2	0	2	2	0	2	0	4
	4:45 PM	3	246	75	15	181	7	6	7	1	62	18	9	630	3	1	3	0	7	0	1	0	2	3	3	2	3	2	10
	5:00 PM	1	258	85	22	186	9	7	12	4	58	13	12	667	0	0	3	0	3	0	1	0	0	1	0	1	3	0	4
	5:15 PM	3	229	88	27	211	7	7	5	3	86	19	19	704	0	0	4	0	4	0	1	0	1	2	0	1	4	1	6
	5:30 PM	1	247	118	21	184	6	12	12	2	78	10	10	701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	1	249	102	18	173	10	1	15	3	62	9	10	653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	24	2,629	1,070	239	2,092	96	66	112	32	722	126	190	7,398	6	7	16	2	31	0	3	3	4	10	6	10	19	6	41
	APPROACH %	1%	71%	29%	10%	86%	4%	31%	53%	15%	70%	12%	18%																
	APP/DEPART	3,723	/	2,885	2,427	/	2,846	210	/	1,421	1,038	/	246	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	6	983	393	88	754	32	27	44	12	284	51	51	2,725															
	APPROACH %	0%	71%	28%	10%	86%	4%	33%	53%	14%	74%	13%	13%																
	PEAK HR FACTOR		0.944			0.892			0.798			0.778		0.968															
	APP/DEPART	1,382	/	1,061	874	/	1,050	83	/	525	386	/	89	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FAIR OAKS AVE	LOCATION #:	3
WEDNESDAY	EAST & WEST:	COLUMBIA ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FAIR OAKS AVE			SOUTHBOUND FAIR OAKS AVE			EASTBOUND COLUMBIA ST			WESTBOUND COLUMBIA ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 1	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	4	81	0	1	80	0	4	0	5	1	0	2	178	0	0	1	0	1	0	0	0	1	1	0	0	1	1	2
	6:15 AM	10	105	0	1	111	2	9	0	11	3	0	2	254	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	6:30 AM	15	150	1	1	132	4	21	1	11	4	3	6	349	0	0	1	2	3	0	0	0	0	0	0	0	1	2	3
	6:45 AM	21	195	1	0	122	9	19	1	10	3	2	6	389	0	0	2	0	2	0	1	1	0	2	0	1	3	0	4
	7:00 AM	22	163	1	3	207	12	18	1	11	5	2	4	449	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1
	7:15 AM	30	262	0	2	175	11	37	1	10	0	6	11	545	0	2	2	0	4	0	0	4	0	4	0	2	6	0	8
	7:30 AM	45	263	2	0	195	7	43	2	21	0	4	19	601	0	0	0	0	0	0	2	3	0	5	0	2	3	0	5
	7:45 AM	32	321	1	2	212	12	34	1	22	5	8	6	656	0	2	2	0	4	0	0	0	0	0	0	2	2	0	4
	8:00 AM	32	318	3	1	179	18	36	3	18	3	4	8	623	0	0	3	1	4	0	0	1	0	1	0	0	4	1	5
	8:15 AM	41	298	1	1	201	13	40	2	20	3	3	9	632	0	4	1	0	5	0	0	0	0	0	0	4	1	0	5
	8:30 AM	42	267	0	1	188	16	42	2	17	3	5	11	594	0	5	1	0	6	0	0	2	0	2	0	5	3	0	8
	8:45 AM	37	263	2	1	195	18	33	3	19	1	5	9	586	0	1	1	0	2	0	0	3	3	6	0	1	4	3	8
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	331	2,686	12	14	1,997	122	336	17	175	31	42	93	5,856	0	14	15	3	32	0	3	15	4	22	0	17	30	7	54
	APPROACH %	11%	89%	0%	1%	94%	6%	64%	3%	33%	19%	25%	56%																
	APP/DEPART	3,029	/	3,115	2,133	/	2,203	528	/	43	166	/	495	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	150	1,200	7	4	787	50	153	8	81	11	19	42	2,512															
	APPROACH %	11%	88%	1%	0%	94%	6%	63%	3%	33%	15%	26%	58%																
	PEAK HR FACTOR		0.958			0.930			0.917			0.783		0.957															
	APP/DEPART	1,357	/	1,395	841	/	879	242	/	19	72	/	219	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	33	238	3	1	200	11	31	3	12	2	1	2	537	0	3	3	1	7	0	1	1	0	2	0	4	4	1	9
	3:15 PM	28	277	4	6	195	17	28	3	24	1	3	6	592	0	0	0	0	0	0	0	1	2	3	0	0	1	2	3
	3:30 PM	36	234	5	9	238	28	24	3	20	2	1	8	608	0	0	3	0	3	0	0	1	0	1	0	0	4	0	4
	3:45 PM	21	245	3	5	240	26	24	3	14	2	4	4	591	0	4	3	2	9	0	0	2	0	2	0	4	5	2	11
	4:00 PM	23	237	1	7	237	18	27	4	11	1	3	4	573	0	3	0	2	5	0	0	1	0	1	0	3	1	2	6
	4:15 PM	28	231	3	5	241	20	24	5	18	2	3	2	582	0	3	1	1	5	0	0	0	1	1	0	3	1	2	6
	4:30 PM	33	236	2	7	244	21	26	4	27	1	5	5	611	0	1	0	0	1	0	0	1	0	1	0	1	1	0	2
	4:45 PM	24	227	2	6	254	17	25	1	20	0	4	4	584	0	3	2	0	5	0	0	1	2	3	0	3	3	2	8
	5:00 PM	24	277	5	9	299	32	29	5	27	0	3	6	716	0	1	1	1	3	0	0	0	0	0	0	1	1	1	3
	5:15 PM	26	253	6	6	239	41	18	6	21	1	4	3	624	0	3	4	0	7	0	0	2	0	2	0	3	6	0	9
	5:30 PM	26	253	5	7	214	40	39	4	20	1	4	7	620	0	0	2	1	3	0	0	0	0	0	0	0	2	1	3
	5:45 PM	23	245	3	6	217	37	25	4	23	0	2	5	590	0	1	2	1	4	0	0	0	1	1	0	1	2	2	5
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	325	2,953	42	74	2,818	308	320	45	237	13	37	56	7,228	0	22	21	9	52	0	1	10	6	17	0	23	31	15	69
	APPROACH %	10%	89%	1%	2%	88%	10%	53%	7%	39%	12%	35%	53%																
	APP/DEPART	3,320	/	3,329	3,200	/	3,068	602	/	161	106	/	670	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	99	1,028	19	28	969	150	111	19	91	2	13	21	2,550															
	APPROACH %	9%	90%	2%	2%	84%	13%	50%	9%	41%	6%	36%	58%																
	PEAK HR FACTOR		0.936			0.843			0.877			0.750		0.890															
	APP/DEPART	1,146	/	1,160	1,147	/	1,062	221	/	66	36	/	262	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FAIR OAKS AVE	LOCATION #:	3
WEDNESDAY	EAST & WEST:	COLUMBIA ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FAIR OAKS AVE			SOUTHBOUND FAIR OAKS AVE			EASTBOUND COLUMBIA ST			WESTBOUND COLUMBIA ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 1	WL 0	WT 1	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	4	81	0	1	80	0	4	0	5	1	0	2	178	0	0	1	0	1	0	0	0	1	1	0	0	1	1	2
	6:15 AM	10	105	0	1	111	2	9	0	11	3	0	2	254	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	6:30 AM	15	150	1	1	132	4	21	1	11	4	3	6	349	0	0	1	2	3	0	0	0	0	0	0	0	1	2	3
	6:45 AM	21	195	1	0	122	9	19	1	10	3	2	6	389	0	0	2	0	2	0	1	1	0	2	0	1	3	0	4
	7:00 AM	22	163	1	3	207	12	18	1	11	5	2	4	449	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1
	7:15 AM	30	262	0	2	175	11	37	1	10	0	6	11	545	0	2	2	0	4	0	0	4	0	4	0	2	6	0	8
	7:30 AM	45	263	2	0	195	7	43	2	21	0	4	19	601	0	0	0	0	0	0	2	3	0	5	0	2	3	0	5
	7:45 AM	32	321	1	2	212	12	34	1	22	5	8	6	656	0	2	2	0	4	0	0	0	0	0	0	2	2	0	4
	8:00 AM	32	318	3	1	179	18	36	3	18	3	4	8	623	0	0	3	1	4	0	0	1	0	1	0	0	4	1	5
	8:15 AM	41	298	1	1	201	13	40	2	20	3	3	9	632	0	4	1	0	5	0	0	0	0	0	0	4	1	0	5
	8:30 AM	42	267	0	1	188	16	42	2	17	3	5	11	594	0	5	1	0	6	0	0	2	0	2	0	5	3	0	8
	8:45 AM	37	263	2	1	195	18	33	3	19	1	5	9	586	0	1	1	0	2	0	0	3	3	6	0	1	4	3	8
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	331	2,686	12	14	1,997	122	336	17	175	31	42	93	5,856	0	14	15	3	32	0	3	15	4	22	0	17	30	7	54
	APPROACH %	11%	89%	0%	1%	94%	6%	64%	3%	33%	19%	25%	56%																
	APP/DEPART	3,029	/	3,115	2,133	/	2,203	528	/	43	166	/	495	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	150	1,200	7	4	787	50	153	8	81	11	19	42	2,512															
	APPROACH %	11%	88%	1%	0%	94%	6%	63%	3%	33%	15%	26%	58%																
	PEAK HR FACTOR		0.958			0.930			0.917			0.783		0.957															
	APP/DEPART	1,357	/	1,395	841	/	879	242	/	19	72	/	219	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	33	238	3	1	200	11	31	3	12	2	1	2	537	0	3	3	1	7	0	1	1	0	2	0	4	4	1	9
	3:15 PM	28	277	4	6	195	17	28	3	24	1	3	6	592	0	0	0	0	0	0	0	1	2	3	0	0	1	2	3
	3:30 PM	36	234	5	9	238	28	24	3	20	2	1	8	608	0	0	3	0	3	0	0	1	0	1	0	0	4	0	4
	3:45 PM	21	245	3	5	240	26	24	3	14	2	4	4	591	0	4	3	2	9	0	0	2	0	2	0	4	5	2	11
	4:00 PM	23	237	1	7	237	18	27	4	11	1	3	4	573	0	3	0	2	5	0	0	1	0	1	0	3	1	2	6
	4:15 PM	28	231	3	5	241	20	24	5	18	2	3	2	582	0	3	1	1	5	0	0	0	1	1	0	3	1	2	6
	4:30 PM	33	236	2	7	244	21	26	4	27	1	5	5	611	0	1	0	0	1	0	0	1	0	1	0	1	1	0	2
	4:45 PM	24	227	2	6	254	17	25	1	20	0	4	4	584	0	3	2	0	5	0	0	1	2	3	0	3	3	2	8
	5:00 PM	24	277	5	9	299	32	29	5	27	0	3	6	716	0	1	1	1	3	0	0	0	0	0	0	1	1	1	3
	5:15 PM	26	253	6	6	239	41	18	6	21	1	4	3	624	0	3	4	0	7	0	0	2	0	2	0	3	6	0	9
	5:30 PM	26	253	5	7	214	40	39	4	20	1	4	7	620	0	0	2	1	3	0	0	0	0	0	0	0	2	1	3
	5:45 PM	23	245	3	6	217	37	25	4	23	0	2	5	590	0	1	2	1	4	0	0	0	1	1	0	1	2	2	5
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	325	2,953	42	74	2,818	308	320	45	237	13	37	56	7,228	0	22	21	9	52	0	1	10	6	17	0	23	31	15	69
	APPROACH %	10%	89%	1%	2%	88%	10%	53%	7%	39%	12%	35%	53%																
	APP/DEPART	3,320	/	3,329	3,200	/	3,068	602	/	161	106	/	670	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	99	1,028	19	28	969	150	111	19	91	2	13	21	2,550															
	APPROACH %	9%	90%	2%	2%	84%	13%	50%	9%	41%	6%	36%	58%																
	PEAK HR FACTOR		0.936			0.843			0.877			0.750		0.890															
	APP/DEPART	1,146	/	1,160	1,147	/	1,062	221	/	66	36	/	262	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	ORANGE GROVE	LOCATION #:	4
WEDNESDAY	EAST & WEST:	MISSION ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ORANGE GROVE			SOUTHBOUND ORANGE GROVE			EASTBOUND MISSION ST			WESTBOUND MISSION ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NB	SB	EB	WB	TTL	NB	SB	EB	WB	TTL
	LANES:	X	X	X	1.5	X	1.5	1	2	0	0	2	0		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM				6		10	13	7			8	6	50	3		0	0	3	1		0	0	1	4	0	0	0	4
	6:15 AM				9		14	26	12			17	11	89	0		1	0	1	0		0	0	0	0	0	1	0	1
	6:30 AM				14		19	27	17			10	15	102	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM				17		17	31	20			20	23	128	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:00 AM				14		24	45	18			25	13	139	1		1	0	2	1		0	0	1	2	0	1	0	3
	7:15 AM				32		47	37	35			24	18	193	5		2	0	7	0		0	0	0	5	0	2	0	7
	7:30 AM				51		42	70	46			50	18	277	4		2	0	6	0		0	0	0	4	0	2	0	6
	7:45 AM				49		62	86	55			55	27	334	2		0	0	2	0		0	0	0	2	0	0	0	2
	8:00 AM				50		50	84	58			87	27	356	4		8	0	12	0		0	0	0	4	0	8	0	12
	8:15 AM				31		45	77	69			55	38	315	3		4	0	7	0		0	0	0	3	0	4	0	7
	8:30 AM				42		51	80	60			57	31	321	1		2	0	3	2		0	0	2	3	0	2	0	5
	8:45 AM				37		44	72	52			50	25	280	2		1	0	3	2		0	0	2	4	0	1	0	5
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	352	0	425	648	449	0	0	458	252	2,584	25	0	21	0	46	6	0	0	0	6	31	0	21	0	52
	APPROACH %	0%	0%	0%	45%	0%	55%	59%	41%	0%	0%	65%	35%																
	APP/DEPART	0	/	900	777	/	0	1,097	/	801	710	/	883	0															
	BEGIN PEAK HR		7:45 AM																										
	VOLUMES	0	0	0	172	0	208	327	242	0	0	254	123	1,326															
	APPROACH %	0%	0%	0%	45%	0%	55%	57%	43%	0%	0%	67%	33%																
	PEAK HR FACTOR		0.000			0.856			0.974			0.827		0.931															
	APP/DEPART	0	/	450	380	/	0	569	/	414	377	/	462	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM				49		60	70	78			85	36	378	5		3	0	8	0		0	0	0	5	0	3	0	8
	3:15 PM				59		48	53	87			71	33	351	2		4	0	6	4		0	0	4	6	0	4	0	10
	3:30 PM				42		64	55	70			53	20	304	12		1	0	13	1		0	0	1	13	0	1	0	14
	3:45 PM				45		63	51	88			60	29	336	4		5	0	9	0		0	0	0	4	0	5	0	9
	4:00 PM				51		49	39	56			60	39	294	4		4	0	8	0		0	0	0	4	0	4	0	8
	4:15 PM				55		68	59	63			67	29	341	7		3	0	10	0		0	0	0	7	0	3	0	10
	4:30 PM				59		66	59	75			58	17	334	3		2	0	5	0		0	0	0	3	0	2	0	5
	4:45 PM				60		49	62	77			50	27	325	7		3	0	10	1		0	0	1	8	0	3	0	11
	5:00 PM				55		70	63	76			90	32	386	1		3	0	4	1		0	0	1	2	0	3	0	5
	5:15 PM				50		71	70	69			74	31	365	4		4	0	8	1		0	0	1	5	0	4	0	9
	5:30 PM				71		69	68	84			78	35	405	1		8	0	9	2		0	0	2	3	0	8	0	11
	5:45 PM				61		82	72	67			67	33	382	2		5	0	7	0		0	0	0	2	0	5	0	7
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	657	0	759	721	890	0	0	813	361	4,201	52	0	45	0	97	10	0	0	0	10	62	0	45	0	107
	APPROACH %	0%	0%	0%	46%	0%	54%	45%	55%	0%	0%	69%	31%																
	APP/DEPART	0	/	1,082	1,416	/	0	1,611	/	1,547	1,174	/	1,572	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	0	0	0	237	0	292	273	296	0	0	309	131	1,538															
	APPROACH %	0%	0%	0%	45%	0%	55%	48%	52%	0%	0%	70%	30%																
	PEAK HR FACTOR		0.000			0.925			0.936			0.902		0.949															
	APP/DEPART	0	/	404	529	/	0	569	/	533	440	/	601	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	ORANGE GROVE	LOCATION #:	4
WEDNESDAY	EAST & WEST:	MISSION ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ORANGE GROVE			SOUTHBOUND ORANGE GROVE			EASTBOUND MISSION ST			WESTBOUND MISSION ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	X	X	X	1.5	X	1.5	1	2	0	0	2	0		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM				6		10	13	7			8	6	50	3		0	0	3	1		0	0	1	4	0	0	0	4
	6:15 AM				9		14	26	12			17	11	89	0		1	0	1	0		0	0	0	0	0	1	0	1
	6:30 AM				14		19	27	17			10	15	102	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM				17		17	31	20			20	23	128	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:00 AM				14		24	45	18			25	13	139	1		1	0	2	1		0	0	1	2	0	1	0	3
	7:15 AM				32		47	37	35			24	18	193	5		2	0	7	0		0	0	0	5	0	2	0	7
	7:30 AM				51		42	70	46			50	18	277	4		2	0	6	0		0	0	0	4	0	2	0	6
	7:45 AM				49		62	86	55			55	27	334	2		0	0	2	0		0	0	0	2	0	0	0	2
	8:00 AM				50		50	84	58			87	27	356	4		8	0	12	0		0	0	0	4	0	8	0	12
	8:15 AM				31		45	77	69			55	38	315	3		4	0	7	0		0	0	0	3	0	4	0	7
	8:30 AM				42		51	80	60			57	31	321	1		2	0	3	2		0	0	2	3	0	2	0	5
	8:45 AM				37		44	72	52			50	25	280	2		1	0	3	2		0	0	2	4	0	1	0	5
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	352	0	425	648	449	0	0	458	252	2,584	25	0	21	0	46	6	0	0	0	6	31	0	21	0	52
	APPROACH %	0%	0%	0%	45%	0%	55%	59%	41%	0%	0%	65%	35%																
	APP/DEPART	0	/	900	777	/	0	1,097	/	801	710	/	883	0															
	BEGIN PEAK HR		7:45 AM																										
	VOLUMES	0	0	0	172	0	208	327	242	0	0	254	123	1,326															
	APPROACH %	0%	0%	0%	45%	0%	55%	57%	43%	0%	0%	67%	33%																
	PEAK HR FACTOR		0.000			0.856			0.974			0.827		0.931															
	APP/DEPART	0	/	450	380	/	0	569	/	414	377	/	462	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM				49		60	70	78			85	36	378	5		3	0	8	0		0	0	0	5	0	3	0	8
	3:15 PM				59		48	53	87			71	33	351	2		4	0	6	4		0	0	4	6	0	4	0	10
	3:30 PM				42		64	55	70			53	20	304	12		1	0	13	1		0	0	1	13	0	1	0	14
	3:45 PM				45		63	51	88			60	29	336	4		5	0	9	0		0	0	0	4	0	5	0	9
	4:00 PM				51		49	39	56			60	39	294	4		4	0	8	0		0	0	0	4	0	4	0	8
	4:15 PM				55		68	59	63			67	29	341	7		3	0	10	0		0	0	0	7	0	3	0	10
	4:30 PM				59		66	59	75			58	17	334	3		2	0	5	0		0	0	0	3	0	2	0	5
	4:45 PM				60		49	62	77			50	27	325	7		3	0	10	1		0	0	1	8	0	3	0	11
	5:00 PM				55		70	63	76			90	32	386	1		3	0	4	1		0	0	1	2	0	3	0	5
	5:15 PM				50		71	70	69			74	31	365	4		4	0	8	1		0	0	1	5	0	4	0	9
	5:30 PM				71		69	68	84			78	35	405	1		8	0	9	2		0	0	2	3	0	8	0	11
	5:45 PM				61		82	72	67			67	33	382	2		5	0	7	0		0	0	0	2	0	5	0	7
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	657	0	759	721	890	0	0	813	361	4,201	52	0	45	0	97	10	0	0	0	10	62	0	45	0	107
	APPROACH %	0%	0%	0%	46%	0%	54%	45%	55%	0%	0%	69%	31%																
	APP/DEPART	0	/	1,082	1,416	/	0	1,611	/	1,547	1,174	/	1,572	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	0	0	0	237	0	292	273	296	0	0	309	131	1,538															
	APPROACH %	0%	0%	0%	45%	0%	55%	48%	52%	0%	0%	70%	30%																
	PEAK HR FACTOR		0.000			0.925			0.936			0.902		0.949															
	APP/DEPART	0	/	404	529	/	0	569	/	533	440	/	601	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FREMONT AVE	LOCATION #:	5
WEDNESDAY	EAST & WEST:	MISSION ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND FREMONT AVE			SOUTHBOUND FREMONT AVE			EASTBOUND MISSION ST			WESTBOUND MISSION ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL	NB X	SB X	EB X	WB X	TTL
AM 5:00 AM													0					0					0	0	0	0	0	0
5:15 AM													0					0					0	0	0	0	0	0
5:30 AM													0					0					0	0	0	0	0	0
5:45 AM													0					0					0	0	0	0	0	0
6:00 AM	8	65	3	0	74	2	0	3	11	6	11	1	184	1	2	0	0	3	1	0	0	0	1	2	2	0	0	4
6:15 AM	10	88	0	2	125	1	4	9	4	5	12	2	262	5	1	0	1	7	0	0	0	0	0	5	1	0	1	7
6:30 AM	13	121	2	9	146	0	4	11	11	4	21	4	346	4	3	0	0	7	0	1	0	0	1	4	4	0	0	8
6:45 AM	14	129	3	6	165	3	4	17	11	6	25	4	387	6	4	1	4	15	1	0	0	0	1	7	4	1	4	16
7:00 AM	9	146	2	8	179	7	5	21	13	5	30	7	432	4	2	1	6	13	0	0	1	0	1	4	2	2	6	14
7:15 AM	14	155	5	13	175	3	5	27	21	7	39	15	479	6	5	0	3	14	0	1	0	0	1	6	6	0	3	15
7:30 AM	14	184	10	24	145	7	6	58	24	19	61	21	573	13	8	4	9	34	0	0	0	0	0	13	8	4	9	34
7:45 AM	34	138	7	26	114	12	11	68	23	9	85	17	544	1	4	3	1	9	1	0	0	1	2	2	4	3	2	11
8:00 AM	18	171	9	15	146	6	19	56	33	6	63	24	566	10	6	1	10	27	0	1	0	0	1	10	7	1	10	28
8:15 AM	14	151	11	15	145	4	20	51	31	7	71	10	530	4	3	2	1	10	0	0	0	0	0	4	3	2	1	10
8:30 AM	18	143	6	14	146	3	10	41	24	10	77	20	512	6	7	3	1	17	0	0	0	1	1	6	7	3	2	18
8:45 AM	15	139	5	21	174	6	14	48	23	7	59	12	523	9	4	0	3	16	0	0	1	0	1	9	4	1	3	17
9:00 AM													0					0					0	0	0	0	0	0
9:15 AM													0					0					0	0	0	0	0	0
9:30 AM													0					0					0	0	0	0	0	0
9:45 AM													0					0					0	0	0	0	0	0
VOLUMES	181	1,630	63	153	1,734	54	102	410	229	91	554	137	5,338	69	49	15	39	172	3	3	2	2	10	72	52	17	41	182
APPROACH %	10%	87%	3%	8%	89%	3%	14%	55%	31%	12%	71%	18%																
APP/DEPART	1,874	/	1,869	1,941	/	2,054	741	/	626	782	/	789	0															
BEGIN PEAK HR		7:30 AM																										
VOLUMES	80	644	37	80	550	29	56	233	111	41	280	72	2,213															
APPROACH %	11%	85%	5%	12%	83%	4%	14%	58%	28%	10%	71%	18%																
PEAK HR FACTOR		0.915			0.936			0.926			0.885		0.966															
APP/DEPART	761	/	772	659	/	702	400	/	350	393	/	389	0															
PM 2:00 PM													0					0					0	0	0	0	0	0
2:15 PM													0					0					0	0	0	0	0	0
2:30 PM													0					0					0	0	0	0	0	0
2:45 PM													0					0					0	0	0	0	0	0
3:00 PM	25	165	11	22	103	13	16	71	30	18	83	23	580	8	10	8	4	30	0	2	1	0	3	8	12	9	4	33
3:15 PM	46	129	5	33	119	3	7	80	30	14	87	14	567	18	7	4	5	34	3	0	1	0	4	21	7	5	5	38
3:30 PM	21	164	8	19	125	8	17	70	40	8	64	23	567	16	11	7	2	36	2	1	0	0	3	18	12	7	2	39
3:45 PM	29	152	9	18	147	4	10	68	38	22	61	15	573	10	8	5	2	25	1	1	1	0	3	11	9	6	2	28
4:00 PM	25	174	11	22	139	6	16	87	26	17	69	17	609	6	13	3	2	24	0	2	0	0	2	6	15	3	2	26
4:15 PM	25	145	7	18	140	9	14	62	27	16	78	12	553	18	11	3	8	40	0	0	0	0	0	18	11	3	8	40
4:30 PM	24	153	12	24	147	1	15	84	32	17	62	16	587	12	9	1	4	26	3	1	0	0	4	15	10	1	4	30
4:45 PM	25	158	10	21	144	9	9	88	28	20	76	14	602	13	6	6	6	31	2	0	0	0	2	15	6	6	6	33
5:00 PM	23	134	10	27	157	4	24	83	43	15	89	19	628	10	12	4	5	31	0	2	0	0	2	10	14	4	5	33
5:15 PM	37	166	6	28	162	8	10	75	29	19	81	20	641	17	8	1	0	26	1	0	0	0	1	18	8	1	0	27
5:30 PM	24	169	10	19	157	6	22	110	35	9	76	10	647	13	10	1	1	25	0	1	0	0	1	13	11	1	1	26
5:45 PM	34	143	5	31	138	11	16	70	39	15	73	11	586	14	7	5	4	30	0	1	0	0	1	14	8	5	4	31
6:00 PM													0					0					0	0	0	0	0	0
6:15 PM													0					0					0	0	0	0	0	0
6:30 PM													0					0					0	0	0	0	0	0
6:45 PM													0					0					0	0	0	0	0	0
VOLUMES	338	1,852	104	282	1,678	82	176	948	397	190	899	194	7,140	155	112	48	43	358	12	11	3	0	26	167	123	51	43	384
APPROACH %	15%	81%	5%	14%	82%	4%	12%	62%	26%	15%	70%	15%																
APP/DEPART	2,294	/	2,222	2,042	/	2,265	1,521	/	1,334	1,283	/	1,319	0															
BEGIN PEAK HR		4:45 PM																										
VOLUMES	109	627	36	95	620	27	65	356	135	63	322	63	2,518															
APPROACH %	14%	81%	5%	13%	84%	4%	12%	64%	24%	14%	72%	14%																
PEAK HR FACTOR		0.923			0.937			0.832			0.911		0.973															
APP/DEPART	772	/	755	742	/	818	556	/	487	448	/	458	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FREMONT AVE	LOCATION #:	5
WEDNESDAY	EAST & WEST:	MISSION ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FREMONT AVE			SOUTHBOUND FREMONT AVE			EASTBOUND MISSION ST			WESTBOUND MISSION ST				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	8	65	3	0	74	2	0	3	11	6	11	1	184	1	2	0	0	3	1	0	0	0	1	2	2	0	0	4
	6:15 AM	10	88	0	2	125	1	4	9	4	5	12	2	262	5	1	0	1	7	0	0	0	0	0	5	1	0	1	7
	6:30 AM	13	121	2	9	146	0	4	11	11	4	21	4	346	4	3	0	0	7	0	1	0	0	1	4	4	0	0	8
	6:45 AM	14	129	3	6	165	3	4	17	11	6	25	4	387	6	4	1	4	15	1	0	0	0	1	7	4	1	4	16
	7:00 AM	9	146	2	8	179	7	5	21	13	5	30	7	432	4	2	1	6	13	0	0	1	0	1	4	2	2	6	14
	7:15 AM	14	155	5	13	175	3	5	27	21	7	39	15	479	6	5	0	3	14	0	1	0	0	1	6	6	0	3	15
	7:30 AM	14	184	10	24	145	7	6	58	24	19	61	21	573	13	8	4	9	34	0	0	0	0	0	13	8	4	9	34
	7:45 AM	34	138	7	26	114	12	11	68	23	9	85	17	544	1	4	3	1	9	1	0	0	1	2	2	4	3	2	11
	8:00 AM	18	171	9	15	146	6	19	56	33	6	63	24	566	10	6	1	10	27	0	1	0	0	1	10	7	1	10	28
	8:15 AM	14	151	11	15	145	4	20	51	31	7	71	10	530	4	3	2	1	10	0	0	0	0	0	4	3	2	1	10
	8:30 AM	18	143	6	14	146	3	10	41	24	10	77	20	512	6	7	3	1	17	0	0	0	1	1	6	7	3	2	18
	8:45 AM	15	139	5	21	174	6	14	48	23	7	59	12	523	9	4	0	3	16	0	0	1	0	1	9	4	1	3	17
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	181	1,630	63	153	1,734	54	102	410	229	91	554	137	5,338	69	49	15	39	172	3	3	2	2	10	72	52	17	41	182
	APPROACH %	10%	87%	3%	8%	89%	3%	14%	55%	31%	12%	71%	18%																
	APP/DEPART	1,874	/	1,869	1,941	/	2,054	741	/	626	782	/	789	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	80	644	37	80	550	29	56	233	111	41	280	72	2,213															
	APPROACH %	11%	85%	5%	12%	83%	4%	14%	58%	28%	10%	71%	18%																
	PEAK HR FACTOR		0.915			0.936			0.926			0.885		0.966															
	APP/DEPART	761	/	772	659	/	702	400	/	350	393	/	389	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	25	165	11	22	103	13	16	71	30	18	83	23	580	8	10	8	4	30	0	2	1	0	3	8	12	9	4	33
	3:15 PM	46	129	5	33	119	3	7	80	30	14	87	14	567	18	7	4	5	34	3	0	1	0	4	21	7	5	5	38
	3:30 PM	21	164	8	19	125	8	17	70	40	8	64	23	567	16	11	7	2	36	2	1	0	0	3	18	12	7	2	39
	3:45 PM	29	152	9	18	147	4	10	68	38	22	61	15	573	10	8	5	2	25	1	1	1	0	3	11	9	6	2	28
	4:00 PM	25	174	11	22	139	6	16	87	26	17	69	17	609	6	13	3	2	24	0	2	0	0	2	6	15	3	2	26
	4:15 PM	25	145	7	18	140	9	14	62	27	16	78	12	553	18	11	3	8	40	0	0	0	0	0	18	11	3	8	40
	4:30 PM	24	153	12	24	147	1	15	84	32	17	62	16	587	12	9	1	4	26	3	1	0	0	4	15	10	1	4	30
	4:45 PM	25	158	10	21	144	9	9	88	28	20	76	14	602	13	6	6	6	31	2	0	0	0	2	15	6	6	6	33
	5:00 PM	23	134	10	27	157	4	24	83	43	15	89	19	628	10	12	4	5	31	0	2	0	0	2	10	14	4	5	33
	5:15 PM	37	166	6	28	162	8	10	75	29	19	81	20	641	17	8	1	0	26	1	0	0	0	1	18	8	1	0	27
	5:30 PM	24	169	10	19	157	6	22	110	35	9	76	10	647	13	10	1	1	25	0	1	0	0	1	13	11	1	1	26
	5:45 PM	34	143	5	31	138	11	16	70	39	15	73	11	586	14	7	5	4	30	0	1	0	0	1	14	8	5	4	31
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	338	1,852	104	282	1,678	82	176	948	397	190	899	194	7,140	155	112	48	43	358	12	11	3	0	26	167	123	51	43	384
	APPROACH %	15%	81%	5%	14%	82%	4%	12%	62%	26%	15%	70%	15%																
	APP/DEPART	2,294	/	2,222	2,042	/	2,265	1,521	/	1,334	1,283	/	1,319	0															
	BEGIN PEAK HR		4:45 PM																										
	VOLUMES	109	627	36	95	620	27	65	356	135	63	322	63	2,518															
	APPROACH %	14%	81%	5%	13%	84%	4%	12%	64%	24%	14%	72%	14%																
	PEAK HR FACTOR		0.923			0.937			0.832			0.911		0.973															
	APP/DEPART	772	/	755	742	/	818	556	/	487	448	/	458	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FAIR OAKS AVE	LOCATION #:	6
WEDNESDAY	EAST & WEST:	MISSION STREET	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FAIR OAKS AVE			SOUTHBOUND FAIR OAKS AVE			EASTBOUND MISSION STREET			WESTBOUND MISSION STREET				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
AM	5:15 AM													0					0					0	0	0	0	0	0
AM	5:30 AM													0					0					0	0	0	0	0	0
AM	5:45 AM													0					0					0	0	0	0	0	0
AM	6:00 AM	8	70	0	6	65	5	7	16	6	2	18	14	217	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
AM	6:15 AM	11	84	2	9	81	9	11	20	7	0	28	16	278	1	0	0	0	1	0	0	0	1	1	1	0	0	1	2
AM	6:30 AM	15	127	1	13	105	11	13	27	10	3	32	20	377	0	2	1	1	4	1	0	0	0	1	1	2	1	1	5
AM	6:45 AM	13	164	4	16	151	8	10	33	12	4	40	24	479	1	1	1	0	3	0	1	0	0	1	1	2	1	0	4
AM	7:00 AM	18	187	3	14	176	15	14	33	12	5	48	28	553	2	1	2	0	5	1	0	0	0	1	3	1	2	0	6
AM	7:15 AM	12	206	5	20	188	11	20	28	14	9	55	31	599	3	4	5	2	14	0	2	0	0	2	3	6	5	2	16
AM	7:30 AM	17	224	1	17	179	16	17	37	11	8	58	30	615	5	5	11	5	26	1	1	1	0	3	6	6	12	5	29
AM	7:45 AM	29	256	2	21	211	17	22	44	9	7	62	34	714	5	3	3	1	12	2	2	0	0	4	7	5	3	1	16
AM	8:00 AM	13	198	3	16	180	13	15	39	21	7	56	29	590	2	2	3	1	8	0	0	0	0	0	2	2	3	1	8
AM	8:15 AM	18	226	8	20	172	17	18	30	10	3	45	34	601	0	4	4	1	9	0	2	1	0	3	0	6	5	1	12
AM	8:30 AM	14	179	3	11	166	11	17	39	16	6	50	33	545	6	1	3	0	10	1	1	2	1	5	7	2	5	1	15
AM	8:45 AM	20	164	4	17	181	12	19	28	7	10	58	23	543	2	2	1	2	7	0	0	0	0	0	2	2	1	2	7
AM	9:00 AM													0					0					0	0	0	0	0	0
AM	9:15 AM													0					0					0	0	0	0	0	0
AM	9:30 AM													0					0					0	0	0	0	0	0
AM	9:45 AM													0					0					0	0	0	0	0	0
AM	VOLUMES	188	2,085	36	180	1,855	145	183	374	135	64	550	316	6,111	27	25	35	13	100	6	9	4	2	21	33	34	39	15	121
AM	APPROACH %	8%	90%	2%	8%	85%	7%	26%	54%	20%	7%	59%	34%																
AM	APP/DEPART	2,309	/	2,584	2,180	/	2,054	692	/	590	930	/	883	0															
AM	BEGIN PEAK HR		7:30 AM																										
AM	VOLUMES	77	904	14	74	742	63	72	150	51	25	221	127	2,520															
AM	APPROACH %	8%	91%	1%	8%	84%	7%	26%	55%	19%	7%	59%	34%																
AM	PEAK HR FACTOR		0.867			0.883			0.910			0.905		0.882															
AM	APP/DEPART	995	/	1,103	879	/	818	273	/	238	373	/	361	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
PM	2:15 PM													0					0					0	0	0	0	0	0
PM	2:30 PM													0					0					0	0	0	0	0	0
PM	2:45 PM													0					0					0	0	0	0	0	0
PM	3:00 PM	21	168	8	19	208	32	34	63	22	10	48	19	652	17	8	25	12	62	3	0	0	0	3	20	8	25	12	65
PM	3:15 PM	17	165	6	32	196	24	31	55	20	7	48	22	623	4	7	17	8	36	0	1	1	2	4	4	8	18	10	40
PM	3:30 PM	16	181	6	23	233	25	40	57	15	12	48	20	676	2	12	12	6	32	1	0	1	0	2	3	12	13	6	34
PM	3:45 PM	20	160	8	25	247	13	29	58	17	3	38	22	640	3	4	6	10	23	0	1	0	1	2	3	5	6	11	25
PM	4:00 PM	21	204	12	29	210	26	26	51	28	11	44	14	676	9	12	19	10	50	0	1	1	0	2	9	13	20	10	52
PM	4:15 PM	17	204	6	22	252	19	29	42	23	5	39	22	680	5	13	15	17	50	0	1	1	0	2	5	14	16	17	52
PM	4:30 PM	18	200	3	25	268	17	32	54	24	10	38	21	710	7	2	10	6	25	0	0	0	0	0	7	2	10	6	25
PM	4:45 PM	25	194	9	23	250	19	33	51	11	7	52	28	702	16	2	22	5	45	1	0	1	0	2	17	2	23	5	47
PM	5:00 PM	20	206	5	24	230	20	14	72	24	7	52	29	703	8	6	8	7	29	0	0	0	1	1	8	6	8	8	30
PM	5:15 PM	21	211	5	33	258	17	36	64	21	17	43	18	744	3	12	14	1	30	2	0	0	2	4	5	12	14	3	34
PM	5:30 PM	18	201	3	28	269	19	35	62	26	13	63	23	760	6	4	12	2	24	0	0	0	0	0	6	4	12	2	24
PM	5:45 PM	22	184	5	36	227	22	40	60	26	10	40	23	695	8	8	17	6	39	0	1	0	1	2	8	9	17	7	41
PM	6:00 PM													0					0					0	0	0	0	0	0
PM	6:15 PM													0					0					0	0	0	0	0	0
PM	6:30 PM													0					0					0	0	0	0	0	0
PM	6:45 PM													0					0					0	0	0	0	0	0
PM	VOLUMES	236	2,278	76	319	2,848	253	379	689	257	112	553	261	8,261	88	90	177	90	445	7	5	5	7	24	95	95	182	97	469
PM	APPROACH %	9%	88%	3%	9%	83%	7%	29%	52%	19%	12%	60%	28%																
PM	APP/DEPART	2,590	/	2,918	3,420	/	3,217	1,325	/	1,084	926	/	1,042	0															
PM	BEGIN PEAK HR		4:45 PM																										
PM	VOLUMES	84	812	22	108	1,007	75	118	249	82	44	210	98	2,909															
PM	APPROACH %	9%	88%	2%	9%	85%	6%	26%	55%	18%	13%	60%	28%																
PM	PEAK HR FACTOR		0.968			0.941			0.913			0.889		0.957															
PM	APP/DEPART	918	/	1,028	1,190	/	1,133	449	/	379	352	/	369	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	AVE 64	LOCATION #:	7
WEDNESDAY	EAST & WEST:	YORK BLVD	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND AVE 64			SOUTHBOUND AVE 64			EASTBOUND YORK BLVD			WESTBOUND YORK BLVD				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	21	19	1	19	30	8	11	42	21	3	66	11	252	0	0	0	1	1	0	0	0	1	1	0	0	0	2	2
	6:15 AM	25	23	0	22	37	11	8	62	24	2	74	17	305	0	1	0	0	1	1	0	0	0	1	1	1	0	0	2
	6:30 AM	31	28	2	23	44	9	14	74	31	5	89	21	371	2	0	0	1	3	0	0	0	0	0	2	0	0	1	3
	6:45 AM	40	34	2	25	53	13	16	89	35	6	107	19	439	3	1	0	2	6	0	1	0	0	1	3	2	0	2	7
	7:00 AM	38	41	3	28	58	15	20	92	38	8	124	23	488	1	3	1	1	6	0	0	0	1	1	1	3	1	2	7
	7:15 AM	44	36	5	34	63	21	15	101	41	11	137	30	538	4	1	0	3	8	1	0	1	0	2	5	1	1	3	10
	7:30 AM	50	44	2	37	71	16	19	98	36	7	146	27	553	2	5	2	5	14	0	1	0	0	1	2	6	2	5	15
	7:45 AM	45	42	6	33	67	19	21	102	39	6	148	33	561	5	5	1	3	14	1	0	0	1	2	6	5	1	4	16
	8:00 AM	52	50	8	35	72	18	24	105	35	17	160	38	614	10	6	1	4	21	3	1	0	0	4	13	7	1	4	25
	8:15 AM	47	37	6	41	74	20	22	104	40	9	158	25	583	2	8	2	6	18	0	1	0	0	1	2	9	2	6	19
	8:30 AM	45	39	4	33	69	17	16	97	43	9	128	28	528	9	7	3	10	29	1	0	0	0	1	10	7	3	10	30
	8:45 AM	26	47	4	41	65	11	19	106	35	8	120	21	503	2	6	1	2	11	0	0	0	0	0	2	6	1	2	11
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	464	440	43	371	703	178	205	1,072	418	91	1,457	293	5,735	40	43	11	38	132	7	4	1	3	15	47	47	12	41	147
	APPROACH %	49%	46%	5%	30%	56%	14%	12%	63%	25%	5%	79%	16%																
	APP/DEPART	947	/	938	1,252	/	1,212	1,695	/	1,486	1,841	/	2,099	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	194	173	22	146	284	73	86	409	150	39	612	123	2,311															
	APPROACH %	50%	44%	6%	29%	56%	15%	13%	63%	23%	5%	79%	16%																
	PEAK HR FACTOR		0.884			0.931			0.971			0.900		0.941															
	APP/DEPART	389	/	382	503	/	473	645	/	577	774	/	879	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	59	72	11	54	36	11	21	106	28	7	125	21	551	6	5	1	4	16	0	1	0	1	2	6	6	1	5	18
	3:15 PM	66	83	18	49	41	16	25	111	34	10	131	30	614	11	2	3	8	24	1	0	1	0	2	12	2	4	8	26
	3:30 PM	73	88	9	56	49	13	33	122	35	6	142	25	651	14	7	1	11	33	1	0	0	1	2	15	7	1	12	35
	3:45 PM	77	79	13	52	50	18	26	113	40	10	133	23	634	9	5	2	9	25	0	2	0	0	2	9	7	2	9	27
	4:00 PM	79	85	17	45	44	24	28	116	37	12	138	26	651	13	3	1	15	32	2	1	0	1	4	15	4	1	16	36
	4:15 PM	84	77	16	56	53	8	29	118	40	12	137	24	654	10	12	1	16	39	3	0	0	1	4	13	12	1	17	43
	4:30 PM	74	91	22	50	44	15	31	139	47	10	165	29	717	12	9	2	5	28	1	0	1	1	3	13	9	3	6	31
	4:45 PM	77	61	15	70	57	12	23	149	43	11	168	35	721	21	4	2	6	33	1	2	0	0	3	22	6	2	6	36
	5:00 PM	91	84	9	64	62	17	24	155	55	8	159	47	775	7	12	4	3	26	0	0	0	1	1	7	12	4	4	27
	5:15 PM	90	80	15	63	61	20	29	153	45	10	228	29	823	7	7	1	4	19	0	2	0	0	2	7	9	1	4	21
	5:30 PM	72	91	15	69	63	19	30	190	51	4	196	26	826	15	9	6	10	40	3	1	0	0	4	18	10	6	10	44
	5:45 PM	80	97	17	65	67	19	23	154	41	9	186	34	792	8	11	1	11	31	1	1	0	0	2	9	12	1	11	33
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	922	988	177	693	627	192	322	1,626	496	109	1,908	349	8,409	133	86	25	102	346	13	10	2	6	31	146	96	27	108	377
	APPROACH %	44%	47%	8%	46%	41%	13%	13%	67%	20%	5%	81%	15%																
	APP/DEPART	2,087	/	1,659	1,512	/	1,232	2,444	/	2,496	2,366	/	3,022	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	333	352	56	261	253	75	106	652	192	31	769	136	3,216															
	APPROACH %	45%	48%	8%	44%	43%	13%	11%	69%	20%	3%	82%	15%																
	PEAK HR FACTOR		0.955			0.975			0.876			0.876		0.973															
	APP/DEPART	741	/	594	589	/	476	950	/	969	936	/	1,177	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	MARMION WAY	LOCATION #:	8
WEDNESDAY	EAST & WEST:	PASADENA AVE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND MARMION WAY			SOUTHBOUND MARMION WAY			EASTBOUND PASADENA AVE			WESTBOUND PASADENA AVE				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	0.5	X	0.5	X	X	X	X	2	0	1	2	X		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	2		2					32	2	8	33		79	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:15 AM	6		3					57	5	5	52		128	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	6:30 AM	8		1					77	6	7	56		155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	7		8					117	9	11	88		240	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:00 AM	6		5					97	8	14	108		238	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	7:15 AM	21		16					118	30	11	134		330	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
	7:30 AM	47		15					140	37	15	121		375	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	7:45 AM	23		17					133	35	18	100		326	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	28		14					114	30	22	157		365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	15		12					135	17	19	139		337	0	4	0	0	4	0	0	1	0	1	0	4	1	0	5
	8:30 AM	12		14					134	14	11	106		291	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	14		15					108	17	16	126		296	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	189	0	122	0	0	0	0	1,262	210	157	1,220	0	3,160	0	14	1	0	15	0	0	1	0	1	0	14	2	0	16
	APPROACH %	61%	0%	39%	0%	0%	0%	0%	86%	14%	11%	89%	0%																
	APP/DEPART	311	/	0	0	/	367	1,472	/	1,384	1,377	/	1,409	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	113	0	58	0	0	0	0	522	119	74	517	0	1,403															
	APPROACH %	66%	0%	34%	0%	0%	0%	0%	81%	19%	13%	87%	0%																
	PEAK HR FACTOR		0.690			0.000			0.905			0.825		0.935															
	APP/DEPART	171	/	0	0	/	193	641	/	580	591	/	630	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	17		16					113	17	5	136		304	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	3:15 PM	15		20					108	18	9	149		319	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	3:30 PM	16		41					151	20	8	117		353	0	1	1	0	2	0	1	0	0	1	0	2	1	0	3
	3:45 PM	17		31					128	15	8	138		337	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	19		38					130	14	8	129		338	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	24		22					131	21	3	109		310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	24		44					151	18	12	153		402	0	5	1	0	6	0	0	0	0	0	0	5	1	0	6
	4:45 PM	25		31					148	23	4	139		370	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	5:00 PM	24		44					143	26	7	153		397	0	3	0	0	3	0	1	0	0	1	0	4	0	0	4
	5:15 PM	33		50					131	26	12	171		423	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	5:30 PM	32		45					141	28	5	146		397	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2
	5:45 PM	26		52					161	32	6	141		418	0	3	4	0	7	0	0	0	0	0	0	3	4	0	7
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	272	0	434	0	0	0	0	1,636	258	87	1,681	0	4,368	0	19	6	0	25	0	4	0	0	4	0	23	6	0	29
	APPROACH %	39%	0%	61%	0%	0%	0%	0%	86%	14%	5%	95%	0%																
	APP/DEPART	706	/	0	0	/	345	1,894	/	2,070	1,768	/	1,953	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	115	0	191	0	0	0	0	576	112	30	611	0	1,635															
	APPROACH %	38%	0%	62%	0%	0%	0%	0%	84%	16%	5%	95%	0%																
	PEAK HR FACTOR		0.922			0.000			0.891			0.876		0.966															
	APP/DEPART	306	/	0	0	/	142	688	/	767	641	/	726	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	MONTEREY ROAD	LOCATION #:	9
WEDNESDAY	EAST & WEST:	MONTEREY ROAD	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND MONTEREY ROAD			SOUTHBOUND MONTEREY ROAD			EASTBOUND MONTEREY ROAD			WESTBOUND MONTEREY ROAD				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 2	NT X	NR 1	SL X	ST X	SR 1	EL X	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	2		1			0		34	4	13	39	0	93					0					0	0	0	0	0	0
	6:15 AM	4		25			0		54	2	16	67	0	168	2	1	1	0	4	0	0	0	0	0	2	1	1	0	4
	6:30 AM	4		25			1		67	6	28	75	0	206	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	6:45 AM	8		39			0		78	8	23	79	2	237	2	2	0	0	4	1	0	0	0	1	3	2	0	0	5
	7:00 AM	10		51			1		97	17	19	105	0	300	3	1	0	0	4	1	0	0	1	2	4	1	0	1	6
	7:15 AM	10		123			0		133	15	63	119	1	464	3	1	1	0	5	1	0	0	0	1	4	1	1	0	6
	7:30 AM	23		71			0		103	15	68	103	1	384	3	0	2	0	5	1	0	0	0	1	4	0	2	0	6
	7:45 AM	12		40			1		115	22	61	160	2	413	11	1	8	0	20	0	0	0	0	0	11	1	8	0	20
	8:00 AM	15		55			2		106	10	51	100	0	339	6	0	6	0	12	0	0	0	0	0	6	0	6	0	12
	8:15 AM	13		60			0		106	13	48	100	0	340	2	3	3	1	9	0	0	1	0	1	2	3	4	1	10
	8:30 AM	7		52			0		100	7	48	91	0	305	23	11	22	0	56	0	0	0	0	0	23	11	22	0	56
	8:45 AM	11		48			1		95	9	44	88	1	297	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	119	0	590	0	0	6	0	1,088	128	482	1,126	7	3,546	56	23	43	2	124	4	0	1	1	6	60	23	44	3	130
	APPROACH %	17%	0%	83%	0%	0%	100%	0%	89%	11%	30%	70%	0%																
	APP/DEPART	709	/	7	6	/	610	1,216	/	1,678	1,615	/	1,251	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	60	0	289	0	0	3	0	457	62	243	482	4	1,600															
	APPROACH %	17%	0%	83%	0%	0%	100%	0%	88%	12%	33%	66%	1%																
	PEAK HR FACTOR		0.656			0.375			0.877			0.817		0.862															
	APP/DEPART	349	/	4	3	/	305	519	/	746	729	/	545	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	14		57			0		118	11	51	118	1	370	11	4	7	3	25	1	0	1	0	2	12	4	8	3	27
	3:15 PM	18		50			0		93	11	64	101	3	340	4	3	6	1	14	0	0	0	0	0	4	3	6	1	14
	3:30 PM	7		63			0		123	13	55	96	0	357	2	1	2	0	5	0	1	0	0	1	2	2	2	0	6
	3:45 PM	10		52			0		120	11	50	82	0	325	0	1	1	0	2	0	0	0	0	0	0	1	1	0	2
	4:00 PM	9		62			1		116	10	38	102	1	339	2	0	2	0	4	1	0	0	0	1	3	0	2	0	5
	4:15 PM	15		57			0		112	8	42	96	0	330	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	4:30 PM	14		73			0		142	12	42	104	2	389	2	0	2	0	4	1	0	0	0	1	3	0	2	0	5
	4:45 PM	12		59			0		122	7	47	89	0	336	0	2	1	1	4	0	0	1	0	1	0	2	2	1	5
	5:00 PM	8		65			0		131	10	45	97	1	357	3	0	2	0	5	1	0	0	0	1	4	0	2	0	6
	5:15 PM	13		61			0		119	14	39	103	1	350	1	1	0	0	2	2	0	0	0	2	3	1	0	0	4
	5:30 PM	10		56			0		114	9	48	94	0	331	0	2	3	0	5	0	0	1	0	1	0	2	4	0	6
	5:45 PM	9		58			0		120	11	50	101	0	349	1	1	2	0	4	0	1	0	0	1	1	2	2	0	5
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	139	0	713	0	0	1	0	1,430	127	571	1,183	9	4,173	26	17	28	5	76	6	2	3	0	11	32	19	31	5	87
	APPROACH %	16%	0%	84%	0%	0%	100%	0%	92%	8%	32%	67%	1%																
	APP/DEPART	852	/	9	1	/	698	1,557	/	2,143	1,763	/	1,323	0															
	BEGIN PEAK HR		4:30 PM																										
	VOLUMES	47	0	258	0	0	0	0	514	43	173	393	4	1,432															
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	92%	8%	30%	69%	1%																
	PEAK HR FACTOR		0.876			0.000			0.904			0.963		0.920															
	APP/DEPART	305	/	4	0	/	216	557	/	772	570	/	440	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FREMONT AVE	LOCATION #:	10
WEDNESDAY	EAST & WEST:	MONTEREY RD	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FREMONT AVE			SOUTHBOUND FREMONT AVE			EASTBOUND MONTEREY RD			WESTBOUND MONTEREY RD				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	10	56	2	2	67	0	5	20	29	4	19	1	215	1	0	0	2	3	0	0	0	0	0	1	0	0	2	3
	6:15 AM	16	74	6	10	93	2	6	32	33	0	25	4	301	0	3	2	0	5	0	0	0	0	0	0	3	2	0	5
	6:30 AM	20	89	4	6	131	0	18	33	22	3	29	1	356	0	0	1	1	2	6	0	0	1	7	6	0	1	2	9
	6:45 AM	26	135	5	5	158	2	7	70	42	4	59	6	519	1	3	1	1	6	1	0	1	0	2	2	3	2	1	8
	7:00 AM	22	150	1	10	178	2	14	60	53	11	63	7	571	2	2	0	3	7	0	2	0	0	2	2	4	0	3	9
	7:15 AM	23	155	5	8	169	2	12	91	52	11	101	11	640	1	5	2	5	13	1	0	0	2	3	2	5	2	7	16
	7:30 AM	31	163	14	12	160	4	12	157	46	19	114	15	747	9	3	6	13	31	0	0	0	0	0	9	3	6	13	31
	7:45 AM	43	173	29	6	125	7	16	118	55	23	161	19	775	5	9	15	7	36	0	0	1	1	2	5	9	16	8	38
	8:00 AM	28	164	2	7	171	5	18	134	51	4	108	11	703	3	0	0	3	6	0	0	0	0	0	3	0	0	3	6
	8:15 AM	37	141	3	12	149	4	22	120	43	6	85	9	631	2	1	2	4	9	0	0	0	1	1	2	1	2	5	10
	8:30 AM	36	151	5	10	156	9	14	114	42	8	82	7	634	5	4	5	4	18	1	0	0	2	3	6	4	5	6	21
	8:45 AM	46	137	3	7	172	6	18	97	55	8	92	15	656	2	2	2	4	10	0	0	1	1	2	2	2	3	5	12
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	338	1,588	79	95	1,729	43	162	1,046	523	101	938	106	6,748	31	32	36	47	146	9	2	3	8	22	40	34	39	55	168
	APPROACH %	17%	79%	4%	5%	93%	2%	9%	60%	30%	9%	82%	9%																
	APP/DEPART	2,005	/	1,856	1,867	/	2,353	1,731	/	1,220	1,145	/	1,319	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	125	655	50	33	625	18	58	500	204	57	484	56	2,865															
	APPROACH %	15%	79%	6%	5%	92%	3%	8%	66%	27%	10%	81%	9%																
	PEAK HR FACTOR		0.847			0.923			0.886			0.735		0.924															
	APP/DEPART	830	/	769	676	/	886	762	/	583	597	/	627	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	42	166	10	30	124	8	20	129	39	17	107	19	711	9	36	14	18	77	0	1	0	0	1	9	37	14	18	78
	3:15 PM	46	144	12	19	132	9	15	107	42	8	112	17	663	3	5	8	10	26	0	2	1	0	3	3	7	9	10	29
	3:30 PM	33	156	10	19	143	13	11	112	49	12	96	15	669	0	1	2	3	6	0	0	0	0	0	0	1	2	3	6
	3:45 PM	34	158	10	22	169	9	20	101	40	9	99	18	689	8	1	4	6	19	0	0	0	0	0	8	1	4	6	19
	4:00 PM	31	178	12	24	157	7	15	97	39	9	89	25	683	3	5	6	4	18	2	2	0	0	4	5	7	6	4	22
	4:15 PM	37	161	8	20	157	9	16	150	43	18	114	14	747	8	3	8	5	24	1	0	0	0	1	9	3	8	5	25
	4:30 PM	40	152	13	26	162	11	14	119	46	15	101	14	713	1	5	5	8	19	0	0	0	1	1	1	5	5	9	20
	4:45 PM	53	180	12	25	160	7	17	126	46	8	129	21	784	2	4	4	7	17	0	1	3	1	5	2	5	7	8	22
	5:00 PM	38	144	11	20	176	10	19	144	57	11	115	10	755	5	4	4	6	19	1	0	0	1	2	6	4	4	7	21
	5:15 PM	44	174	18	28	172	9	13	132	37	11	159	11	808	3	2	2	2	9	0	0	0	0	0	3	2	2	2	9
	5:30 PM	39	144	12	33	146	10	14	153	42	13	139	16	761	3	4	2	5	14	1	0	1	0	2	4	4	3	5	16
	5:45 PM	39	151	11	15	166	10	17	139	49	15	130	11	753	3	2	4	0	9	0	0	0	1	1	3	2	4	1	10
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	476	1,908	139	281	1,864	112	191	1,509	529	146	1,390	191	8,736	48	72	63	74	257	5	6	5	4	20	53	78	68	78	277
	APPROACH %	19%	76%	6%	12%	83%	5%	9%	68%	24%	8%	80%	11%																
	APP/DEPART	2,523	/	2,290	2,257	/	2,539	2,229	/	1,929	1,727	/	1,978	0															
	BEGIN PEAK HR		4:45 PM																										
	VOLUMES	174	642	53	106	654	36	63	555	182	43	542	58	3,108															
	APPROACH %	20%	74%	6%	13%	82%	5%	8%	69%	23%	7%	84%	9%																
	PEAK HR FACTOR		0.887			0.952			0.909			0.888		0.962															
	APP/DEPART	869	/	763	796	/	879	800	/	714	643	/	752	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FAIR OAKS	LOCATION #:	11
WEDNESDAY	EAST & WEST:	MONTEREY	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FAIR OAKS			SOUTHBOUND FAIR OAKS			EASTBOUND MONTEREY			WESTBOUND MONTEREY				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 3	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	13	71	0	2	38	6	4	8	4	3	8	8	165	0	0	0	1	1	1	0	0	0	1	1	0	0	1	2
	6:15 AM	12	93	2	3	62	3	9	16	11	3	13	3	230	1	0	2	0	3	0	0	2	1	3	1	0	4	1	6
	6:30 AM	14	105	4	9	79	8	6	17	12	5	15	8	282	1	0	0	0	1	0	0	0	1	1	1	0	0	1	2
	6:45 AM	25	133	3	12	111	4	12	36	33	2	31	9	411	2	3	0	1	6	1	0	1	0	2	3	3	1	1	8
	7:00 AM	34	141	3	15	166	9	14	29	27	11	25	13	487	0	0	0	0	0	0	1	1	3	5	0	1	1	3	5
	7:15 AM	52	167	2	11	172	9	12	49	50	14	57	14	609	4	8	7	3	22	1	3	5	3	12	5	11	12	6	34
	7:30 AM	41	156	10	14	243	13	18	43	77	18	81	18	732	8	11	22	13	54	2	0	0	1	3	10	11	22	14	57
	7:45 AM	41	163	13	19	269	22	20	45	79	20	95	10	796	8	8	9	6	31	1	2	2	0	5	9	10	11	6	36
	8:00 AM	63	208	10	19	221	8	18	46	59	13	58	16	739	4	3	3	8	18	0	0	0	1	1	4	3	3	9	19
	8:15 AM	54	206	11	12	138	12	27	71	43	14	39	22	649	1	2	3	3	9	0	0	0	0	0	1	2	3	3	9
	8:30 AM	43	164	10	10	154	10	17	44	36	14	55	10	567	2	4	1	0	7	0	1	0	1	2	2	5	1	1	9
	8:45 AM	38	167	11	10	160	10	19	45	34	5	73	13	585	2	1	2	3	8	1	0	1	1	3	3	1	3	4	11
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	430	1,774	79	136	1,813	114	176	449	465	122	550	144	6,252	33	40	49	38	160	7	7	12	12	38	40	47	61	50	198
	APPROACH %	19%	78%	3%	7%	88%	6%	16%	41%	43%	15%	67%	18%																
	APP/DEPART	2,283	/	2,094	2,063	/	2,400	1,090	/	664	816	/	1,094	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	199	733	44	64	871	55	83	205	258	65	273	66	2,916															
	APPROACH %	20%	75%	5%	6%	88%	6%	15%	38%	47%	16%	68%	16%																
	PEAK HR FACTOR		0.868			0.798			0.948			0.808		0.916															
	APP/DEPART	976	/	882	990	/	1,194	546	/	313	404	/	527	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	50	203	22	28	198	18	21	70	60	15	60	16	761	6	11	33	16	66	1	0	1	0	2	7	11	34	16	68
	3:15 PM	53	184	22	31	213	15	26	53	51	13	56	27	744	3	0	6	9	18	0	0	0	0	0	3	0	6	9	18
	3:30 PM	24	137	10	25	220	18	37	59	52	13	44	12	651	0	0	9	4	13	0	0	0	0	0	0	0	9	4	13
	3:45 PM	34	130	10	30	211	15	23	54	49	13	59	26	654	2	1	8	6	17	0	0	0	1	1	2	1	8	7	18
	4:00 PM	35	140	17	23	210	12	18	60	51	15	45	22	648	3	1	4	3	11	1	0	0	0	1	4	1	4	3	12
	4:15 PM	46	156	10	26	215	16	30	76	63	16	49	9	712	1	4	7	5	17	0	0	0	0	0	1	4	7	5	17
	4:30 PM	51	190	15	29	284	17	22	64	49	12	51	19	803	7	10	9	7	33	0	0	0	0	0	7	10	9	7	33
	4:45 PM	58	171	5	20	272	13	23	68	51	10	60	20	771	9	12	5	4	30	0	0	0	0	0	9	12	5	4	30
	5:00 PM	47	168	11	23	257	15	28	72	57	13	54	16	761	5	8	7	6	26	0	0	1	0	1	5	8	8	6	27
	5:15 PM	50	172	8	26	261	10	21	65	48	16	46	11	734	3	8	3	10	24	1	0	0	1	2	4	8	3	11	26
	5:30 PM	45	159	13	30	253	16	26	70	50	11	48	14	735	4	4	6	4	18	0	0	0	0	0	4	4	6	4	18
	5:45 PM	51	163	9	24	246	12	24	67	46	8	44	17	711	6	7	2	4	19	0	0	0	0	0	6	7	2	4	19
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	544	1,973	152	315	2,840	177	299	778	627	155	616	209	8,685	49	66	99	78	292	3	0	2	2	7	52	66	101	80	299
	APPROACH %	20%	74%	6%	9%	85%	5%	18%	46%	37%	16%	63%	21%																
	APP/DEPART	2,669	/	2,481	3,332	/	3,622	1,704	/	1,245	980	/	1,337	0															
	BEGIN PEAK HR		4:30 PM																										
	VOLUMES	206	701	39	98	1,074	55	94	269	205	51	211	66	3,069															
	APPROACH %	22%	74%	4%	8%	88%	4%	17%	47%	36%	16%	64%	20%																
	PEAK HR FACTOR		0.924			0.930			0.904			0.911		0.955															
	APP/DEPART	946	/	861	1,227	/	1,330	568	/	406	328	/	472	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FIGUEROA STREET	LOCATION #:	12
WEDNESDAY	EAST & WEST:	AVE 60	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FIGUEROA STREET			SOUTHBOUND FIGUEROA STREET			EASTBOUND AVE 60			WESTBOUND AVE 60				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	1	2	0	1	2	0	0	1	0	0.5	0.5	1		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	0	37	8	29	40	0	0	0	0	9	0	22	145	2	0	1	0	3	0	0	0	0	0	2	0	1	0	3
	6:15 AM	0	40	10	32	44	0	0	0	1	10	0	20	157	0	2	1	0	3	1	0	0	0	1	1	2	1	0	4
	6:30 AM	0	47	7	33	56	0	0	0	0	10	0	23	176	3	4	1	0	8	0	1	0	0	1	3	5	1	0	9
	6:45 AM	0	56	10	40	53	0	0	0	0	18	0	28	205	1	2	1	0	4	0	0	0	0	0	1	2	1	0	4
	7:00 AM	0	60	13	53	113	0	0	0	0	21	0	52	312	2	5	1	0	8	0	1	1	0	2	2	6	2	0	10
	7:15 AM	0	76	11	80	121	0	0	0	0	32	0	68	388	4	5	6	1	16	1	2	0	0	3	5	7	6	1	19
	7:30 AM	0	89	12	116	162	0	0	0	0	35	0	85	499	6	11	6	3	26	1	0	0	0	1	7	11	6	3	27
	7:45 AM	0	86	26	96	171	0	1	0	0	32	1	69	482	3	1	4	1	9	0	1	0	2	3	3	2	4	3	12
	8:00 AM	0	91	20	98	194	2	0	0	0	30	1	70	506	5	11	6	2	24	0	1	0	0	1	5	12	6	2	25
	8:15 AM	0	69	24	74	151	1	0	1	1	30	0	53	404	2	5	3	2	12	1	1	0	0	2	3	6	3	2	14
	8:30 AM	0	73	16	70	148	2	0	0	0	18	0	63	390	4	4	4	0	12	0	0	0	0	0	4	4	4	0	12
	8:45 AM	0	70	17	60	127	1	0	1	2	30	0	50	358	5	10	3	1	19	0	0	0	0	0	5	10	3	1	19
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	794	174	781	1,380	6	1	2	4	275	2	603	4,022	37	60	37	10	144	4	7	1	2	14	41	67	38	12	158
	APPROACH %	0%	82%	18%	36%	64%	0%	14%	29%	57%	31%	0%	69%																
	APP/DEPART	968	/	1,398	2,167	/	1,659	7	/	957	880	/	8	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	0	335	82	384	678	3	1	1	1	127	2	277	1,891															
	APPROACH %	0%	80%	20%	36%	64%	0%	33%	33%	33%	31%	0%	68%																
	PEAK HR FACTOR		0.931			0.906			0.375			0.846		0.934															
	APP/DEPART	417	/	613	1,065	/	806	3	/	467	406	/	5	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	1	141	38	67	152	1	0	1	3	29	1	70	504	13	18	17	6	54	1	0	0	0	1	14	18	17	6	55
	3:15 PM	1	154	48	86	148	1	0	1	1	42	1	64	547	20	27	10	3	60	0	0	0	0	0	20	27	10	3	60
	3:30 PM	2	176	30	66	106	1	1	0	0	39	1	63	485	16	38	14	6	74	1	0	0	0	1	17	38	14	6	75
	3:45 PM	1	133	30	66	122	2	2	2	2	40	0	66	466	29	34	9	0	72	0	2	2	0	4	29	36	11	0	76
	4:00 PM	1	139	33	72	146	2	2	0	3	29	0	70	497	31	18	24	7	80	0	0	0	1	1	31	18	24	8	81
	4:15 PM	5	154	34	51	136	1	3	1	2	32	4	60	483	24	28	5	2	59	0	0	0	2	2	24	28	5	4	61
	4:30 PM	1	133	23	72	139	1	1	0	4	49	3	76	502	20	24	22	4	70	0	1	1	0	2	20	25	23	4	72
	4:45 PM	2	177	25	64	125	4	3	0	3	33	3	73	512	26	32	16	0	74	2	0	0	0	2	28	32	16	0	76
	5:00 PM	1	149	29	53	112	1	0	1	1	31	0	59	437	17	33	3	4	57	0	0	0	0	0	17	33	3	4	57
	5:15 PM	5	138	31	85	135	2	1	1	3	44	1	61	507	9	12	5	0	26	0	0	0	2	2	9	12	5	2	28
	5:30 PM	2	131	33	80	141	3	2	0	1	36	2	71	502	11	16	9	1	37	0	0	0	0	0	11	16	9	1	37
	5:45 PM	2	137	26	77	144	6	1	2	2	33	2	70	502	7	13	7	4	31	0	0	0	1	1	7	13	7	5	32
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	24	1,762	380	839	1,606	25	16	9	25	437	18	803	5,944	223	293	141	37	694	4	3	3	6	16	227	296	144	43	710
	APPROACH %	1%	81%	18%	34%	65%	1%	32%	18%	50%	35%	1%	64%																
	APP/DEPART	2,166	/	2,581	2,470	/	2,068	50	/	1,228	1,258	/	67	0															
	BEGIN PEAK HR		3:00 PM																										
	VOLUMES	5	604	146	285	528	5	3	4	6	150	3	263	2,002															
	APPROACH %	1%	80%	19%	35%	65%	1%	23%	31%	46%	36%	1%	63%																
	PEAK HR FACTOR		0.907			0.870			0.542			0.972		0.915															
	APP/DEPART	755	/	870	818	/	684	13	/	435	416	/	13	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FIGUEROA STREET	LOCATION #:	13
WEDNESDAY	EAST & WEST:	AVE 57	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FIGUEROA STREET			SOUTHBOUND FIGUEROA STREET			EASTBOUND AVE 57			WESTBOUND AVE 57				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	1	2	0	1	2	0	0	1	0	0	1	0		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	3	46	6	2	44	0	0	6	1	7	2	3	120	1	0	2	0	3	0	0	0	0	0	1	0	2	0	3
	6:15 AM	4	53	10	4	54	0	1	11	2	11	4	4	158	2	1	1	1	5	0	1	0	0	1	2	2	1	1	6
	6:30 AM	7	61	12	4	67	1	5	18	3	14	5	4	201	3	3	3	4	13	0	0	0	0	0	3	3	3	4	13
	6:45 AM	2	70	9	7	80	0	0	8	2	13	8	5	204	5	2	7	3	17	1	0	1	0	2	6	2	8	3	19
	7:00 AM	2	71	9	8	124	2	0	9	5	34	4	6	274	10	2	6	7	25	0	0	0	1	1	10	2	6	8	26
	7:15 AM	2	92	25	13	153	3	2	12	3	49	10	10	374	12	8	10	5	35	0	1	1	0	2	12	9	11	5	37
	7:30 AM	5	96	30	14	168	2	4	22	2	55	40	11	449	18	8	11	9	46	0	0	0	1	1	18	8	11	10	47
	7:45 AM	10	114	39	13	207	7	8	21	4	65	26	7	521	4	7	3	4	18	0	0	1	0	1	4	7	4	4	19
	8:00 AM	5	105	28	20	216	2	3	12	5	30	21	6	453	2	7	10	7	26	0	0	1	0	1	2	7	11	7	27
	8:15 AM	1	92	24	10	169	2	1	8	2	41	14	6	370	13	6	10	5	34	1	0	0	1	2	14	6	10	6	36
	8:30 AM	4	83	21	9	163	3	5	10	3	19	7	9	336	10	0	9	3	22	1	0	2	0	3	11	0	11	3	25
	8:45 AM	4	81	22	10	150	9	6	6	1	24	6	11	330	3	2	9	6	20	0	0	0	0	0	3	2	9	6	20
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	49	964	235	114	1,595	31	35	143	33	362	147	82	3,790	83	46	81	54	264	3	2	6	3	14	86	48	87	57	278
	APPROACH %	4%	77%	19%	7%	92%	2%	17%	68%	16%	61%	25%	14%																
	APP/DEPART	1,248	/	1,081	1,740	/	1,990	211	/	492	591	/	227	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	22	407	122	60	744	14	17	67	14	199	97	34	1,797															
	APPROACH %	4%	74%	22%	7%	91%	2%	17%	68%	14%	60%	29%	10%																
	PEAK HR FACTOR		0.845			0.859			0.742			0.778		0.862															
	APP/DEPART	551	/	458	818	/	957	98	/	249	330	/	133	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	11	187	50	24	169	4	6	15	2	38	18	21	545	7	21	29	14	71	0	0	0	1	1	7	21	29	15	72
	3:15 PM	5	172	45	22	170	7	8	10	1	42	13	18	513	22	12	25	22	81	0	0	0	0	0	22	12	25	22	81
	3:30 PM	11	165	38	12	142	5	9	17	4	32	15	27	477	16	19	27	18	80	0	0	0	2	2	16	19	27	20	82
	3:45 PM	10	153	33	21	155	6	10	7	7	42	12	31	487	6	16	42	28	92	1	0	3	0	4	7	16	45	28	96
	4:00 PM	13	184	30	20	164	6	10	8	5	31	18	28	517	15	10	51	34	110	0	0	1	0	1	15	10	52	34	111
	4:15 PM	7	156	36	20	156	5	7	8	5	37	19	30	486	10	14	32	29	85	0	1	2	1	4	10	15	34	30	89
	4:30 PM	10	177	34	24	152	10	4	19	3	33	17	28	511	4	13	19	36	72	0	1	2	1	4	4	14	21	37	76
	4:45 PM	9	198	43	14	140	13	6	13	6	32	17	28	519	2	24	30	25	81	1	2	2	2	7	3	26	32	27	88
	5:00 PM	12	190	46	21	132	9	5	23	4	43	17	29	531	7	10	32	23	72	0	0	0	1	1	7	10	32	24	73
	5:15 PM	13	156	27	28	176	12	13	13	6	39	25	23	531	5	9	29	28	71	0	0	1	0	1	5	9	30	28	72
	5:30 PM	11	165	46	24	177	5	9	13	8	44	15	14	531	4	16	25	18	63	0	1	1	1	3	4	17	26	19	66
	5:45 PM	22	190	45	19	164	5	7	15	3	46	5	28	549	5	10	29	21	65	0	0	2	1	3	5	10	31	22	68
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	134	2,093	473	249	1,897	87	94	161	54	459	191	305	6,197	103	174	370	296	943	2	5	14	10	31	105	179	384	306	974
	APPROACH %	5%	78%	18%	11%	85%	4%	30%	52%	17%	48%	20%	32%																
	APP/DEPART	2,700	/	2,492	2,233	/	2,410	309	/	883	955	/	412	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	58	701	164	92	649	31	34	64	21	172	62	94	2,142															
	APPROACH %	6%	76%	18%	12%	84%	4%	29%	54%	18%	52%	19%	29%																
	PEAK HR FACTOR		0.898			0.894			0.930			0.921		0.975															
	APP/DEPART	923	/	829	772	/	842	119	/	320	328	/	151	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	MONTEREY ROAD	LOCATION #:	14
WEDNESDAY	EAST & WEST:	AVE 60	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND MONTEREY ROAD			SOUTHBOUND MONTEREY ROAD			EASTBOUND AVE 60			WESTBOUND AVE 60			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM													
5:00 AM													0
5:15 AM													0
5:30 AM													0
5:45 AM													0
6:00 AM	25	9	0	3	21	8	2	13	20	0	19	1	121
6:15 AM	34	15	1	2	34	6	4	11	26	2	25	2	162
6:30 AM	37	11	2	5	37	11	1	16	31	3	34	2	190
6:45 AM	43	18	1	8	46	15	4	24	37	4	46	4	250
7:00 AM	55	14	3	6	52	13	6	20	43	4	54	3	273
7:15 AM	69	27	3	11	71	19	5	33	64	7	66	6	381
7:30 AM	82	44	1	10	63	21	5	44	102	14	86	12	484
7:45 AM	79	42	5	20	71	10	3	49	81	6	73	8	447
8:00 AM	89	35	5	26	76	19	4	42	78	13	56	4	447
8:15 AM	68	24	4	11	58	20	6	28	63	2	33	4	321
8:30 AM	54	31	5	12	62	15	10	32	48	6	47	12	334
8:45 AM	44	31	6	5	60	10	6	32	34	6	42	9	285
9:00 AM													0
9:15 AM													0
9:30 AM													0
9:45 AM													0
VOLUMES	679	301	36	119	651	167	56	344	627	67	581	67	3,695
APPROACH %	67%	30%	4%	13%	69%	18%	5%	33%	61%	9%	81%	9%	
APP/DEPART	1,016	/	424	937	/	1,345	1,027	/	499	715	/	1,427	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	319	148	14	67	281	69	17	168	325	40	281	30	1,759
APPROACH %	66%	31%	3%	16%	67%	17%	3%	33%	64%	11%	80%	9%	
PEAK HR FACTOR		0.932			0.862			0.844			0.783		0.909
APP/DEPART	481	/	195	417	/	646	510	/	249	351	/	669	0
PM													
2:00 PM													0
2:15 PM													0
2:30 PM													0
2:45 PM													0
3:00 PM	54	43	8	14	30	9	5	43	45	8	36	2	297
3:15 PM	57	33	6	18	26	12	15	50	49	5	54	10	335
3:30 PM	64	42	10	11	40	10	14	50	49	4	47	5	346
3:45 PM	42	42	8	14	29	7	10	59	36	11	47	9	314
4:00 PM	54	32	9	16	28	10	15	50	29	4	36	9	292
4:15 PM	63	54	8	20	30	13	16	44	36	1	37	11	333
4:30 PM	61	52	12	20	23	12	22	52	51	5	55	12	377
4:45 PM	69	37	17	22	37	15	14	55	53	4	34	12	369
5:00 PM	64	60	11	25	35	9	21	44	53	4	55	6	387
5:15 PM	87	52	12	14	42	15	14	51	52	2	43	8	392
5:30 PM	72	69	24	20	31	16	21	56	60	5	48	13	435
5:45 PM	69	52	12	30	42	6	24	54	54	5	41	12	401
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
VOLUMES	756	568	137	224	393	134	191	608	567	58	533	109	4,278
APPROACH %	52%	39%	9%	30%	52%	18%	14%	45%	42%	8%	76%	16%	
APP/DEPART	1,461	/	868	751	/	1,018	1,366	/	969	700	/	1,423	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	292	233	59	89	150	46	80	205	219	16	187	39	1,615
APPROACH %	50%	40%	10%	31%	53%	16%	16%	41%	43%	7%	77%	16%	
PEAK HR FACTOR		0.885			0.913			0.920			0.917		0.928
APP/DEPART	584	/	352	285	/	385	504	/	353	242	/	525	0

	PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM															
5:00 AM					0					0	0	0	0	0	0
5:15 AM					0					0	0	0	0	0	0
5:30 AM					0					0	0	0	0	0	0
5:45 AM					0					0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	1	0	0	0	1	0	1	0	0	1	1	1	0	0	2
6:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
6:45 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
7:00 AM	2	0	1	0	3	0	0	0	1	1	2	0	1	1	4
7:15 AM	1	2	2	1	6	0	0	0	0	0	1	2	2	1	6
7:30 AM	0	1	1	0	2	0	0	1	0	1	0	1	2	0	3
7:45 AM	1	3	1	2	7	0	0	0	0	0	1	3	1	2	7
8:00 AM	1	0	0	0	1	0	0	0	1	1	1	0	0	1	2
8:15 AM	2	4	4	1	11	0	0	0	0	0	2	4	4	1	11
8:30 AM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
8:45 AM	1	0	2	0	3	0	0	0	0	0	1	0	2	0	3
9:00 AM					0					0	0	0	0	0	0
9:15 AM					0					0	0	0	0	0	0
9:30 AM					0					0	0	0	0	0	0
9:45 AM					0					0	0	0	0	0	0
VOLUMES	12	12	11	5	40	0	1	1	2	4	12	13	12	7	44
PM															
2:00 PM					0					0	0	0	0	0	0
2:15 PM					0					0	0	0	0	0	0
2:30 PM					0					0	0	0	0	0	0
2:45 PM					0					0	0	0	0	0	0
3:00 PM	0	0	0	3	3	0	1	0	0	1	0	1	0	3	4
3:15 PM	23	4	2	0	29	0	1	1	0	2	23	5	3	0	31
3:30 PM	3	3	3	0	9	0	1	0	0	1	3	4	3	0	10
3:45 PM	23	0	3	1	27	0	0	1	0	1	23	0	4	1	28
4:00 PM	1	0	3	1	5	1	0	4	0	5	2	0	7	1	10
4:15 PM	2	2	4	0	8	1	2	1	2	6	3	4	5	2	14
4:30 PM	2	2	5	0	9	6	1	0	0	7	8	3	5	0	16
4:45 PM	4	3	5	1	13	2	0	1	1	4	6	3	6	2	17
5:00 PM	1	1	2	0	4	0	0	0	0	0	1	1	2	0	4
5:15 PM	0	2	4	0	6	0	0	0	0	0	0	2	4	0	6
5:30 PM	0	2	1	0	3	0	0	0	0	0	0	2	1	0	3
5:45 PM	5	1	6	0	12	1	0	0	0	1	6	1	6	0	13
6:00 PM					0					0	0	0	0	0	0
6:15 PM					0					0	0	0	0	0	0
6:30 PM					0					0	0	0	0	0	0
6:45 PM					0					0	0	0	0	0	0
VOLUMES	64	20	38	6	128	11	6	8	3	28	75	26	46	9	156

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FIGUEROA STREET	LOCATION #:	15
WEDNESDAY	EAST & WEST:	AVE 52	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FIGUEROA STREET			SOUTHBOUND FIGUEROA STREET			EASTBOUND AVE 52			WESTBOUND AVE 52				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	1	2	0	1	2	0	0	1	0	0	1	0		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	2	31	16	34	51	1	1	40	4	3	12	5	200	2	1	0	1	4	0	0	1	0	1	2	1	1	1	5
	6:15 AM	4	45	21	31	59	1	2	51	9	11	10	15	259	2	6	9	2	19	2	0	1	0	3	4	6	10	2	22
	6:30 AM	2	47	15	56	98	6	2	64	7	7	18	12	334	2	0	6	5	13	0	0	3	0	3	2	0	9	5	16
	6:45 AM	4	56	20	26	97	5	1	53	10	5	25	22	324	2	3	7	3	15	1	0	0	0	1	3	3	7	3	16
	7:00 AM	3	76	23	31	159	5	4	62	13	7	33	20	436	4	9	17	5	35	0	0	0	0	0	4	9	17	5	35
	7:15 AM	9	105	14	44	218	5	6	62	12	14	23	39	551	8	8	20	3	39	0	0	0	0	0	8	8	20	3	39
	7:30 AM	13	124	15	54	245	17	10	58	14	19	35	34	638	16	13	18	10	57	1	1	0	0	2	17	14	18	10	59
	7:45 AM	8	127	30	40	311	21	11	61	19	26	43	24	721	3	4	19	8	34	0	0	1	0	1	3	4	20	8	35
	8:00 AM	4	94	18	31	222	7	14	58	28	34	47	20	577	4	6	19	0	29	0	0	0	0	0	4	6	19	0	29
	8:15 AM	11	105	24	29	191	2	11	68	16	20	25	21	523	8	8	18	7	41	1	0	1	0	2	9	8	19	7	43
	8:30 AM	4	83	26	50	175	4	6	48	14	13	27	33	483	5	3	5	2	15	2	0	1	0	3	7	3	6	2	18
	8:45 AM	8	94	24	20	154	3	8	29	15	14	28	34	431	15	3	5	7	30	0	0	0	0	0	15	3	5	7	30
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	72	987	246	446	1,980	77	76	654	161	173	326	279	5,477	71	64	143	53	331	7	1	8	0	16	78	65	151	53	347
	APPROACH %	6%	76%	19%	18%	79%	3%	9%	73%	18%	22%	42%	36%																
	APP/DEPART	1,305	/	1,342	2,503	/	2,314	891	/	1,346	778	/	475	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	34	450	77	169	996	50	41	239	73	93	148	117	2,487															
	APPROACH %	6%	80%	14%	14%	82%	4%	12%	68%	21%	26%	41%	33%																
	PEAK HR FACTOR		0.850			0.817			0.883			0.886		0.862															
	APP/DEPART	561	/	608	1,215	/	1,162	353	/	485	358	/	232	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	16	180	26	51	152	5	14	54	8	15	52	21	594	16	10	12	16	54	1	0	2	0	3	17	10	14	16	57
	3:15 PM	13	165	20	48	159	13	5	57	11	23	53	38	605	27	14	16	12	69	0	0	1	0	1	27	14	17	12	70
	3:30 PM	15	158	29	44	180	6	7	27	4	22	55	48	595	16	6	16	9	47	2	1	0	0	3	18	7	16	9	50
	3:45 PM	21	159	25	40	157	5	11	41	10	30	68	37	604	18	7	16	7	48	2	0	0	0	2	20	7	16	7	50
	4:00 PM	11	173	23	38	166	7	8	37	10	24	57	47	601	19	7	12	10	48	1	0	1	0	2	20	7	13	10	50
	4:15 PM	16	172	20	41	158	11	9	37	9	21	56	45	595	9	7	10	5	31	0	0	0	0	0	9	7	10	5	31
	4:30 PM	12	177	24	40	137	13	11	39	12	40	56	44	605	7	8	13	8	36	0	0	2	0	2	7	8	15	8	38
	4:45 PM	8	162	23	35	119	10	11	30	9	22	62	35	526	18	4	16	17	55	0	1	1	0	2	18	5	17	17	57
	5:00 PM	11	165	29	42	141	16	8	57	10	32	38	39	588	14	6	17	5	42	1	0	2	0	3	15	6	19	5	45
	5:15 PM	11	168	20	42	159	12	8	39	14	20	49	34	576	13	2	13	6	34	3	0	1	0	4	16	2	14	6	38
	5:30 PM	15	178	33	36	163	20	10	43	12	24	46	25	605	6	6	16	3	31	2	0	1	0	3	8	6	17	3	34
	5:45 PM	15	188	21	38	145	13	7	38	14	33	53	41	606	19	3	7	12	41	1	0	0	0	1	20	3	7	12	42
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	164	2,045	293	495	1,836	131	109	499	123	306	645	454	7,100	182	80	164	110	536	13	2	11	0	26	195	82	175	110	562
	APPROACH %	7%	82%	12%	20%	75%	5%	15%	68%	17%	22%	46%	32%																
	APP/DEPART	2,502	/	2,608	2,462	/	2,265	731	/	1,287	1,405	/	940	0															
	BEGIN PEAK HR		3:45 PM																										
	VOLUMES	60	681	92	159	618	36	39	154	41	115	237	173	2,405															
	APPROACH %	7%	82%	11%	20%	76%	4%	17%	66%	18%	22%	45%	33%																
	PEAK HR FACTOR		0.978			0.884			0.801			0.938		0.994															
	APP/DEPART	833	/	893	813	/	774	234	/	405	525	/	333	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	MONTEREY ROAD	LOCATION #:	16
WEDNESDAY	EAST & WEST:	VIA MARISOL	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND MONTEREY ROAD			SOUTHBOUND MONTEREY ROAD			EASTBOUND VIA MARISOL			WESTBOUND VIA MARISOL				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	12	29	2	4	32	5	3	10	13	1	18	3	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	13	37	3	4	53	3	4	12	18	4	23	7	181	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:30 AM	16	42	1	7	58	7	2	9	22	3	29	7	203	1	0	1	1	3	0	0	0	0	0	1	0	1	1	3
	6:45 AM	20	47	2	5	78	5	5	13	33	5	34	10	257	0	2	1	0	3	0	0	0	0	0	0	2	1	0	3
	7:00 AM	22	55	3	9	79	11	6	17	39	6	42	12	301	1	3	2	1	7	0	0	0	0	0	1	3	2	1	7
	7:15 AM	26	74	5	11	116	15	7	21	55	8	52	16	406	0	3	2	3	8	0	0	0	0	0	0	3	2	3	8
	7:30 AM	54	79	6	14	153	6	3	23	68	8	73	45	532	0	5	4	1	10	0	0	1	0	1	0	5	5	1	11
	7:45 AM	73	74	12	25	125	10	7	57	80	16	74	44	597	0	7	1	4	12	0	0	0	0	0	0	7	1	4	12
	8:00 AM	70	85	12	18	130	19	6	25	92	19	37	39	552	0	3	6	0	9	0	0	0	0	0	0	3	6	0	9
	8:15 AM	41	64	9	11	99	15	9	14	33	6	48	25	374	0	0	5	3	8	0	0	0	0	0	0	0	5	3	8
	8:30 AM	37	45	5	12	97	10	6	21	23	6	27	39	328	0	4	4	0	8	0	0	0	0	0	0	4	4	0	8
	8:45 AM	34	41	4	13	73	13	11	30	29	4	38	29	319	2	2	2	0	6	0	0	0	0	0	2	2	2	0	6
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	418	672	64	133	1,093	119	69	252	505	86	495	276	4,182	4	30	28	13	75	0	0	1	0	1	4	30	29	13	76
	APPROACH %	36%	58%	6%	10%	81%	9%	8%	31%	61%	10%	58%	32%																
	APP/DEPART	1,154	/	1,017	1,345	/	1,684	826	/	449	857	/	1,032	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	223	312	35	68	524	50	23	126	295	51	236	144	2,087															
	APPROACH %	39%	55%	6%	11%	82%	8%	5%	28%	66%	12%	55%	33%																
	PEAK HR FACTOR		0.853			0.928			0.771			0.804		0.874															
	APP/DEPART	570	/	479	642	/	870	444	/	229	431	/	509	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	41	69	1	12	60	8	14	43	35	3	19	21	326	2	2	2	0	6	0	0	0	0	0	2	2	2	0	6
	3:15 PM	37	68	4	15	60	8	15	40	50	6	35	18	356	4	1	8	1	14	0	0	0	1	1	4	1	8	2	15
	3:30 PM	34	77	7	16	64	9	12	37	48	6	20	14	344	1	0	7	2	10	0	0	0	0	0	1	0	7	2	10
	3:45 PM	43	72	7	17	45	11	15	50	38	9	15	16	338	0	0	3	4	7	0	0	2	0	2	0	0	5	4	9
	4:00 PM	37	66	3	13	51	13	29	49	64	3	15	17	360	1	1	2	0	4	0	0	0	0	0	1	1	2	0	4
	4:15 PM	41	77	6	11	42	3	13	41	48	3	23	19	327	0	0	3	1	4	0	0	0	1	1	0	0	3	2	5
	4:30 PM	45	87	2	12	43	20	24	60	56	6	29	22	406	2	11	9	1	23	0	1	1	0	2	2	12	10	1	25
	4:45 PM	45	88	2	21	61	11	17	50	58	5	25	8	391	0	1	2	2	5	0	0	0	2	2	0	1	2	4	7
	5:00 PM	53	88	9	22	51	10	26	62	57	7	25	20	430	4	4	6	1	15	0	0	0	0	0	4	4	6	1	15
	5:15 PM	45	104	9	17	72	13	29	59	61	5	30	16	460	0	3	4	0	7	0	0	0	1	1	0	3	4	1	8
	5:30 PM	50	108	9	19	75	12	39	66	61	4	25	19	487	2	3	3	2	10	0	0	0	0	0	2	3	3	2	10
	5:45 PM	41	100	15	16	59	19	27	72	44	10	28	15	446	3	7	8	0	18	2	0	0	0	2	5	7	8	0	20
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	512	1,004	74	191	683	137	260	629	620	67	289	205	4,671	19	33	57	14	123	2	1	3	5	11	21	34	60	19	134
	APPROACH %	32%	63%	5%	19%	68%	14%	17%	42%	41%	12%	52%	37%																
	APP/DEPART	1,590	/	1,469	1,011	/	1,370	1,509	/	894	561	/	938	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	189	400	42	74	257	54	121	259	223	26	108	70	1,823															
	APPROACH %	30%	63%	7%	19%	67%	14%	20%	43%	37%	13%	53%	34%																
	PEAK HR FACTOR		0.945			0.908			0.908			0.962		0.936															
	APP/DEPART	631	/	591	385	/	506	603	/	375	204	/	351	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FAIR OAKS AVENUE	LOCATION #:	17
WEDNESDAY	EAST & WEST:	HUNTINGTON DRIVE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND FAIR OAKS AVENUE			SOUTHBOUND FAIR OAKS AVENUE			EASTBOUND HUNTINGTON DRIVE			WESTBOUND HUNTINGTON DRIVE				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	X	X	X	2	X	2	2	3	X	X	3	1		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM				13		33	33	25			64	53	221	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM				34		22	31	28			95	60	270	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM				29		45	35	50			139	92	390	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM				53		35	45	45			185	92	455	0		2	0	2	0		0	0	0	0	0	2	0	2
	7:00 AM				79		76	63	67			214	110	609	0		1	0	1	0		0	0	0	0	0	1	0	1
	7:15 AM				83		94	59	85			272	151	744	0		1	0	1	0		0	0	0	0	0	1	0	1
	7:30 AM				96		132	82	117			307	158	892	0		3	0	3	0		0	0	0	0	0	3	0	3
	7:45 AM				157		114	105	107			312	181	976	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:00 AM				131		82	81	115			336	148	893	1		1	0	2	0		0	0	0	0	1	0	1	0	2
	8:15 AM				104		80	77	108			297	133	799	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:30 AM				85		78	75	107			312	149	806	0		1	0	1	0		0	0	0	0	0	0	1	0	1
	8:45 AM													0					0					0	0	0	0	0	0
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	864	0	791	686	854	0	0	2,533	1,327	7,055	1	0	9	0	10	0	0	0	0	0	1	0	9	0	10
	APPROACH %	0%	0%	0%	52%	0%	48%	45%	55%	0%	0%	66%	34%																
	APP/DEPART	0	/	2,013	1,655	/	0	1,540	/	1,718	3,860	/	3,324	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	0	0	0	488	0	408	345	447	0	0	1,252	620	3,560															
	APPROACH %	0%	0%	0%	54%	0%	46%	44%	56%	0%	0%	67%	33%																
	PEAK HR FACTOR		0.000			0.827			0.934			0.949		0.912															
	APP/DEPART	0	/	965	896	/	0	792	/	935	1,872	/	1,660	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM				153		116	75	143			113	111	711					0					0	0	0	0	0	0
	3:00 PM				191		102	94	168			111	109	775	0		2	0	2	0		0	0	0	0	0	2	0	2
	3:15 PM				190		88	63	190			107	120	758	0		1	0	1	0		0	0	0	0	0	1	0	1
	3:30 PM				194		85	94	174			106	104	757	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:45 PM				159		89	81	196			101	115	741	0		1	0	1	0		0	0	0	0	0	1	0	1
	4:00 PM				195		93	110	213			141	120	872	1		1	0	2	0		0	0	0	0	1	0	1	0	2
	4:15 PM				195		125	67	233			97	121	838	0		2	0	2	0		0	0	0	0	0	2	0	2
	4:30 PM				176		123	105	181			139	127	851	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:45 PM				198		70	98	227			117	130	840	2		2	0	4	0		0	0	0	0	2	0	2	0	4
	5:00 PM				235		115	88	219			143	122	922	3		3	0	6	0		0	0	0	0	3	0	3	0	6
	5:15 PM				208		95	113	259			127	117	919					0					0	0	0	0	0	0
	5:30 PM				189		123	120	252			135	108	927					0					0	0	0	0	0	0
	5:45 PM				193		104	102	300			125	113	937					0					0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	2,476	0	1,328	1,210	2,755	0	0	1,562	1,517	10,848	6	0	12	0	18	0	0	0	0	0	6	0	12	0	18
	APPROACH %	0%	0%	0%	65%	0%	35%	31%	69%	0%	0%	51%	49%																
	APP/DEPART	0	/	2,727	3,804	/	0	3,965	/	5,231	3,079	/	2,890	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	0	0	0	825	0	437	423	1,030	0	0	530	460	3,705															
	APPROACH %	0%	0%	0%	65%	0%	35%	29%	71%	0%	0%	54%	46%																
	PEAK HR FACTOR		0.000			0.901			0.904			0.934		0.989															
	APP/DEPART	0	/	883	1,262	/	0	1,453	/	1,855	990	/	967	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FIGUEROA AVENUE	LOCATION #:	18
WEDNESDAY	EAST & WEST:	AVE 43	CONTROL:	2 WAY STOP EW

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FIGUEROA AVENUE			SOUTHBOUND FIGUEROA AVENUE			EASTBOUND AVE 43			WESTBOUND AVE 43				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
AM	5:15 AM													0					0					0	0	0	0	0	0
AM	5:30 AM													0					0					0	0	0	0	0	0
AM	5:45 AM													0					0					0	0	0	0	0	0
AM	6:00 AM	2	37	11	30	42	1	0	0	0	5	1	10	139	9	0	1	2	12	0	0	0	0	0	9	0	1	2	12
AM	6:15 AM	2	42	10	35	67	0	1	0	0	2	1	16	176	3	0	4	0	7	0	0	1	0	1	3	0	5	0	8
AM	6:30 AM	7	81	19	46	86	0	0	1	0	14	4	36	294	9	0	8	0	17	0	0	0	1	1	9	0	8	1	18
AM	6:45 AM	3	65	11	31	144	0	0	0	0	22	4	25	305	7	0	6	0	13	0	0	0	0	0	7	0	6	0	13
AM	7:00 AM	1	73	19	44	180	1	0	0	0	31	2	26	377	12	0	14	1	27	0	0	1	0	1	12	0	15	1	28
AM	7:15 AM	1	89	11	59	280	0	1	0	0	30	5	41	517	11	1	9	0	21	0	0	1	0	1	11	1	10	0	22
AM	7:30 AM	4	107	44	82	295	0	0	1	0	34	5	39	611	7	0	13	0	20	0	0	3	0	3	7	0	16	0	23
AM	7:45 AM	2	131	47	84	318	1	3	6	0	31	1	51	675	8	0	10	0	18	0	0	1	1	2	8	0	11	1	20
AM	8:00 AM	3	97	38	66	343	0	3	2	0	30	8	31	621	9	0	5	0	14	0	0	0	2	2	9	0	5	2	16
AM	8:15 AM	3	91	27	63	272	0	0	0	0	25	0	28	509	3	0	15	0	18	0	0	1	0	1	3	0	16	0	19
AM	8:30 AM	3	73	14	65	286	0	0	4	0	30	1	28	504	3	0	14	0	17	2	0	0	1	3	5	0	14	1	20
AM	8:45 AM	2	80	16	48	263	1	2	1	0	31	4	30	478	4	1	11	0	16	0	0	0	0	0	4	1	11	0	16
AM	9:00 AM													0					0					0	0	0	0	0	0
AM	9:15 AM													0					0					0	0	0	0	0	0
AM	9:30 AM													0					0					0	0	0	0	0	0
AM	9:45 AM													0					0					0	0	0	0	0	0
AM	VOLUMES	33	966	267	653	2,576	4	10	15	0	285	36	361	5,206	85	2	110	3	200	2	0	8	5	15	87	2	118	8	215
AM	APPROACH %	3%	76%	21%	20%	80%	0%	40%	60%	0%	42%	5%	53%																
AM	APP/DEPART	1,266	/	1,337	3,233	/	2,861	25	/	935	682	/	73	0															
AM	BEGIN PEAK HR		7:15 AM																										
AM	VOLUMES	10	424	140	291	1,236	1	7	9	0	125	19	162	2,424															
AM	APPROACH %	2%	74%	24%	19%	81%	0%	44%	56%	0%	41%	6%	53%																
AM	PEAK HR FACTOR		0.797			0.934			0.444			0.922		0.898															
AM	APP/DEPART	574	/	593	1,528	/	1,361	16	/	440	306	/	30	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
PM	2:15 PM													0					0					0	0	0	0	0	0
PM	2:30 PM													0					0					0	0	0	0	0	0
PM	2:45 PM													0					0					0	0	0	0	0	0
PM	3:00 PM	1	131	23	40	101	0	2	1	0	19	9	53	380	14	0	17	0	31	0	0	1	0	1	14	0	18	0	32
PM	3:15 PM	4	119	28	41	107	0	2	2	0	20	6	46	375	11	0	17	0	28	1	0	0	1	2	12	0	17	1	30
PM	3:30 PM	4	151	15	47	127	1	2	1	0	22	11	67	448	11	0	17	0	28	0	0	0	0	0	11	0	17	0	28
PM	3:45 PM	1	118	34	57	109	1	4	4	0	19	8	61	416	7	0	13	1	21	0	0	1	4	5	7	0	14	5	26
PM	4:00 PM	4	132	27	43	120	0	2	3	0	18	12	62	423	10	0	10	2	22	0	0	2	0	2	10	0	12	2	24
PM	4:15 PM	1	146	26	38	124	3	0	6	0	19	7	60	430	27	0	44	0	71	0	0	1	3	4	27	0	45	3	75
PM	4:30 PM	3	159	20	42	127	1	3	0	0	19	5	63	442	3	0	13	2	18	0	0	0	0	0	3	0	13	2	18
PM	4:45 PM	2	184	18	46	128	0	3	0	0	20	9	66	476	9	1	15	1	26	1	0	0	3	4	10	1	15	4	30
PM	5:00 PM	4	166	24	37	115	0	3	2	0	23	13	68	455	5	0	29	0	34	0	0	3	0	3	5	0	32	0	37
PM	5:15 PM	2	156	26	41	122	0	2	0	0	18	6	55	428	2	0	11	1	14	0	0	1	0	1	2	0	12	1	15
PM	5:30 PM	1	161	23	45	118	1	0	3	0	25	6	64	447	6	1	17	1	25	0	0	0	1	1	6	1	17	2	26
PM	5:45 PM	2	148	19	36	120	1	2	1	0	18	4	61	412	2	0	12	0	14	0	0	1	1	2	2	0	13	1	16
PM	6:00 PM													0					0					0	0	0	0	0	0
PM	6:15 PM													0					0					0	0	0	0	0	0
PM	6:30 PM													0					0					0	0	0	0	0	0
PM	6:45 PM													0					0					0	0	0	0	0	0
PM	VOLUMES	29	1,771	283	513	1,418	8	25	23	0	240	96	726	5,132	107	2	215	8	332	2	0	10	13	25	109	2	225	21	357
PM	APPROACH %	1%	85%	14%	26%	73%	0%	52%	48%	0%	23%	9%	68%																
PM	APP/DEPART	2,083	/	2,522	1,939	/	1,658	48	/	819	1,062	/	133	0															
PM	BEGIN PEAK HR		4:45 PM																										
PM	VOLUMES	9	667	91	169	483	1	8	5	0	86	34	253	1,806															
PM	APPROACH %	1%	87%	12%	26%	74%	0%	62%	38%	0%	23%	9%	68%																
PM	PEAK HR FACTOR		0.940			0.938			0.650			0.897		0.949															
PM	APP/DEPART	767	/	928	653	/	569	13	/	265	373	/	44	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	GRIFFIN AVENUE	LOCATION #:	19
WEDNESDAY	EAST & WEST:	AVE 43	CONTROL:	4 WAY STOP

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND GRIFFIN AVENUE			SOUTHBOUND GRIFFIN AVENUE			EASTBOUND AVE 43			WESTBOUND AVE 43			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0	1	0	0	1	0	
AM													
5:00 AM													0
5:15 AM													0
5:30 AM													0
5:45 AM													0
6:00 AM	8	2	1	0	6	10	3	2	6	0	14	0	52
6:15 AM	11	6	0	0	4	7	2	1	10	0	5	2	48
6:30 AM	15	1	1	1	15	13	4	3	13	0	9	1	76
6:45 AM	19	6	0	1	39	8	4	6	17	3	7	1	111
7:00 AM	21	6	1	6	49	28	4	7	15	3	8	5	153
7:15 AM	24	10	1	9	75	32	5	31	23	7	27	4	248
7:30 AM	17	9	11	22	77	27	7	39	23	9	43	12	296
7:45 AM	34	23	5	10	54	32	8	17	22	7	41	7	260
8:00 AM	30	20	0	2	75	20	9	9	28	2	15	2	212
8:15 AM	21	20	0	2	74	24	5	6	13	2	13	2	182
8:30 AM	19	18	1	1	70	20	7	8	18	4	7	3	176
8:45 AM	16	15	1	1	67	25	6	5	26	3	4	3	172
9:00 AM													0
9:15 AM													0
9:30 AM													0
9:45 AM													0
VOLUMES	235	136	22	55	605	246	64	134	214	40	193	42	1,986
APPROACH %	60%	35%	6%	6%	67%	27%	16%	33%	52%	15%	70%	15%	
APP/DEPART	393	/	242	906	/	859	412	/	211	275	/	674	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	105	62	17	43	281	111	29	96	96	25	126	25	1,016
APPROACH %	57%	34%	9%	10%	65%	26%	13%	43%	43%	14%	72%	14%	
PEAK HR FACTOR		0.742			0.863			0.801			0.688		0.858
APP/DEPART	184	/	116	435	/	402	221	/	156	176	/	342	0
PM													
2:00 PM													0
2:15 PM													0
2:30 PM													0
2:45 PM													0
3:00 PM	25	20	3	3	15	11	14	8	28	1	7	2	137
3:15 PM	20	45	2	4	14	10	25	15	24	1	3	4	167
3:30 PM	38	31	2	2	19	8	16	10	23	1	9	2	161
3:45 PM	22	31	1	1	14	15	18	5	30	2	5	3	147
4:00 PM	24	29	3	1	17	15	23	13	26	1	12	2	166
4:15 PM	26	35	7	7	21	13	13	5	33	3	7	3	173
4:30 PM	25	37	4	3	12	6	18	15	24	3	16	3	166
4:45 PM	21	38	1	2	23	11	20	9	30	3	10	1	169
5:00 PM	28	31	5	2	20	14	20	17	28	4	10	2	181
5:15 PM	26	30	9	1	25	13	11	23	24	2	16	1	181
5:30 PM	30	41	6	4	25	11	25	17	30	5	9	7	210
5:45 PM	34	40	3	4	19	7	13	18	19	0	18	4	179
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
VOLUMES	319	408	46	34	224	134	216	155	319	26	122	34	2,037
APPROACH %	41%	53%	6%	9%	57%	34%	31%	22%	46%	14%	67%	19%	
APP/DEPART	773	/	658	392	/	569	690	/	235	182	/	575	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	118	142	23	11	89	45	69	75	101	11	53	14	751
APPROACH %	42%	50%	8%	8%	61%	31%	28%	31%	41%	14%	68%	18%	
PEAK HR FACTOR		0.919			0.906			0.851			0.886		0.894
APP/DEPART	283	/	225	145	/	201	245	/	109	78	/	216	0

	PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM															
5:00 AM					0					0	0	0	0	0	0
5:15 AM					0					0	0	0	0	0	0
5:30 AM					0					0	0	0	0	0	0
5:45 AM					0					0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	4	0	0	0	4	0	0	0	2	2	4	0	0	2	6
6:30 AM	2	0	0	0	2	0	0	1	0	1	2	0	1	0	3
6:45 AM	2	0	2	1	5	0	0	0	0	0	2	0	2	1	5
7:00 AM	7	2	0	6	15	0	1	0	1	2	7	3	0	7	17
7:15 AM	25	2	4	8	39	0	0	0	0	0	25	2	4	8	39
7:30 AM	45	0	1	4	50	1	0	0	0	1	46	0	1	4	51
7:45 AM	25	5	0	8	38	0	0	1	0	1	25	5	1	8	39
8:00 AM	5	1	1	1	8	0	0	0	0	0	5	1	1	1	8
8:15 AM	13	8	2	7	30	0	0	0	1	1	13	8	2	8	31
8:30 AM	3	6	9	5	23	0	0	0	0	0	3	6	9	5	23
8:45 AM	1	0	0	2	3	0	0	0	0	0	1	0	0	2	3
9:00 AM					0					0	0	0	0	0	0
9:15 AM					0					0	0	0	0	0	0
9:30 AM					0					0	0	0	0	0	0
9:45 AM					0					0	0	0	0	0	0
VOLUMES	132	24	19	42	217	1	1	2	4	8	133	25	21	46	225
APPROACH %															
APP/DEPART															
BEGIN PEAK HR															
VOLUMES															
APPROACH %															
PEAK HR FACTOR															
APP/DEPART															
PM															
2:00 PM					0					0	0	0	0	0	0
2:15 PM					0					0	0	0	0	0	0
2:30 PM					0					0	0	0	0	0	0
2:45 PM					0					0	0	0	0	0	0
3:00 PM	2	1	1	0	4	1	0	0	0	1	3	1	1	0	5
3:15 PM	15	3	4	3	25	1	0	0	0	1	16	3	4	3	26
3:30 PM	5	2	1	8	16	0	0	1	1	2	5	2	2	9	18
3:45 PM	0	3	1	8	12	0	1	0	1	2	0	4	1	9	14
4:00 PM	9	0	3	8	20	2	0	2	0	4	11	0	5	8	24
4:15 PM	3	3	4	5	15	0	1	0	1	2	3	4	4	6	17
4:30 PM	12	1	3	1	17	0	0	0	0	0	12	1	3	1	17
4:45 PM	23	2	1	10	36	0	0	0	0	0	23	2	1	10	36
5:00 PM	10	5	1	2	18	0	0	0	1	1	10	5	1	3	19
5:15 PM	7	2	8	2	19	0	0	0	0	0	7	2	8	2	19
5:30 PM	5	1	1	1	8	0	0	0	0	0	5	1	1	1	8
5:45 PM	9	1	1	2	13	2	0	0	0	2	11	1	1	2	15
6:00 PM					0					0	0	0	0	0	0
6:15 PM					0					0	0	0	0	0	0
6:30 PM					0					0	0	0	0	0	0
6:45 PM					0					0	0	0	0	0	0
VOLUMES	100	24	29	50	203	6	2	3	4	15	106	26	32	54	218
APPROACH %															
APP/DEPART															
BEGIN PEAK HR															
VOLUMES															
APPROACH %															
PEAK HR FACTOR															
APP/DEPART															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FIGUEROA STREET	LOCATION #:	20
WEDNESDAY	EAST & WEST:	MARMION/PASADENA	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FIGUEROA STREET			SOUTHBOUND FIGUEROA STREET			EASTBOUND MARMION/PASADENA			WESTBOUND MARMION/PASADENA				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
AM	5:15 AM													0					0					0	0	0	0	0	0
AM	5:30 AM													0					0					0	0	0	0	0	0
AM	5:45 AM													0					0					0	0	0	0	0	0
AM	6:00 AM	7	25	1	18	37	0	1	5	28	3	2	9	136	1	4	8	2	15	0	0	1	0	1	1	4	9	2	16
AM	6:15 AM	5	33	3	21	52	1	2	10	41	4	3	11	186	0	9	4	2	15	0	0	0	0	0	0	9	4	2	15
AM	6:30 AM	4	37	5	33	86	1	4	13	65	6	6	14	274	0	4	2	3	9	0	0	0	1	1	0	4	2	4	10
AM	6:45 AM	8	40	4	38	112	1	4	33	67	6	11	19	343	1	7	7	1	16	0	0	0	0	0	1	7	7	1	16
AM	7:00 AM	13	59	7	59	125	6	2	55	79	12	13	17	447	1	10	10	0	21	1	2	0	1	4	2	12	10	1	25
AM	7:15 AM	22	77	18	71	154	4	9	61	77	17	15	22	547	1	24	9	8	42	0	0	1	0	1	1	24	10	8	43
AM	7:30 AM	34	101	37	91	202	6	16	67	83	20	17	24	698	3	20	13	5	41	0	1	1	0	2	3	21	14	5	43
AM	7:45 AM	26	111	24	107	190	6	12	61	78	22	16	24	677	2	8	12	12	34	0	0	1	0	1	2	8	13	12	35
AM	8:00 AM	14	75	11	102	196	4	16	57	85	6	12	29	607	1	14	6	1	22	0	0	0	0	0	1	14	6	1	22
AM	8:15 AM	19	50	10	75	168	0	10	72	90	5	17	28	544	0	7	10	6	23	0	1	0	0	1	0	8	10	6	24
AM	8:30 AM	22	85	4	90	175	6	15	50	69	14	17	20	567	0	7	4	4	15	1	1	0	0	2	1	8	4	4	17
AM	8:45 AM	24	78	4	72	176	3	10	39	51	5	11	26	499	1	3	2	1	7	0	2	0	0	2	1	5	2	1	9
AM	9:00 AM													0					0					0	0	0	0	0	0
AM	9:15 AM													0					0					0	0	0	0	0	0
AM	9:30 AM													0					0					0	0	0	0	0	0
AM	9:45 AM													0					0					0	0	0	0	0	0
AM	VOLUMES	198	771	128	777	1,673	38	101	523	813	120	140	243	5,525	11	117	87	45	260	2	7	4	2	15	13	124	91	47	275
AM	APPROACH %	18%	70%	12%	31%	67%	2%	7%	36%	57%	24%	28%	48%																
AM	APP/DEPART	1,097	/	1,115	2,488	/	2,606	1,437	/	1,428	503	/	376	0															
AM	BEGIN PEAK HR		7:15 AM																										
AM	VOLUMES	96	364	90	371	742	20	53	246	323	65	60	99	2,529															
AM	APPROACH %	17%	66%	16%	33%	65%	2%	9%	40%	52%	29%	27%	44%																
AM	PEAK HR FACTOR		0.799			0.935			0.937			0.903		0.906															
AM	APP/DEPART	550	/	516	1,133	/	1,130	622	/	707	224	/	176	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
PM	2:15 PM													0					0					0	0	0	0	0	0
PM	2:30 PM													0					0					0	0	0	0	0	0
PM	2:45 PM													0					0					0	0	0	0	0	0
PM	3:00 PM	31	125	26	46	122	8	5	20	45	17	19	52	516	1	13	6	5	25	0	7	0	0	7	1	20	6	5	32
PM	3:15 PM	30	121	23	41	122	6	10	16	31	24	31	56	511	10	22	7	10	49	0	4	2	2	8	10	26	9	12	57
PM	3:30 PM	49	133	11	41	115	10	6	20	27	18	27	54	511	8	14	8	8	38	0	2	2	3	7	8	16	10	11	45
PM	3:45 PM	35	134	10	38	107	11	14	17	34	13	41	51	505	8	19	9	3	39	1	2	0	0	3	9	21	9	3	42
PM	4:00 PM	40	111	19	40	106	10	5	18	28	15	28	47	467	3	16	7	6	32	0	3	0	3	6	3	19	7	9	38
PM	4:15 PM	36	116	13	28	107	10	13	16	32	14	37	67	489	4	10	4	7	25	2	7	0	5	14	6	17	4	12	39
PM	4:30 PM	44	146	12	45	117	11	8	21	30	14	39	59	546	4	14	7	8	33	0	1	0	5	6	4	15	7	13	39
PM	4:45 PM	21	88	8	36	92	5	5	10	49	3	9	15	341	3	9	7	5	24	2	7	1	1	11	5	16	8	6	35
PM	5:00 PM	21	75	4	31	94	5	10	17	45	6	14	27	349	1	10	5	5	21	1	2	1	4	8	2	12	6	9	29
PM	5:15 PM	25	87	10	26	104	7	7	14	37	8	12	21	358	0	11	3	7	21	1	1	4	3	9	1	12	7	10	30
PM	5:30 PM	18	79	6	33	111	12	7	16	41	11	8	17	359	1	8	8	8	25	0	2	0	1	3	1	10	8	9	28
PM	5:45 PM	20	75	9	30	96	6	4	12	35	5	11	20	323	0	10	5	6	21	1	1	0	2	4	1	11	5	8	25
PM	6:00 PM													0					0					0	0	0	0	0	0
PM	6:15 PM													0					0					0	0	0	0	0	0
PM	6:30 PM													0					0					0	0	0	0	0	0
PM	6:45 PM													0					0					0	0	0	0	0	0
PM	VOLUMES	370	1,290	151	435	1,293	101	94	197	434	148	276	486	5,275	43	156	76	78	353	8	39	10	29	86	51	195	86	107	439
PM	APPROACH %	20%	71%	8%	24%	71%	6%	13%	27%	60%	16%	30%	53%																
PM	APP/DEPART	1,811	/	1,870	1,829	/	1,875	725	/	783	910	/	747	0															
PM	BEGIN PEAK HR		3:00 PM																										
PM	VOLUMES	145	513	70	166	466	35	35	73	137	72	118	213	2,043															
PM	APPROACH %	20%	70%	10%	25%	70%	5%	14%	30%	56%	18%	29%	53%																
PM	PEAK HR FACTOR		0.943			0.947			0.875			0.908		0.990															
PM	APP/DEPART	728	/	761	667	/	675	245	/	309	403	/	298	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	FIGUEROA STREET	LOCATION #:	21
WEDNESDAY	EAST & WEST:	CYPRESS AVENUE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND FIGUEROA STREET			SOUTHBOUND FIGUEROA STREET			EASTBOUND CYPRESS AVENUE			WESTBOUND CYPRESS AVENUE				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 3	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	15	27	4	1	94	7	4	1	6	3	0	0	162	0	1	1	1	3	0	0	0	1	1	0	1	1	2	4
	6:15 AM	19	43	3	0	110	12	0	0	12	3	1	0	203	1	2	2	5	10	0	0	0	0	0	1	2	2	5	10
	6:30 AM	16	49	1	0	163	24	6	0	13	6	2	1	281	3	1	1	5	10	0	0	0	0	0	3	1	1	5	10
	6:45 AM	21	50	7	1	177	29	4	1	6	7	2	0	305	6	2	3	15	26	0	1	1	1	3	6	3	4	16	29
	7:00 AM	18	69	5	1	245	23	2	3	9	12	3	2	392	35	3	25	17	80	0	0	0	0	0	35	3	25	17	80
	7:15 AM	47	96	6	4	282	36	10	2	21	18	16	3	541	66	28	31	49	174	0	0	0	1	1	66	28	31	50	175
	7:30 AM	54	137	12	5	238	48	16	18	24	28	34	10	624	107	73	24	116	320	0	0	1	0	1	107	73	25	116	321
	7:45 AM	41	109	12	7	268	69	20	19	20	19	23	6	613	66	8	18	45	137	0	0	0	0	0	66	8	18	45	137
	8:00 AM	29	105	7	2	244	50	8	4	8	17	14	3	491	16	5	3	12	36	0	0	1	1	2	16	5	4	13	38
	8:15 AM	23	79	3	1	237	39	7	0	14	8	6	1	418	1	2	2	4	9	0	1	0	0	1	1	3	2	4	10
	8:30 AM	23	88	3	2	227	29	15	3	14	10	3	1	418	0	2	3	6	11	0	0	1	0	1	0	2	4	6	12
	8:45 AM	17	89	5	1	194	23	5	0	2	6	7	1	350	2	1	1	3	7	0	0	0	1	1	2	1	1	4	8
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	323	941	68	25	2,479	389	97	51	149	137	111	28	4,798	303	128	114	278	823	0	2	4	5	11	303	130	118	283	834
	APPROACH %	24%	71%	5%	1%	86%	13%	33%	17%	50%	50%	40%	10%																
	APP/DEPART	1,332	/	1,066	2,893	/	2,765	297	/	144	276	/	823	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	171	447	37	18	1,032	203	54	43	73	82	87	22	2,269															
	APPROACH %	26%	68%	6%	1%	82%	16%	32%	25%	43%	43%	46%	12%																
	PEAK HR FACTOR		0.807			0.911			0.720			0.663		0.909															
	APP/DEPART	655	/	523	1,253	/	1,187	170	/	98	191	/	461	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	56	146	8	6	135	57	29	7	23	22	10	11	510	72	40	33	136	281	0	0	0	0	0	72	40	33	136	281
	3:15 PM	46	155	12	4	116	45	8	6	17	10	8	2	429	7	10	6	7	30	0	0	0	0	0	7	10	6	7	30
	3:30 PM	47	183	7	3	105	52	12	5	13	8	10	1	446	5	12	8	27	52	2	0	1	0	3	7	12	9	27	55
	3:45 PM	45	164	4	3	111	45	12	2	11	6	6	4	413	11	8	5	33	57	0	0	0	1	1	11	8	5	34	58
	4:00 PM	49	140	14	2	115	49	23	4	9	6	6	0	417	8	9	3	38	58	0	2	0	1	3	8	11	3	39	61
	4:15 PM	59	159	11	4	112	44	9	3	10	10	7	2	430	11	16	9	15	51	0	2	2	7	11	11	18	11	22	62
	4:30 PM	51	188	9	0	101	48	7	2	4	5	8	6	429	7	11	7	13	38	0	2	1	0	3	7	13	8	13	41
	4:45 PM	55	168	14	2	118	48	17	4	8	7	8	3	452	1	16	8	19	44	0	2	2	2	6	1	18	10	21	50
	5:00 PM	48	173	16	1	140	56	10	4	10	12	7	5	482	1	13	4	31	49	0	1	2	8	11	1	14	6	39	60
	5:15 PM	53	166	11	0	123	47	8	2	6	6	10	2	434	2	8	6	17	33	0	0	1	0	1	2	8	7	17	34
	5:30 PM	45	154	13	2	114	52	11	3	10	9	5	5	423	3	11	6	22	42	0	1	0	2	3	3	12	6	24	45
	5:45 PM	50	162	8	2	106	45	9	3	7	7	8	3	410	2	9	4	15	30	0	0	2	1	3	2	9	6	16	33
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	604	1,958	127	29	1,396	588	155	45	128	108	93	44	5,275	130	163	99	373	765	2	10	11	22	45	132	173	110	395	810
	APPROACH %	22%	73%	5%	1%	69%	29%	47%	14%	39%	44%	38%	18%																
	APP/DEPART	2,689	/	2,157	2,013	/	1,632	328	/	201	245	/	1,285	0															
	BEGIN PEAK HR		3:00 PM																										
	VOLUMES	194	648	31	16	467	199	61	20	64	46	34	18	1,798															
	APPROACH %	22%	74%	4%	2%	68%	29%	42%	14%	44%	47%	35%	18%																
	PEAK HR FACTOR		0.921			0.861			0.614			0.570		0.881															
	APP/DEPART	873	/	727	682	/	577	145	/	67	98	/	427	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	GRIFFIN AVENUE	LOCATION #:	22
WEDNESDAY	EAST & WEST:	BROADWAY	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND GRIFFIN AVENUE			SOUTHBOUND GRIFFIN AVENUE			EASTBOUND BROADWAY			WESTBOUND BROADWAY				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	8	10	6	7	14	18	2	40	3	3	155	6	272	7	5	5	0	17	1	1	0	0	2	8	6	5	0	19
	6:15 AM	14	11	10	14	19	23	6	78	6	3	192	9	385	8	5	2	2	17	0	0	0	0	0	8	5	2	2	17
	6:30 AM	15	12	5	17	23	14	3	77	8	7	225	13	419	9	6	7	1	23	0	0	0	0	0	9	6	7	1	23
	6:45 AM	17	19	10	17	18	21	6	109	12	2	252	24	507	7	17	3	5	32	0	0	1	0	1	7	17	4	5	33
	7:00 AM	19	20	2	17	38	23	4	138	11	8	322	22	624	20	21	9	3	53	0	0	0	1	1	20	21	9	4	54
	7:15 AM	21	43	9	29	56	32	8	160	12	8	408	17	803	12	21	13	16	62	4	1	0	3	8	16	22	13	19	70
	7:30 AM	23	84	13	26	115	22	16	237	17	18	463	41	1,075	39	43	24	29	135	3	1	1	4	9	42	44	25	33	144
	7:45 AM	23	70	18	35	102	19	14	269	23	20	422	28	1,043	29	37	20	24	110	0	0	0	0	0	29	37	20	24	110
	8:00 AM	23	53	27	21	62	31	16	168	24	22	410	24	881	13	42	15	13	83	1	0	0	0	1	14	42	15	13	84
	8:15 AM	28	38	9	29	61	39	13	165	14	10	355	17	778	26	31	20	11	88	1	2	0	0	3	27	33	20	11	91
	8:30 AM	16	42	7	32	52	36	12	116	6	8	377	19	723	13	24	9	5	51	2	3	0	1	6	15	27	9	6	57
	8:45 AM	18	30	12	19	66	18	6	115	17	8	322	15	646	21	36	8	14	79	1	1	0	2	4	22	37	8	16	83
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	225	432	128	263	626	296	106	1,672	153	117	3,903	235	8,156	204	288	135	123	750	13	9	2	11	35	217	297	137	134	785
	APPROACH %	29%	55%	16%	22%	53%	25%	5%	87%	8%	3%	92%	6%																
	APP/DEPART	785	/	773	1,185	/	896	1,931	/	2,063	4,255	/	4,424	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	90	250	67	111	335	104	54	834	76	68	1,703	110	3,802															
	APPROACH %	22%	61%	16%	20%	61%	19%	6%	87%	8%	4%	91%	6%																
	PEAK HR FACTOR		0.848			0.844			0.788			0.901		0.884															
	APP/DEPART	407	/	414	550	/	479	964	/	1,012	1,881	/	1,897	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM													0					0					0	0	0	0	0	0
	3:15 PM	28	72	13	31	38	12	29	247	21	11	230	40	772	130	102	23	25	280	4	3	2	2	11	134	105	25	27	291
	3:30 PM	39	76	24	39	47	14	22	235	28	9	206	25	764	49	46	29	12	136	0	1	1	1	3	49	47	30	13	139
	3:45 PM	39	60	21	37	52	20	14	263	26	11	169	28	740	77	47	34	17	175	2	3	1	0	6	79	50	35	17	181
	4:00 PM	37	71	17	33	35	19	19	258	27	7	175	24	722	49	56	15	18	138	3	7	4	1	15	52	63	19	19	153
	4:15 PM	23	75	22	29	38	18	15	281	21	11	184	26	743	29	48	18	20	115	1	0	0	1	2	30	48	18	21	117
	4:30 PM	30	72	16	33	51	13	17	272	17	11	183	33	748	31	30	13	10	84	5	1	3	0	9	36	31	16	10	93
	4:45 PM	31	92	18	33	45	18	22	328	32	2	202	35	858	35	48	12	25	120	1	1	5	1	8	36	49	17	26	128
	5:00 PM	28	83	26	33	49	19	17	286	28	8	173	33	783	43	48	20	21	132	4	0	1	2	7	47	48	21	23	139
	5:15 PM	39	104	18	30	35	14	27	351	29	17	210	32	906	29	41	14	18	102	2	5	0	1	8	31	46	14	19	110
	5:30 PM	30	89	28	30	51	15	19	318	30	13	194	25	842	24	43	26	21	114	0	4	2	1	7	24	47	28	22	121
	5:45 PM	32	107	31	34	61	20	22	321	18	12	172	31	861	30	42	13	20	105	1	1	2	0	4	31	43	15	20	109
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	356	901	234	362	502	182	223	3,160	277	112	2,098	332	8,739	526	551	217	207	###	23	26	21	10	80	549	577	238	217	###
	APPROACH %	24%	60%	16%	35%	48%	17%	6%	86%	8%	4%	83%	13%																
	APP/DEPART	1,491	/	1,456	1,046	/	891	3,660	/	3,756	2,542	/	2,636	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	129	383	103	127	196	68	85	1,276	105	50	749	121	3,392															
	APPROACH %	21%	62%	17%	32%	50%	17%	6%	87%	7%	5%	81%	13%																
	PEAK HR FACTOR		0.904			0.850			0.900			0.888		0.936															
	APP/DEPART	615	/	589	391	/	351	1,466	/	1,506	920	/	946	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	PASADENA AVENUE	LOCATION #:	23
WEDNESDAY	EAST & WEST:	BROADWAY	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND PASADENA AVENUE			SOUTHBOUND PASADENA AVENUE			EASTBOUND BROADWAY			WESTBOUND BROADWAY				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 2	EL 1.5	ET 1.5	ER X	WL X	WT 2	WR 1	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM						49	13	20			66	0	148	0		0	0	0	1		0	0	1	1	0	0	0	1
	6:15 AM						81	19	27			87	0	214	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM						178	32	35			104	0	349	1		1	0	2	0		0	0	0	1	0	1	0	2
	6:45 AM						243	35	39			132	0	449	1		2	0	3	0		1	0	1	1	0	3	0	4
	7:00 AM						256	28	60			200	0	544	0		1	0	1	0		0	0	0	0	0	1	0	1
	7:15 AM						330	31	74			187	0	622	2		0	0	2	2		1	0	3	4	0	1	0	5
	7:30 AM						422	62	114			198	0	796	3		1	0	4	2		0	0	2	5	0	1	0	6
	7:45 AM						451	75	111			261	3	901	1		0	0	1	0		0	0	0	1	0	0	0	1
	8:00 AM						375	62	79			167	0	683	3		0	0	3	0		0	0	0	3	0	0	0	3
	8:15 AM						428	42	58			225	0	753	2		1	0	3	1		0	0	1	3	0	1	0	4
	8:30 AM						386	40	57			198	1	682	2		0	0	2	1		0	0	1	3	0	0	0	3
	8:45 AM						394	44	60			204	2	704	1		1	0	2	0		0	0	0	1	0	1	0	2
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	3,593	483	734	0	0	2,029	6	6,845	16	0	7	0	23	7	0	2	0	9	23	0	9	0	32
	APPROACH %	0%	0%	0%	0%	0%	100%	40%	60%	0%	0%	100%	0%																
	APP/DEPART	0	/	489	3,593	/	0	1,217	/	734	2,035	/	5,622	0															
	BEGIN PEAK HR		7:30 AM																										
	VOLUMES	0	0	0	0	0	1,676	241	362	0	0	851	3	3,133															
	APPROACH %	0%	0%	0%	0%	0%	100%	40%	60%	0%	0%	100%	0%																
	PEAK HR FACTOR		0.000			0.929			0.810			0.809		0.869															
	APP/DEPART	0	/	244	1,676	/	0	603	/	362	854	/	2,527	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM						83	95	116			68	0	362	2		0	0	2	1		0	0	1	3	0	0	0	3
	3:15 PM						67	107	134			66	0	374	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:30 PM						92	106	112			84	0	394	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:45 PM						93	126	156			101	0	476	3		0	0	3	1		0	0	1	4	0	0	0	4
	4:00 PM						106	112	93			82	1	394	1		0	0	1	0		0	0	0	1	0	0	0	1
	4:15 PM						93	158	124			61	0	436	0		0	0	0	1		0	0	1	1	0	0	0	1
	4:30 PM						70	154	132			74	0	430	1		2	0	3	2		2	0	4	3	0	4	0	7
	4:45 PM						79	162	157			71	0	469	2		0	0	2	0		0	0	0	2	0	0	0	2
	5:00 PM						78	212	141			85	1	517	0		0	0	0	1		0	0	1	1	0	0	0	1
	5:15 PM						86	207	160			77	0	530	2		0	0	2	0		0	0	0	2	0	0	0	2
	5:30 PM						108	230	134			85	1	558	3		0	0	3	1		0	0	1	4	0	0	0	4
	5:45 PM						96	221	135			64	0	516	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	1,051	1,890	1,594	0	0	918	3	5,456	14	0	2	0	16	7	0	2	0	9	21	0	4	0	25
	APPROACH %	0%	0%	0%	0%	0%	100%	54%	46%	0%	0%	100%	0%																
	APP/DEPART	0	/	1,893	1,051	/	0	3,484	/	1,594	921	/	1,969	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	0	0	0	0	0	368	870	570	0	0	311	2	2,121															
	APPROACH %	0%	0%	0%	0%	0%	100%	60%	40%	0%	0%	99%	1%																
	PEAK HR FACTOR		0.000			0.852			0.981			0.910		0.950															
	APP/DEPART	0	/	872	368	/	0	1,440	/	570	313	/	679	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	STADIUM WAY (NORTH)	LOCATION #:	24
WEDNESDAY	EAST & WEST:	110 SB RAMP	CONTROL:	ALL WAY STOP

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND STADIUM WAY (NORTH)			SOUTHBOUND STADIUM WAY (NORTH)			EASTBOUND 110 SB RAMP			WESTBOUND 110 SB RAMP				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL	NS	SS	ES	WS	TTL
	LANES:	1	1	X	X	1	0	X	X	X	1	1	1		X	X	X	X		X	X	X	X		X	X	X	X	
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM	0	7			29	0				8	1	1	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	1	8			41	0				20	0	1	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	16			48	0				46	0	6	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	37			63	0				54	0	9	163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	40			77	0				50	1	3	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	50			85	0				44	0	10	189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	74			74	0				59	0	3	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	1	38			65	0				49	0	4	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	25			67	1				33	0	5	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	28			56	0				33	0	3	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	1	15			52	1				39	1	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	20			72	0				40	0	1	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	3	358	0	0	729	2	0	0	0	475	3	46	1,616	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	1%	99%	0%	0%	100%	0%	0%	0%	0%	91%	1%	9%																
	APP/DEPART	361	/	404	731	/	1,204	0	/	0	524	/	8	0															
	BEGIN PEAK HR		6:45 AM																										
	VOLUMES	0	201	0	0	299	0	0	0	0	207	1	25	733															
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	89%	0%	11%																
	PEAK HR FACTOR		0.679			0.879			0.000			0.925		0.873															
	APP/DEPART	201	/	226	299	/	506	0	/	0	233	/	1	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM	2	64			26	0				59	0	7	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	41			24	1				82	3	7	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	49			31	0				40	0	6	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	2	65			23	2				21	1	5	119	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2
	4:00 PM	0	59			25	1				15	3	5	108	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	4:15 PM	0	64			20	1				25	0	6	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	95			12	0				36	0	6	149	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM	0	101			24	0				22	0	6	153	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	5:00 PM	0	122			28	0				18	0	3	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	125			15	1				31	4	6	183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	113			34	0				26	1	11	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	1	103			11	0				35	0	5	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	6	1,001	0	0	273	6	0	0	0	410	12	73	1,781	4	1	0	0	5	0	1	0	1	2	4	2	0	1	7
	APPROACH %	1%	99%	0%	0%	98%	2%	0%	0%	0%	83%	2%	15%																
	APP/DEPART	1,007	/	1,074	279	/	683	0	/	0	495	/	24	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	2	463	0	0	88	1	0	0	0	110	5	25	694															
	APPROACH %	0%	100%	0%	0%	99%	1%	0%	0%	0%	79%	4%	18%																
	PEAK HR FACTOR		0.923			0.654			0.000			0.854		0.938															
	APP/DEPART	465	/	488	89	/	198	0	/	0	140	/	8	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	STADIUM WAY (SOUTH)	LOCATION #:	24
WEDNESDAY	EAST & WEST:	110 NB OFF/SB ON RAMP	CONTROL:	2 WAY STOP NS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND STADIUM WAY (SOUTH)			SOUTHBOUND STADIUM WAY (SOUTH)			EASTBOUND 110 NB OFF/SB ON RAMP			WESTBOUND 110 NB OFF/SB ON RAMP				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
	LANES:	0	1	1	1	1	0	1	2	1	0	2	0																
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM		1	5	21	9		0	0	0	9	0	8	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM		3	9	34	16		0	0	1	6	0	5	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM		4	14	48	32		0	0	0	12	0	4	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM		15	24	82	41		0	0	0	11	0	21	194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM		23	34	92	53		0	0	0	14	0	15	231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM		25	38	91	65		0	0	0	16	1	20	256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM		35	41	97	88		0	0	0	17	0	33	311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM		28	38	94	85		0	0	1	15	0	37	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM		22	45	87	72		0	0	0	6	0	3	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM		20	47	91	60		0	0	2	11	2	5	238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM		17	53	89	61		0	4	0	12	0	2	238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM		14	57	81	61		0	2	3	16	0	6	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	207	405	907	643	0	0	6	7	145	3	159	2,482	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	34%	66%	59%	41%	0%	0%	46%	54%	47%	1%	52%																
	APP/DEPART	612	/	366	1,550	/	795	13	/	1,318	307	/	3	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	0	110	162	369	310	0	0	0	1	54	1	93	1,100															
	APPROACH %	0%	40%	60%	54%	46%	0%	0%	0%	100%	36%	1%	63%																
	PEAK HR FACTOR		0.895			0.918			0.250			0.712		0.884															
	APP/DEPART	272	/	203	679	/	365	1	/	531	148	/	1	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM		32	20	32	46		1	2	0	14	5	16	168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM		33	17	53	67		0	2	2	7	1	17	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM		43	20	27	49		0	0	4	12	2	9	166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM		41	16	19	44		0	0	3	10	0	14	147	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2
	4:00 PM		49	13	106	28		1	0	4	7	0	13	221	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	4:15 PM		71	21	41	26		0	1	2	9	0	13	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM		72	21	21	28		0	1	2	7	1	11	164	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM		86	17	15	27		0	2	0	7	1	13	168	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	5:00 PM		112	26	24	31		0	0	0	5	0	10	208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM		117	19	17	40		0	0	0	6	0	16	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM		96	11	16	30		0	1	0	6	0	16	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM		99	12	22	40		0	3	1	3	0	13	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	851	213	393	456	0	2	12	18	93	10	161	2,209	4	1	0	0	5	0	1	0	1	2	4	2	0	1	7
	APPROACH %	0%	80%	20%	46%	54%	0%	6%	38%	56%	35%	4%	61%																
	APP/DEPART	1,064	/	1,014	849	/	567	32	/	618	264	/	10	0															
	BEGIN PEAK HR		5:00 PM																										
	VOLUMES	0	424	68	79	141	0	0	4	1	20	0	55	792															
	APPROACH %	0%	86%	14%	36%	64%	0%	0%	80%	20%	27%	0%	73%																
	PEAK HR FACTOR		0.891			0.887			0.313			0.852		0.921															
	APP/DEPART	492	/	479	220	/	162	5	/	151	75	/	0	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	HILL STREET	LOCATION #:	25
WEDNESDAY	EAST & WEST:	COLLEGE STREET	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND HILL STREET			SOUTHBOUND HILL STREET			EASTBOUND COLLEGE STREET			WESTBOUND COLLEGE STREET				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
AM	5:15 AM													0					0					0	0	0	0	0	0
AM	5:30 AM													0					0					0	0	0	0	0	0
AM	5:45 AM													0					0					0	0	0	0	0	0
AM	6:00 AM	1	19	0	47	152	9	0	1	3	4	8	4	248	0	0	7	0	7	1	0	0	0	1	1	0	7	0	8
AM	6:15 AM	1	13	0	31	271	9	1	12	10	15	18	4	385	4	1	0	3	8	0	0	0	0	0	4	1	0	3	8
AM	6:30 AM	2	17	0	41	313	13	4	14	18	21	20	5	468	9	6	3	2	20	0	0	0	0	0	9	6	3	2	20
AM	6:45 AM	2	34	1	34	342	9	3	20	17	31	27	2	522	9	6	4	5	24	0	0	0	0	0	9	6	4	5	24
AM	7:00 AM	3	26	2	32	344	5	10	29	19	29	49	7	555	4	8	13	2	27	0	0	0	0	0	4	8	13	2	27
AM	7:15 AM	1	53	1	25	350	14	9	29	15	29	46	10	582	18	8	2	5	33	0	0	0	0	0	18	8	2	5	33
AM	7:30 AM	4	37	2	18	335	23	15	51	22	26	59	5	597	21	8	8	3	40	0	0	0	0	0	21	8	8	3	40
AM	7:45 AM	2	54	0	22	363	11	13	46	21	22	81	8	643	19	19	22	10	70	0	0	0	0	0	19	19	22	10	70
AM	8:00 AM	4	60	2	18	347	11	17	46	21	21	74	15	636	23	14	9	9	55	1	0	0	0	1	24	14	9	9	56
AM	8:15 AM	2	26	6	13	324	8	9	40	15	23	67	9	542	18	11	11	12	52	1	1	3	0	5	19	12	14	12	57
AM	8:30 AM	2	39	6	12	344	7	8	30	7	36	75	10	576	24	16	10	10	60	1	0	1	0	2	25	16	11	10	62
AM	8:45 AM	4	55	5	15	343	8	9	42	18	31	89	7	626	33	9	9	33	84	0	0	0	0	0	33	9	9	33	84
AM	9:00 AM													0					0					0	0	0	0	0	0
AM	9:15 AM													0					0					0	0	0	0	0	0
AM	9:30 AM													0					0					0	0	0	0	0	0
AM	9:45 AM													0					0					0	0	0	0	0	0
AM	VOLUMES	28	433	25	308	3,828	127	98	360	186	288	613	86	6,380	182	106	98	94	480	4	1	4	0	9	186	107	102	94	489
AM	APPROACH %	6%	89%	5%	7%	90%	3%	15%	56%	29%	29%	62%	9%																
AM	APP/DEPART	486	/	617	4,263	/	4,302	644	/	693	987	/	768	0															
AM	BEGIN PEAK HR		7:15 AM																										
AM	VOLUMES	11	204	5	83	1,395	59	54	172	79	98	260	38	2,458															
AM	APPROACH %	5%	93%	2%	5%	91%	4%	18%	56%	26%	25%	66%	10%																
AM	PEAK HR FACTOR		0.833			0.970			0.866			0.892		0.956															
AM	APP/DEPART	220	/	296	1,537	/	1,572	305	/	260	396	/	330	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
PM	2:15 PM													0					0					0	0	0	0	0	0
PM	2:30 PM													0					0					0	0	0	0	0	0
PM	2:45 PM													0					0					0	0	0	0	0	0
PM	3:00 PM	8	177	15	38	129	12	19	46	10	9	54	38	555	30	34	27	18	109	0	0	0	0	0	30	34	27	18	109
PM	3:15 PM	7	167	15	43	159	9	14	39	5	16	43	27	544	28	43	10	29	110	0	0	1	0	1	28	43	11	29	111
PM	3:30 PM	7	196	13	38	184	12	21	31	11	5	59	22	599	30	32	17	22	101	0	0	0	0	0	30	32	17	22	101
PM	3:45 PM	9	217	22	29	194	12	14	50	7	10	45	23	632	19	13	11	10	53	1	0	1	0	2	20	13	12	10	55
PM	4:00 PM	7	279	16	29	193	13	27	44	8	12	39	19	686	38	22	17	7	84	0	0	0	0	0	38	22	17	7	84
PM	4:15 PM	11	274	19	31	286	16	16	47	6	5	36	22	769	37	17	13	6	73	0	0	0	0	0	37	17	13	6	73
PM	4:30 PM	8	327	22	28	313	18	30	60	5	6	48	26	891	34	16	13	10	73	0	0	0	0	0	34	16	13	10	73
PM	4:45 PM	11	329	23	26	314	13	25	55	5	12	41	46	900	25	22	17	6	70	1	0	1	0	2	26	22	18	6	72
PM	5:00 PM	11	357	21	31	287	24	29	76	12	7	46	51	952	19	23	12	12	66	0	0	0	0	0	19	23	12	12	66
PM	5:15 PM	4	341	12	27	309	11	28	66	12	6	36	51	903	29	14	8	11	62	0	0	1	0	1	29	14	9	11	63
PM	5:30 PM	0	365	12	20	295	10	26	49	13	8	49	34	881	11	12	10	5	38	0	0	0	0	0	11	12	10	5	38
PM	5:45 PM	5	352	14	20	271	9	31	54	10	4	52	46	868	18	6	10	12	46	0	0	1	0	1	18	6	11	12	47
PM	6:00 PM													0					0					0	0	0	0	0	0
PM	6:15 PM													0					0					0	0	0	0	0	0
PM	6:30 PM													0					0					0	0	0	0	0	0
PM	6:45 PM													0					0					0	0	0	0	0	0
PM	VOLUMES	88	3,381	204	360	2,934	159	280	617	104	100	548	405	9,180	318	254	165	148	885	2	0	5	0	7	320	254	170	148	892
PM	APPROACH %	2%	92%	6%	10%	85%	5%	28%	62%	10%	9%	52%	38%																
PM	APP/DEPART	3,673	/	4,066	3,453	/	3,138	1,001	/	1,181	1,053	/	795	0															
PM	BEGIN PEAK HR		4:30 PM																										
PM	VOLUMES	34	1,354	78	112	1,223	66	112	257	34	31	171	174	3,646															
PM	APPROACH %	2%	92%	5%	8%	87%	5%	28%	64%	8%	8%	45%	46%																
PM	PEAK HR FACTOR		0.942			0.976			0.861			0.904		0.957															
PM	APP/DEPART	1,466	/	1,640	1,401	/	1,288	403	/	447	376	/	271	0															

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA12-0120-0086
1/18/12	NORTH & SOUTH:	PASADENA	LOCATION #:	26
WEDNESDAY	EAST & WEST:	MONTEREY ROAD	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND PASADENA			SOUTHBOUND PASADENA			EASTBOUND MONTEREY ROAD			WESTBOUND MONTEREY ROAD				PEDESTRIAN CROSSING					BICYCLE CROSSING					PEDESTRIAN + BICYCLE CROSSING				
	LANES:	NL 2	NT X	NR 1	SL X	ST X	SR 1	EL X	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL	NS X	SS X	ES X	WS X	TTL
AM	5:00 AM													0					0					0	0	0	0	0	0
	5:15 AM													0					0					0	0	0	0	0	0
	5:30 AM													0					0					0	0	0	0	0	0
	5:45 AM													0					0					0	0	0	0	0	0
	6:00 AM				1		4	5	39			42	1	92					0					0	0	0	0	0	0
	6:15 AM				1		9	9	54			68	0	141					0					0	0	0	0	0	0
	6:30 AM				1		6	5	73			77	2	164					0					0	0	0	0	0	0
	6:45 AM				2		13	4	80			88	1	188					0					0	0	0	0	0	0
	7:00 AM				3		6	11	113			113	4	250					0					0	0	0	0	0	0
	7:15 AM				8		20	10	140			119	9	306					0					0	0	0	0	0	0
	7:30 AM				3		21	14	113			124	4	279					0					0	0	0	0	0	0
	7:45 AM				7		14	23	131			155	16	346					0					0	0	0	0	0	0
	8:00 AM				11		31	19	106			105	12	284					0					0	0	0	0	0	0
	8:15 AM				2		25	15	115			107	5	269					0					0	0	0	0	0	0
	8:30 AM				8		24	8	100			96	4	240					0					0	0	0	0	0	0
	8:45 AM				3		17	16	101			91	7	235					0					0	0	0	0	0	0
	9:00 AM													0					0					0	0	0	0	0	0
	9:15 AM													0					0					0	0	0	0	0	0
	9:30 AM													0					0					0	0	0	0	0	0
	9:45 AM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	50	0	190	139	1,165	0	0	1,185	65	2,794	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	21%	0%	79%	11%	89%	0%	0%	95%	5%																
	APP/DEPART	0	/	204	240	/	0	1,304	/	1,215	1,250	/	1,375	0															
	BEGIN PEAK HR		7:15 AM																										
	VOLUMES	0	0	0	29	0	86	66	490	0	0	503	41	1,215															
	APPROACH %	0%	0%	0%	25%	0%	75%	12%	88%	0%	0%	92%	8%																
	PEAK HR FACTOR		0.000			0.685			0.903			0.795		0.878															
	APP/DEPART	0	/	107	115	/	0	556	/	519	544	/	589	0															
PM	2:00 PM													0					0					0	0	0	0	0	0
	2:15 PM													0					0					0	0	0	0	0	0
	2:30 PM													0					0					0	0	0	0	0	0
	2:45 PM													0					0					0	0	0	0	0	0
	3:00 PM				9		30	13	115			122	7	296					0					0	0	0	0	0	0
	3:15 PM				5		15	21	104			117	4	266					0					0	0	0	0	0	0
	3:30 PM				3		16	18	135			102	2	276					0					0	0	0	0	0	0
	3:45 PM				7		18	20	121			88	6	260					0					0	0	0	0	0	0
	4:00 PM				4		21	18	122			102	5	272					0					0	0	0	0	0	0
	4:15 PM				6		12	14	115			104	8	259					0					0	0	0	0	0	0
	4:30 PM				10		13	23	142			110	7	305					0					0	0	0	0	0	0
	4:45 PM				8		15	19	123			97	5	267					0					0	0	0	0	0	0
	5:00 PM				11		21	16	131			94	9	282					0					0	0	0	0	0	0
	5:15 PM				7		18	20	123			114	4	286					0					0	0	0	0	0	0
	5:30 PM				7		13	17	117			98	7	259					0					0	0	0	0	0	0
	5:45 PM				5		15	14	126			105	5	270					0					0	0	0	0	0	0
	6:00 PM													0					0					0	0	0	0	0	0
	6:15 PM													0					0					0	0	0	0	0	0
	6:30 PM													0					0					0	0	0	0	0	0
	6:45 PM													0					0					0	0	0	0	0	0
	VOLUMES	0	0	0	82	0	207	213	1,474	0	0	1,253	69	3,298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	28%	0%	72%	13%	87%	0%	0%	95%	5%																
	APP/DEPART	0	/	282	289	/	0	1,687	/	1,556	1,322	/	1,460	0															
	BEGIN PEAK HR		4:30 PM																										
	VOLUMES	0	0	0	36	0	67	78	519	0	0	415	25	1,140															
	APPROACH %	0%	0%	0%	35%	0%	65%	13%	87%	0%	0%	94%	6%																
	PEAK HR FACTOR		0.000			0.805			0.905			0.932		0.934															
	APP/DEPART	0	/	103	103	/	0	597	/	555	440	/	482	0															

APPENDIX

EXISTING INTERSECTION COUNT DATA RECEIVED

WILTEC

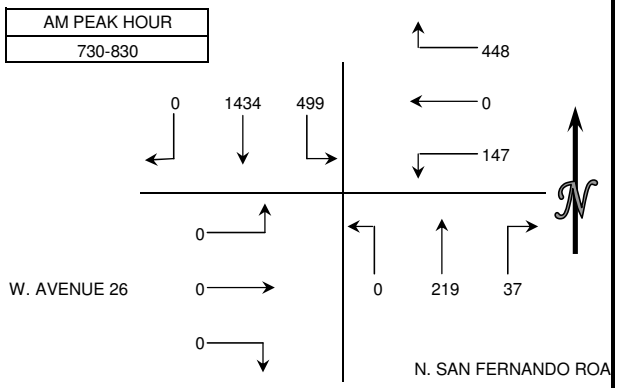
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S N. SAN FERNANDO ROAD
E/W W. AVENUE 26
CITY: LOS ANGELES

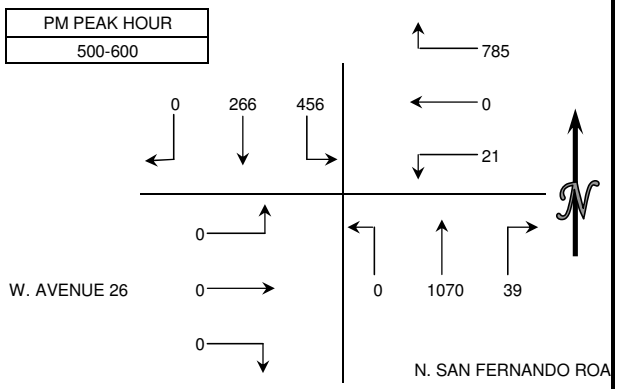
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	205	125	91	0	12	11	43	0	0	0	0	487
715-730	0	299	128	91	0	21	7	36	0	0	0	0	582
730-745	0	397	125	109	0	40	7	56	0	0	0	0	734
745-800	0	389	145	126	0	64	16	62	0	0	0	0	802
800-815	0	347	116	110	0	24	10	54	0	0	0	0	661
815-830	0	301	113	103	0	19	4	47	0	0	0	0	587
830-845	0	276	167	104	0	12	5	55	0	0	0	0	619
845-900	0	208	99	90	0	10	1	31	0	0	0	0	439
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	0	1290	523	417	0	137	41	197	0	0	0	0	2605
715-815	0	1432	514	436	0	149	40	208	0	0	0	0	2779
730-830	0	1434	499	448	0	147	37	219	0	0	0	0	2784
745-845	0	1313	541	443	0	119	35	218	0	0	0	0	2669
800-900	0	1132	495	407	0	65	20	187	0	0	0	0	2306



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	82	142	149	0	4	3	145	0	0	0	0	525
415-430	0	63	133	158	0	3	7	165	0	0	0	0	529
430-445	0	70	122	194	0	6	3	200	0	0	0	0	595
445-500	0	72	128	182	0	6	4	222	0	0	0	0	614
500-515	0	73	122	204	0	5	9	274	0	0	0	0	687
515-530	0	61	105	202	0	3	9	286	0	0	0	0	666
530-545	0	67	113	216	0	3	11	250	0	0	0	0	660
545-600	0	65	116	163	0	10	10	260	0	0	0	0	624
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	0	287	525	683	0	19	17	732	0	0	0	0	2263
415-515	0	278	505	738	0	20	23	861	0	0	0	0	2425
430-530	0	276	477	782	0	20	25	982	0	0	0	0	2562
445-545	0	273	468	804	0	17	33	1032	0	0	0	0	2627
500-600	0	266	456	785	0	21	39	1070	0	0	0	0	2637



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

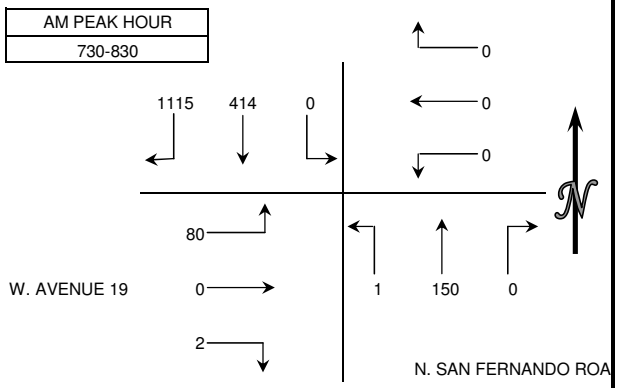
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S N. SAN FERNANDO ROAD
E/W W. AVENUE 19
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	140	38	0	0	0	0	0	28	0	0	0	7	213
715-730	221	84	0	0	0	0	0	35	0	1	0	15	356
730-745	283	123	0	0	0	0	0	43	1	1	0	19	470
745-800	272	105	0	0	0	0	0	39	0	0	0	19	435
800-815	319	98	0	0	0	0	0	34	0	1	0	19	471
815-830	241	88	0	0	0	0	0	34	0	0	0	23	386
830-845	193	71	0	0	0	0	0	33	0	1	0	13	311
845-900	125	61	0	0	0	0	0	15	0	1	0	10	212

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	916	350	0	0	0	0	0	145	1	2	0	60	1474
715-815	1095	410	0	0	0	0	0	151	1	3	0	72	1732
730-830	1115	414	0	0	0	0	0	150	1	2	0	80	1762
745-845	1025	362	0	0	0	0	0	140	0	2	0	74	1603
800-900	878	318	0	0	0	0	0	116	0	3	0	65	1380

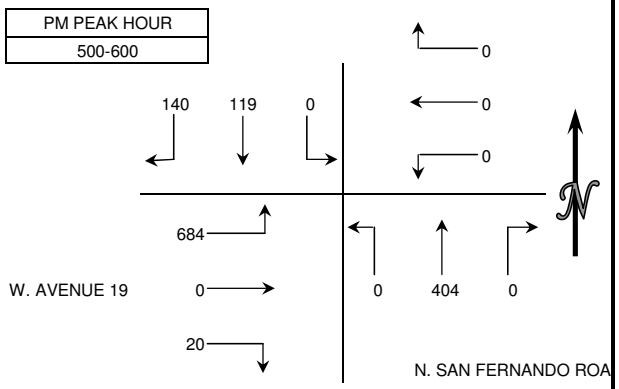


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	35	26	0	0	0	0	0	75	0	5	0	83	224
415-430	33	24	0	0	0	0	0	72	0	4	0	105	238
430-445	37	29	0	0	0	0	0	57	0	6	0	118	247
445-500	43	27	0	0	0	0	0	78	0	3	0	136	287
500-515	30	23	0	0	0	0	0	87	0	3	0	143	286
515-530	37	27	0	0	0	0	0	109	0	5	0	177	355
530-545	34	36	0	0	0	0	0	102	0	4	0	167	343
545-600	39	33	0	0	0	0	0	106	0	8	0	197	383

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	148	106	0	0	0	0	0	282	0	18	0	442	996
415-515	143	103	0	0	0	0	0	294	0	16	0	502	1058
430-530	147	106	0	0	0	0	0	331	0	17	0	574	1175
445-545	144	113	0	0	0	0	0	376	0	15	0	623	1271
500-600	140	119	0	0	0	0	0	404	0	20	0	684	1367



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

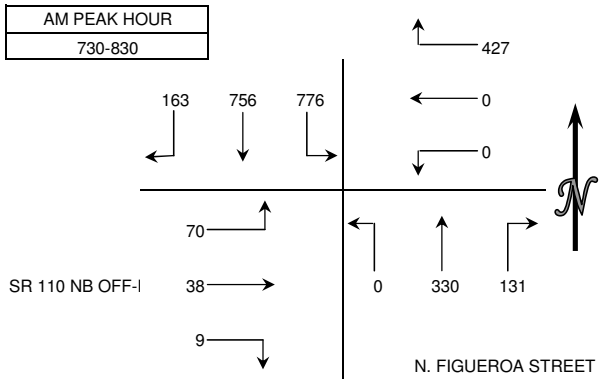
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S N. FIGUEROA STREET
E/W SR 110 NB OFF-RAMP/ SB ON-RAMP
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	36	123	159	102	0	0	22	63	0	1	6	9	521
715-730	25	189	170	102	0	0	15	62	0	5	4	7	579
730-745	39	209	190	141	0	0	28	94	0	2	8	18	729
745-800	40	192	206	113	0	0	37	86	0	4	12	15	705
800-815	42	178	193	89	0	0	28	73	0	1	9	20	633
815-830	42	177	187	84	0	0	38	77	0	2	9	17	633
830-845	34	174	187	80	0	0	33	61	0	3	10	17	599
845-900	43	157	203	88	0	0	23	75	0	6	15	14	624

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	140	713	725	458	0	0	102	305	0	12	30	49	2534
715-815	146	768	759	445	0	0	108	315	0	12	33	60	2646
730-830	163	756	776	427	0	0	131	330	0	9	38	70	2700
745-845	158	721	773	366	0	0	136	297	0	10	40	69	2570
800-900	161	686	770	341	0	0	122	286	0	12	43	68	2489

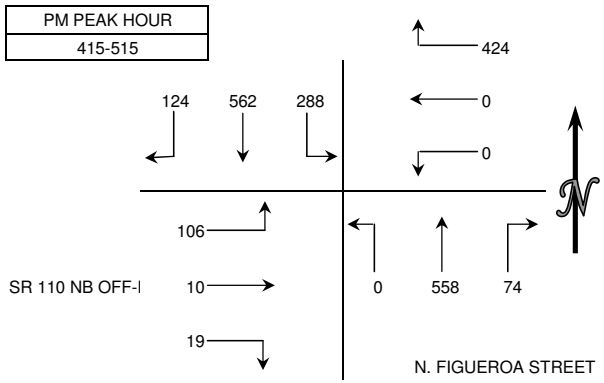


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	30	114	76	122	0	0	18	115	0	5	4	26	510
415-430	39	138	66	118	0	0	20	116	0	5	2	22	526
430-445	32	139	79	97	0	0	15	136	0	6	0	29	533
445-500	27	139	46	118	0	0	19	171	0	2	2	23	547
500-515	26	146	97	91	0	0	20	135	0	6	6	32	559
515-530	26	120	95	88	0	0	11	146	0	2	2	19	509
530-545	35	100	79	97	0	0	11	156	0	3	2	13	496
545-600	37	107	93	111	0	0	13	132	0	2	0	21	516

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	128	530	267	455	0	0	72	538	0	18	8	100	2116
415-515	124	562	288	424	0	0	74	558	0	19	10	106	2165
430-530	111	544	317	394	0	0	65	588	0	16	10	103	2148
445-545	114	505	317	394	0	0	61	608	0	13	12	87	2111
500-600	124	473	364	387	0	0	55	569	0	13	10	85	2080



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

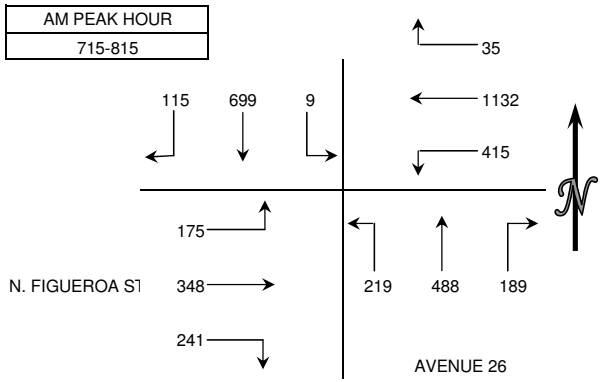
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 26
E/W N. FIGUEROA STREET
CITY: LOS ANGELES

15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	23	147	2	3	249	97	39	108	45	33	60	36	842
715-730	36	162	3	3	282	106	42	114	55	48	78	32	961
730-745	22	182	2	4	258	102	46	134	56	58	117	56	1037
745-800	25	179	0	11	310	106	61	127	59	72	92	40	1082
800-815	32	176	4	17	282	101	40	113	49	63	61	47	985
815-830	31	138	5	9	254	90	36	89	46	62	62	34	856
830-845	35	158	7	13	286	80	33	96	46	38	55	41	888
845-900	26	121	5	14	224	89	37	85	50	68	64	40	823

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	106	670	7	21	1099	411	188	483	215	211	347	164	3922
715-815	115	699	9	35	1132	415	189	488	219	241	348	175	4065
730-830	110	675	11	41	1104	399	183	463	210	255	332	177	3960
745-845	123	651	16	50	1132	377	170	425	200	235	270	162	3811
800-900	124	593	21	53	1046	360	146	383	191	231	242	162	3552

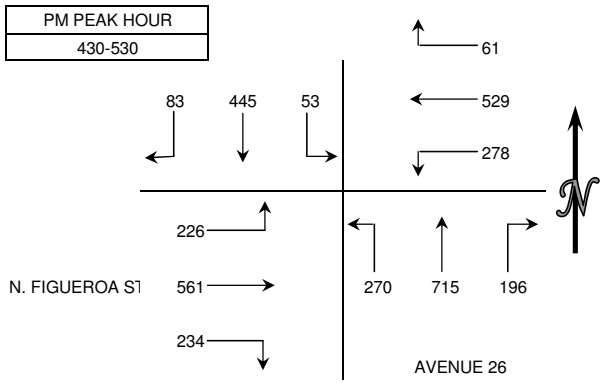


15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	19	125	11	9	129	68	42	141	61	54	121	54	834
415-430	28	127	11	19	129	61	42	153	59	52	119	63	863
430-445	20	110	10	10	142	75	39	199	63	61	122	56	907
445-500	16	113	17	12	115	71	48	167	70	60	152	56	897
500-515	29	121	8	18	136	62	58	156	73	68	147	69	945
515-530	18	101	18	21	136	70	51	193	64	45	140	45	902
530-545	18	98	13	16	103	66	54	181	64	50	134	51	848
545-600	26	119	15	11	137	60	51	185	63	59	140	63	929

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	83	475	49	50	515	275	171	660	253	227	514	229	3501
415-515	93	471	46	59	522	269	187	675	265	241	540	244	3612
430-530	83	445	53	61	529	278	196	715	270	234	561	226	3651
445-545	81	433	56	67	490	269	211	697	271	223	573	221	3592
500-600	91	439	54	66	512	258	214	715	264	222	561	228	3624



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

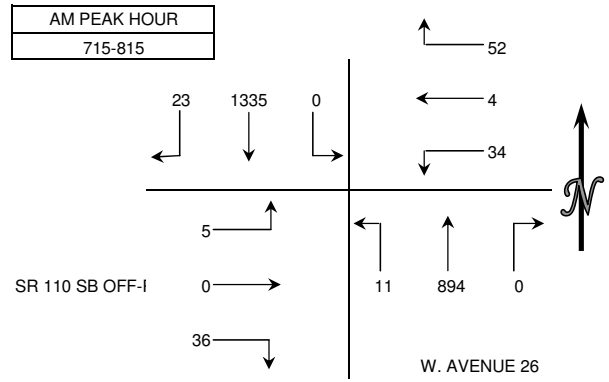
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S W. AVENUE 26
E/W SR 110 SB OFF-RAMP
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	5	274	0	17	1	7	0	195	4	9	0	1	513
715-730	5	314	0	21	0	14	0	220	3	10	0	2	589
730-745	3	353	0	11	2	9	0	232	0	11	0	1	622
745-800	7	333	0	10	1	4	0	228	3	6	0	0	592
800-815	8	335	0	10	1	7	0	214	5	9	0	2	591
815-830	5	294	0	5	0	4	0	178	3	19	0	0	508
830-845	8	268	0	6	0	6	0	147	3	15	0	4	457
845-900	5	278	0	11	0	5	0	120	6	9	0	4	438

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	20	1274	0	59	4	34	0	875	10	36	0	4	2316
715-815	23	1335	0	52	4	34	0	894	11	36	0	5	2394
730-830	23	1315	0	36	4	24	0	852	11	45	0	3	2313
745-845	28	1230	0	31	2	21	0	767	14	49	0	6	2148
800-900	26	1175	0	32	1	22	0	659	17	52	0	10	1994

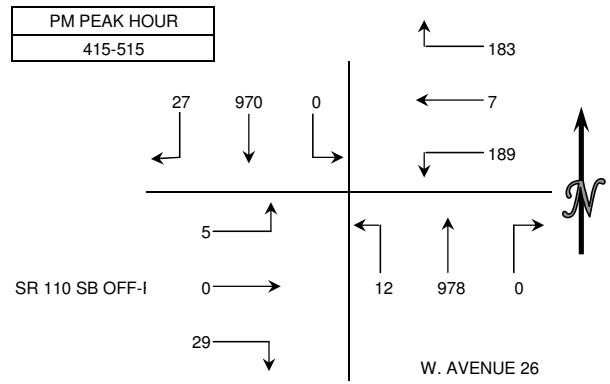


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	4	234	0	38	1	14	0	202	2	13	0	2	510
415-430	1	240	0	36	0	55	0	246	5	4	0	1	588
430-445	9	241	0	39	3	52	0	252	4	9	0	1	610
445-500	9	245	0	67	4	64	0	235	2	8	0	1	635
500-515	8	244	0	41	0	18	0	245	1	8	0	2	567
515-530	4	226	0	38	0	8	0	283	0	8	0	1	568
530-545	7	232	0	31	2	9	0	279	1	2	0	2	565
545-600	6	241	0	24	0	9	0	281	3	4	0	0	568

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	23	960	0	180	8	185	0	935	13	34	0	5	2343
415-515	27	970	0	183	7	189	0	978	12	29	0	5	2400
430-530	30	956	0	185	7	142	0	1015	7	33	0	5	2380
445-545	28	947	0	177	6	99	0	1042	4	26	0	6	2335
500-600	25	943	0	134	2	44	0	1088	5	22	0	5	2268



WILTEC

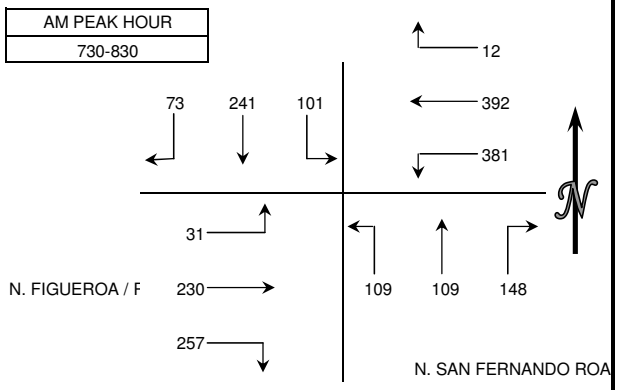
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S N. SAN FERNANDO ROAD
E/W N. FIGUEROA / RIVERSIDE DRIVE
CITY: LOS ANGELES

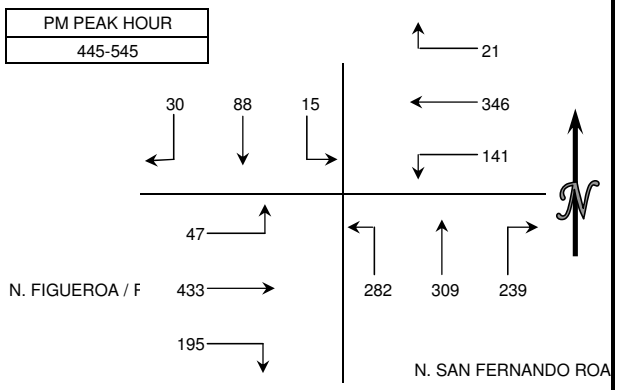
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	7	33	12	2	85	52	29	25	23	40	42	7	357
715-730	9	56	15	0	103	105	28	31	26	48	42	4	467
730-745	20	70	23	3	85	104	40	29	22	51	67	5	519
745-800	22	68	23	4	100	96	48	31	26	65	55	7	545
800-815	23	56	21	0	108	84	28	28	34	66	47	10	505
815-830	8	47	34	5	99	97	32	21	27	75	61	9	515
830-845	9	35	24	1	87	87	21	21	20	55	52	6	418
845-900	9	39	17	0	76	75	21	14	15	63	67	3	399
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	58	227	73	9	373	357	145	116	97	204	206	23	1888
715-815	74	250	82	7	396	389	144	119	108	230	211	26	2036
730-830	73	241	101	12	392	381	148	109	109	257	230	31	2084
745-845	62	206	102	10	394	364	129	101	107	261	215	32	1983
800-900	49	177	96	6	370	343	102	84	96	259	227	28	1837



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	5	23	6	7	79	36	50	51	61	30	82	15	445
415-430	7	22	2	6	78	44	55	50	68	39	82	7	460
430-445	11	23	2	5	92	40	44	56	58	45	121	5	502
445-500	10	19	1	3	116	26	59	73	74	43	114	8	546
500-515	8	19	3	8	75	39	68	68	76	54	124	14	556
515-530	6	20	2	3	82	37	57	82	60	47	104	12	512
530-545	6	30	9	7	73	39	55	86	72	51	91	13	532
545-600	12	22	4	11	75	26	51	79	68	47	94	13	502
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	33	87	11	21	365	146	208	230	261	157	399	35	1953
415-515	36	83	8	22	361	149	226	247	276	181	441	34	2064
430-530	35	81	8	19	365	142	228	279	268	189	463	39	2116
445-545	30	88	15	21	346	141	239	309	282	195	433	47	2146
500-600	32	91	18	29	305	141	231	315	276	199	413	52	2102



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S NORTH SAN FERNANDO ROAD
E/W SR 110 NORTH BOUND ON RAMP
CITY: LOS ANGELES

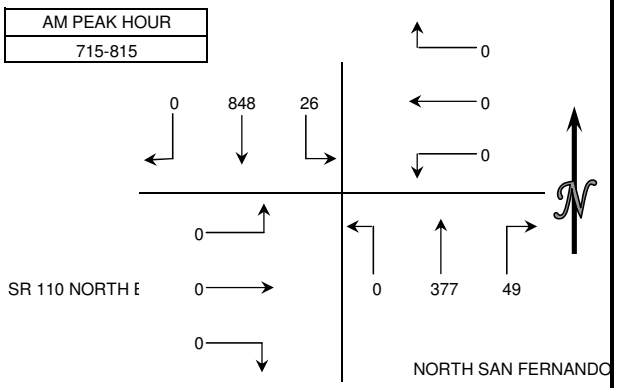
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	136	3	0	0	0	8	68	0	0	0	0	215
715-730	0	195	6	0	0	0	10	81	0	0	0	0	292
730-745	0	225	5	0	0	0	17	111	0	0	0	0	358
745-800	0	222	12	0	0	0	13	104	0	0	0	0	351
800-815	0	206	3	0	0	0	9	81	0	0	0	0	299
815-830	0	196	3	0	0	0	10	72	0	0	0	0	281
830-845	0	169	6	0	0	0	4	76	0	0	0	0	255
845-900	0	192	6	0	0	0	5	58	0	0	0	0	261

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	0	778	26	0	0	0	48	364	0	0	0	0	1216
715-815	0	848	26	0	0	0	49	377	0	0	0	0	1300
730-830	0	849	23	0	0	0	49	368	0	0	0	0	1289
745-845	0	793	24	0	0	0	36	333	0	0	0	0	1186
800-900	0	763	18	0	0	0	28	287	0	0	0	0	1096

AM PEAK HOUR
715-815



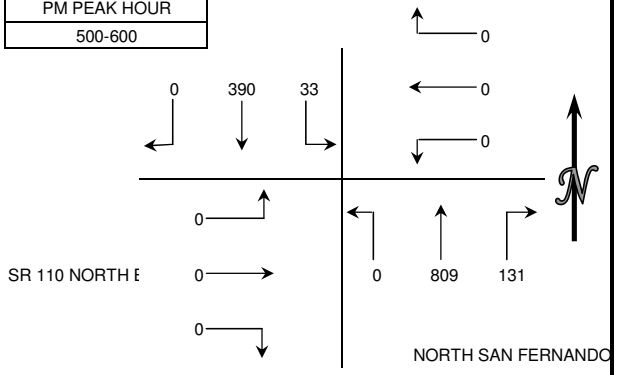
15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	94	5	0	0	0	28	156	0	0	0	0	283
415-430	0	99	9	0	0	0	25	177	0	0	0	0	310
430-445	0	75	6	0	0	0	25	162	0	0	0	0	268
445-500	0	90	9	0	0	0	20	191	0	0	0	0	310
500-515	0	105	5	0	0	0	27	211	0	0	0	0	348
515-530	0	91	12	0	0	0	35	207	0	0	0	0	345
530-545	0	99	9	0	0	0	36	203	0	0	0	0	347
545-600	0	95	7	0	0	0	33	188	0	0	0	0	323

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	0	358	29	0	0	0	98	686	0	0	0	0	1171
415-515	0	369	29	0	0	0	97	741	0	0	0	0	1236
430-530	0	361	32	0	0	0	107	771	0	0	0	0	1271
445-545	0	385	35	0	0	0	118	812	0	0	0	0	1350
500-600	0	390	33	0	0	0	131	809	0	0	0	0	1363

PM PEAK HOUR
500-600



WILTEC

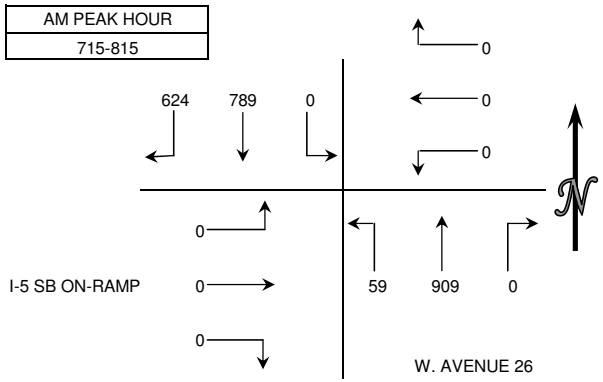
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S W. AVENUE 26
E/W I-5 SB ON-RAMP
CITY: LOS ANGELES

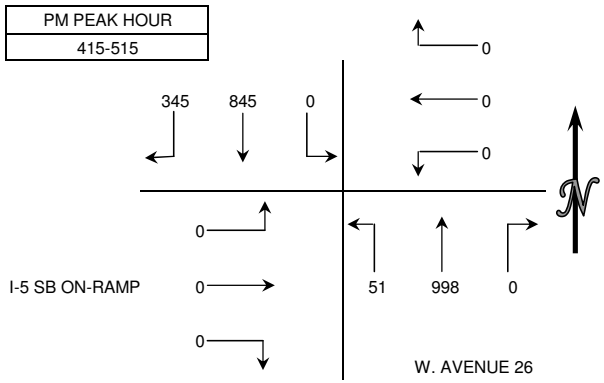
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	148	133	0	0	0	0	0	196	13	0	0	0	490
715-730	160	194	0	0	0	0	0	230	14	0	0	0	598
730-745	160	207	0	0	0	0	0	239	13	0	0	0	619
745-800	152	194	0	0	0	0	0	234	18	0	0	0	598
800-815	152	194	0	0	0	0	0	206	14	0	0	0	566
815-830	146	179	0	0	0	0	0	195	17	0	0	0	537
830-845	139	147	0	0	0	0	0	150	16	0	0	0	452
845-900	117	176	0	0	0	0	0	124	15	0	0	0	432
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	620	728	0	0	0	0	0	899	58	0	0	0	2305
715-815	624	789	0	0	0	0	0	909	59	0	0	0	2381
730-830	610	774	0	0	0	0	0	874	62	0	0	0	2320
745-845	589	714	0	0	0	0	0	785	65	0	0	0	2153
800-900	554	696	0	0	0	0	0	675	62	0	0	0	1987



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	104	186	0	0	0	0	0	238	27	0	0	0	555
415-430	113	203	0	0	0	0	0	247	11	0	0	0	574
430-445	78	195	0	0	0	0	0	253	17	0	0	0	543
445-500	73	228	0	0	0	0	0	217	9	0	0	0	527
500-515	81	219	0	0	0	0	0	281	14	0	0	0	595
515-530	70	178	0	0	0	0	0	279	8	0	0	0	535
530-545	69	161	0	0	0	0	0	278	12	0	0	0	520
545-600	86	177	0	0	0	0	0	264	11	0	0	0	538
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	368	812	0	0	0	0	0	955	64	0	0	0	2199
415-515	345	845	0	0	0	0	0	998	51	0	0	0	2239
430-530	302	820	0	0	0	0	0	1030	48	0	0	0	2200
445-545	293	786	0	0	0	0	0	1055	43	0	0	0	2177
500-600	306	735	0	0	0	0	0	1102	45	0	0	0	2188



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

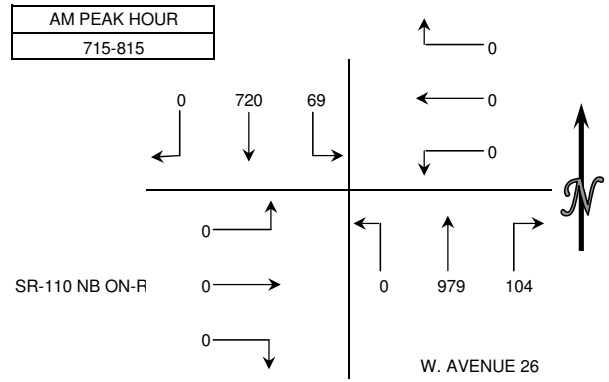
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S W. AVENUE 26
E/W SR-110 NB ON-RAMP
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	122	15	0	0	0	14	207	0	0	0	0	358
715-730	0	175	13	0	0	0	22	252	0	0	0	0	462
730-745	0	188	22	0	0	0	24	259	0	0	0	0	493
745-800	0	189	16	0	0	0	29	248	0	0	0	0	482
800-815	0	168	18	0	0	0	29	220	0	0	0	0	435
815-830	0	165	10	0	0	0	26	208	0	0	0	0	409
830-845	0	136	17	0	0	0	13	173	0	0	0	0	339
845-900	0	176	11	0	0	0	16	139	0	0	0	0	342

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	0	674	66	0	0	0	89	966	0	0	0	0	1795
715-815	0	720	69	0	0	0	104	979	0	0	0	0	1872
730-830	0	710	66	0	0	0	108	935	0	0	0	0	1819
745-845	0	658	61	0	0	0	97	849	0	0	0	0	1665
800-900	0	645	56	0	0	0	84	740	0	0	0	0	1525

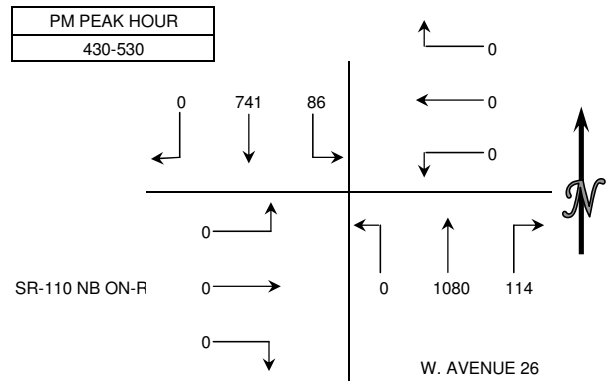


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	147	29	0	0	0	30	219	0	0	0	0	425
415-430	0	162	23	0	0	0	29	245	0	0	0	0	459
430-445	0	187	25	0	0	0	30	278	0	0	0	0	520
445-500	0	210	22	0	0	0	31	262	0	0	0	0	525
500-515	0	194	22	0	0	0	23	265	0	0	0	0	504
515-530	0	150	17	0	0	0	30	275	0	0	0	0	472
530-545	0	146	23	0	0	0	44	302	0	0	0	0	515
545-600	0	148	30	0	0	0	40	306	0	0	0	0	524

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	0	706	99	0	0	0	120	1004	0	0	0	0	1929
415-515	0	753	92	0	0	0	113	1050	0	0	0	0	2008
430-530	0	741	86	0	0	0	114	1080	0	0	0	0	2021
445-545	0	700	84	0	0	0	128	1104	0	0	0	0	2016
500-600	0	638	92	0	0	0	137	1148	0	0	0	0	2015



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S I-5 NB OFF-RAMP/ LACY STREET
E/W W. AVENUE 26
CITY: LOS ANGELES

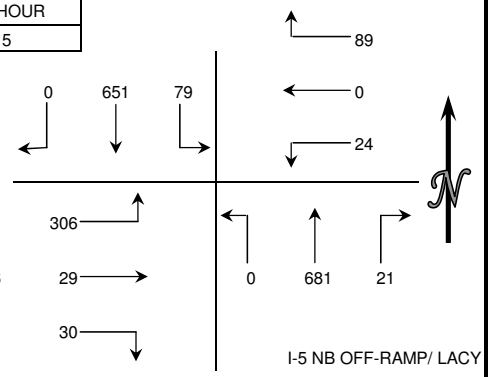
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	100	20	16	0	6	5	121	0	7	3	89	367
715-730	0	162	17	19	0	7	3	154	0	8	4	77	451
730-745	0	174	12	22	0	6	7	196	0	10	7	82	516
745-800	0	162	30	21	0	9	9	191	0	5	7	72	506
800-815	0	153	20	27	0	2	2	140	0	7	11	75	437
815-830	0	130	29	27	0	6	3	137	0	8	10	55	405
830-845	0	112	23	19	0	2	6	118	0	12	6	63	361
845-900	0	127	41	31	0	1	2	95	0	13	12	47	369

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	0	598	79	78	0	28	24	662	0	30	21	320	1840
715-815	0	651	79	89	0	24	21	681	0	30	29	306	1910
730-830	0	619	91	97	0	23	21	664	0	30	35	284	1864
745-845	0	557	102	94	0	19	20	586	0	32	34	265	1709
800-900	0	522	113	104	0	11	13	490	0	40	39	240	1572

AM PEAK HOUR
715-815



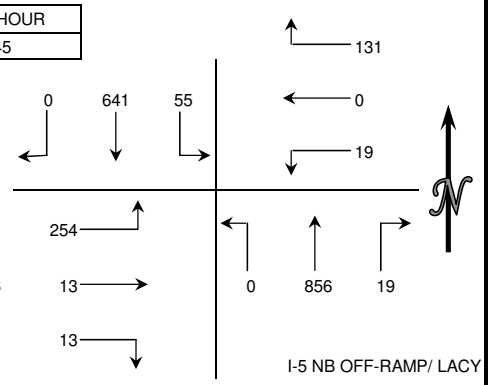
15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	133	15	30	0	5	6	184	0	5	5	76	459
415-430	0	152	16	25	0	3	3	171	0	3	7	89	469
430-445	0	173	11	28	0	2	4	180	0	1	5	88	492
445-500	0	196	12	20	0	4	1	171	0	3	2	73	482
500-515	0	176	16	42	0	7	4	229	0	2	2	41	519
515-530	0	138	17	25	0	5	9	245	0	3	1	51	494
530-545	0	131	10	44	0	3	5	211	0	5	8	89	506
545-600	0	125	18	32	0	6	4	209	0	6	4	72	476

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	0	654	54	103	0	14	14	706	0	12	19	326	1902
415-515	0	697	55	115	0	16	12	751	0	9	16	291	1962
430-530	0	683	56	115	0	18	18	825	0	9	10	253	1987
445-545	0	641	55	131	0	19	19	856	0	13	13	254	2001
500-600	0	570	61	143	0	21	22	894	0	16	15	253	1995

PM PEAK HOUR
445-545



WILTEC

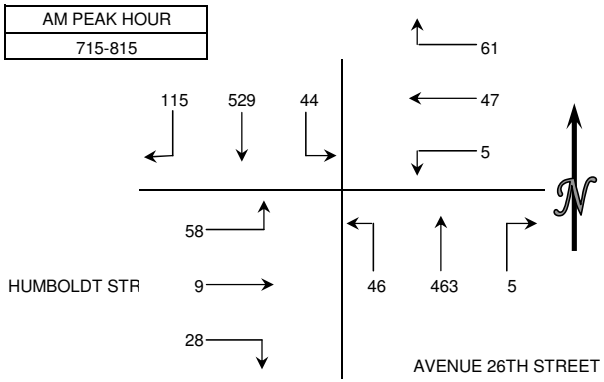
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 26TH STREET
E/W HUMBOLDT STREET
CITY: LOS ANGELES

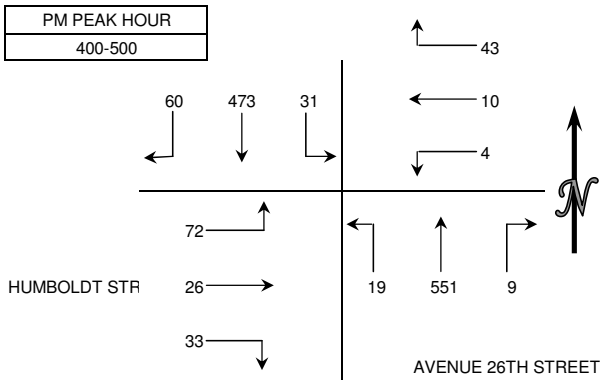
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	18	81	10	8	4	0	1	89	5	3	1	11	231
715-730	21	101	11	10	3	1	3	105	9	6	1	12	283
730-745	32	151	7	21	9	2	1	155	8	6	1	17	410
745-800	30	157	13	15	18	1	0	105	18	8	3	14	382
800-815	32	120	13	15	17	1	1	98	11	8	4	15	335
815-830	18	92	18	11	15	0	5	70	11	9	3	19	271
830-845	17	87	19	13	9	1	5	82	5	5	3	5	251
845-900	12	112	7	4	7	3	3	68	7	9	0	7	239
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	101	490	41	54	34	4	5	454	40	23	6	54	1306
715-815	115	529	44	61	47	5	5	463	46	28	9	58	1410
730-830	112	520	51	62	59	4	7	428	48	31	11	65	1398
745-845	97	456	63	54	59	3	11	355	45	30	13	53	1239
800-900	79	411	57	43	48	5	14	318	34	31	10	46	1096



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	13	118	7	12	0	1	2	138	4	7	5	24	331
415-430	19	126	6	11	2	1	2	131	1	7	7	15	328
430-445	19	123	10	16	3	1	2	140	9	7	8	14	352
445-500	9	106	8	4	5	1	3	142	5	12	6	19	320
500-515	13	110	11	14	2	3	1	127	3	7	5	12	308
515-530	17	105	5	18	3	1	6	136	1	7	5	18	322
530-545	10	93	9	18	2	9	8	139	3	6	3	20	320
545-600	13	107	8	4	1	1	1	123	8	9	6	18	299
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	60	473	31	43	10	4	9	551	19	33	26	72	1331
415-515	60	465	35	45	12	6	8	540	18	33	26	60	1308
430-530	58	444	34	52	13	6	12	545	18	33	24	63	1302
445-545	49	414	33	54	12	14	18	544	12	32	19	69	1270
500-600	53	415	33	54	8	14	16	525	15	29	19	68	1249



WILTEC

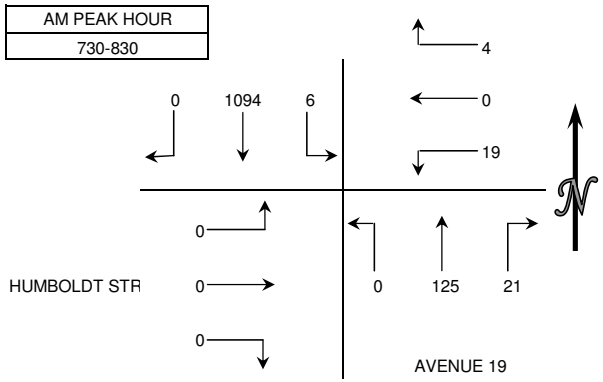
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 19
E/W HUMBOLDT STREET
CITY: LOS ANGELES

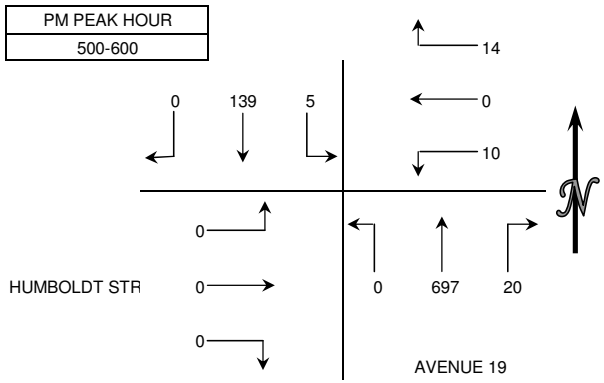
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	169	0	1	0	0	3	8	0	0	0	0	181
715-730	0	191	3	0	0	2	5	11	0	0	0	0	212
730-745	0	274	4	1	0	4	6	24	0	0	0	0	313
745-800	0	296	0	1	0	5	5	22	0	0	0	0	329
800-815	0	257	1	2	0	3	6	22	0	0	0	0	291
815-830	0	267	1	0	0	7	4	57	0	0	0	0	336
830-845	0	206	1	1	0	3	2	10	0	0	0	0	223
845-900	0	167	4	4	0	3	1	7	0	0	0	0	186
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	0	930	7	3	0	11	19	65	0	0	0	0	1035
715-815	0	1018	8	4	0	14	22	79	0	0	0	0	1145
730-830	0	1094	6	4	0	19	21	125	0	0	0	0	1269
745-845	0	1026	3	4	0	18	17	111	0	0	0	0	1179
800-900	0	897	7	7	0	16	13	96	0	0	0	0	1036



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	38	1	0	0	3	3	106	0	0	0	0	151
415-430	0	38	1	2	0	1	1	116	0	0	0	0	159
430-445	0	26	4	2	0	2	7	112	0	0	0	0	153
445-500	0	43	0	3	0	5	8	147	0	0	0	0	206
500-515	0	30	1	1	0	4	9	158	0	0	0	0	203
515-530	0	37	0	5	0	1	5	168	0	0	0	0	216
530-545	0	48	2	2	0	4	5	192	0	0	0	0	253
545-600	0	24	2	6	0	1	1	179	0	0	0	0	213
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	0	145	6	7	0	11	19	481	0	0	0	0	669
415-515	0	137	6	8	0	12	25	533	0	0	0	0	721
430-530	0	136	5	11	0	12	29	585	0	0	0	0	778
445-545	0	158	3	11	0	14	27	665	0	0	0	0	878
500-600	0	139	5	14	0	10	20	697	0	0	0	0	885



WILTEC

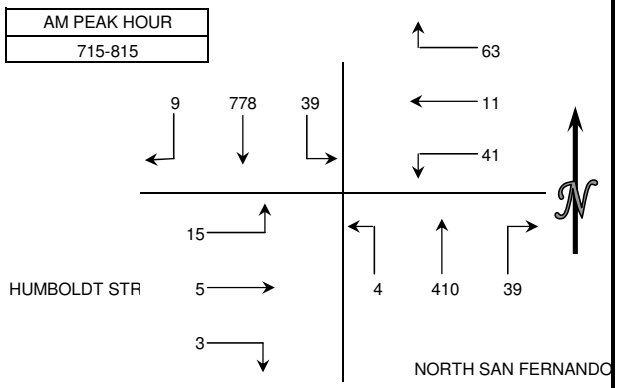
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S NORTH SAN FERNANDO ROAD
E/W HUMBOLDT STREET
CITY: LOS ANGELES

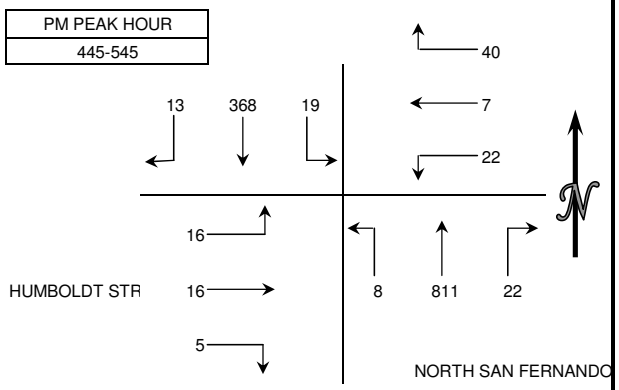
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	1	158	2	6	5	1	10	81	1	0	0	3	268
715-730	2	198	7	15	0	9	8	82	1	0	0	3	325
730-745	0	197	8	16	3	9	6	118	2	1	2	6	368
745-800	5	203	12	16	6	9	12	114	0	0	2	4	383
800-815	2	180	12	16	2	14	13	96	1	2	1	2	341
815-830	5	186	12	5	3	9	4	80	0	2	4	2	312
830-845	6	156	7	5	4	3	5	79	0	0	0	3	268
845-900	5	180	7	11	2	6	9	71	1	2	0	3	297
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	8	756	29	53	14	28	36	395	4	1	4	16	1344
715-815	9	778	39	63	11	41	39	410	4	3	5	15	1417
730-830	12	766	44	53	14	41	35	408	3	5	9	14	1404
745-845	18	725	43	42	15	35	34	369	1	4	7	11	1304
800-900	18	702	38	37	11	32	31	326	2	6	5	10	1218



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	83	8	7	0	11	12	156	2	1	4	4	288
415-430	1	97	7	13	2	8	7	141	0	3	0	0	279
430-445	2	82	7	13	1	9	9	147	3	1	9	9	292
445-500	5	97	7	12	1	8	4	204	3	0	4	4	349
500-515	3	85	3	10	1	8	5	206	2	5	4	4	336
515-530	3	92	4	5	2	4	7	209	0	0	2	2	330
530-545	2	94	5	13	3	2	6	192	3	0	6	6	332
545-600	6	80	7	17	1	6	6	213	1	1	2	2	342
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	8	359	29	45	4	36	32	648	8	5	17	17	1208
415-515	11	361	24	48	5	33	25	698	8	9	17	17	1256
430-530	13	356	21	40	5	29	25	766	8	6	19	19	1307
445-545	13	368	19	40	7	22	22	811	8	5	16	16	1347
500-600	14	351	19	45	7	20	24	820	6	6	14	14	1340



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

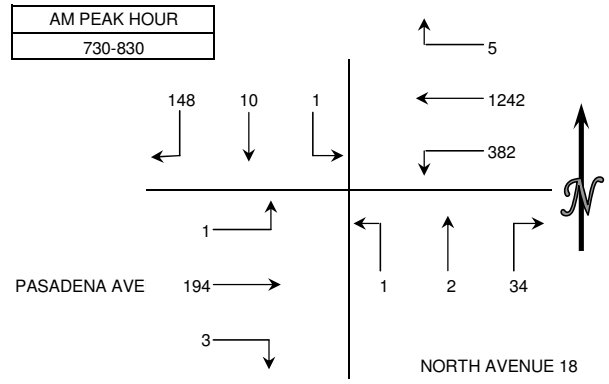
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S NORTH AVENUE 18
E/W PASADENA AVENUE
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	10	0	0	0	286	50	6	2	0	1	42	1	398
715-730	25	2	0	1	301	72	8	0	0	1	46	0	456
730-745	41	2	1	1	304	89	7	0	1	2	49	0	497
745-800	45	1	0	1	285	81	4	0	0	0	52	0	469
800-815	29	3	0	2	343	133	11	0	0	0	49	0	570
815-830	33	4	0	1	310	79	12	2	0	1	44	1	487
830-845	16	1	4	0	291	66	9	1	4	1	44	1	438
845-900	3	1	0	1	231	65	5	2	1	1	41	6	357

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	121	5	1	3	1176	292	25	2	1	4	189	1	1820
715-815	140	8	1	5	1233	375	30	0	1	3	196	0	1992
730-830	148	10	1	5	1242	382	34	2	1	3	194	1	2023
745-845	123	9	4	4	1229	359	36	3	4	2	189	2	1964
800-900	81	9	4	4	1175	343	37	5	5	3	178	8	1852

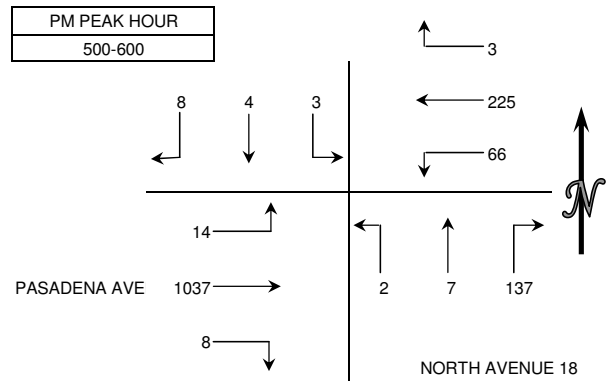


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	2	4	0	0	71	17	20	2	0	2	174	2	294
415-430	0	0	0	0	69	11	28	4	1	0	149	2	264
430-445	3	0	0	1	64	13	21	1	0	0	167	1	271
445-500	7	1	1	0	55	10	33	0	1	0	221	4	333
500-515	4	2	1	1	59	19	34	0	1	1	281	4	407
515-530	0	1	2	1	58	14	37	1	0	4	242	5	365
530-545	1	0	0	1	65	19	32	3	0	2	267	4	394
545-600	3	1	0	0	43	14	34	3	1	1	247	1	348

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	12	5	1	1	259	51	102	7	2	2	711	9	1162
415-515	14	3	2	2	247	53	116	5	3	1	818	11	1275
430-530	14	4	4	3	236	56	125	2	2	5	911	14	1376
445-545	12	4	4	3	237	62	136	4	2	7	1011	17	1499
500-600	8	4	3	3	225	66	137	7	2	8	1037	14	1514



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

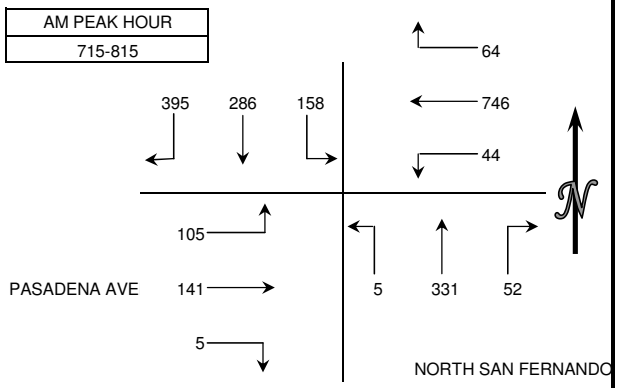
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S NORTH SAN FERNANDO ROAD
E/W PASADENA AVENUE
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	104	49	18	20	138	11	7	56	1	1	22	30	457
715-730	111	69	31	15	158	14	6	72	1	3	27	29	536
730-745	91	87	50	14	202	9	15	83	0	0	26	24	601
745-800	85	69	42	15	179	13	16	92	2	0	46	31	590
800-815	108	61	35	20	207	8	15	84	2	2	42	21	605
815-830	83	73	31	15	185	8	11	59	6	3	26	20	520
830-845	87	63	23	20	191	9	14	50	9	2	38	21	527
845-900	97	58	26	19	143	4	29	56	7	1	32	16	488

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	391	274	141	64	677	47	44	303	4	4	121	114	2184
715-815	395	286	158	64	746	44	52	331	5	5	141	105	2332
730-830	367	290	158	64	773	38	57	318	10	5	140	96	2316
745-845	363	266	131	70	762	38	56	285	19	7	152	93	2242
800-900	375	255	115	74	726	29	69	249	24	8	138	78	2140

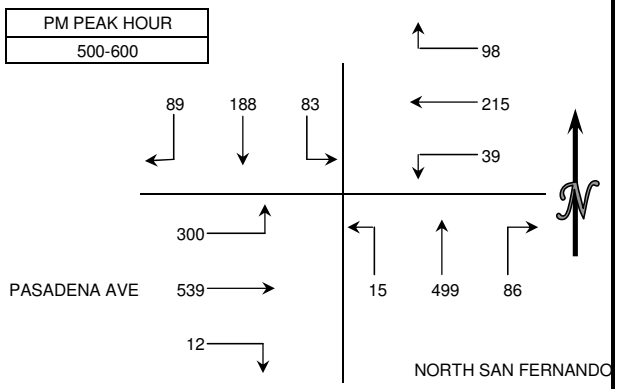


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	20	52	24	29	43	7	19	94	2	3	88	39	420
415-430	26	52	23	18	48	9	14	99	3	2	105	43	442
430-445	24	42	21	18	59	9	25	97	1	1	90	48	435
445-500	25	63	21	27	45	5	19	100	2	3	110	67	487
500-515	24	51	29	20	59	13	19	128	4	3	147	76	573
515-530	23	53	17	31	50	5	15	123	5	3	122	73	520
530-545	23	41	19	24	59	12	25	110	3	3	150	75	544
545-600	19	43	18	23	47	9	27	138	3	3	120	76	526

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	95	209	89	92	195	30	77	390	8	9	393	197	1784
415-515	99	208	94	83	211	36	77	424	10	9	452	234	1937
430-530	96	209	88	96	213	32	78	448	12	10	469	264	2015
445-545	95	208	86	102	213	35	78	461	14	12	529	291	2124
500-600	89	188	83	98	215	39	86	499	15	12	539	300	2163



WILTEC

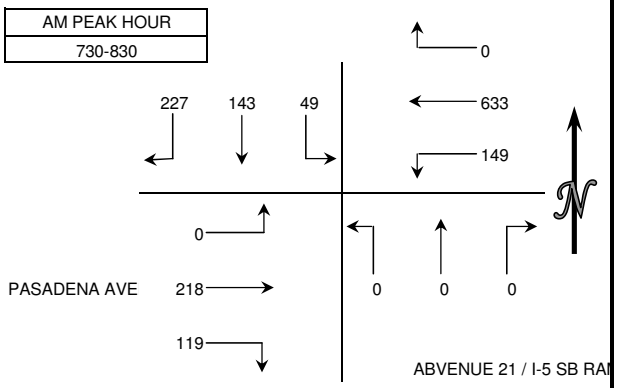
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHE AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: TUESDAY APRIL 14, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S ABVENUE 21 / I-5 SB RAMPS
E/W PASADENA AVENUE
CITY: LOS ANGELES

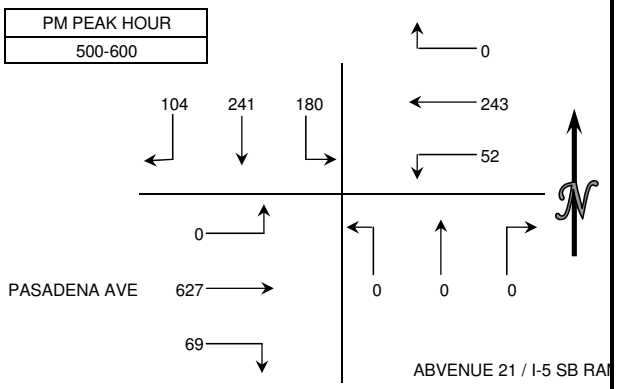
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	52	40	19	0	93	28	0	0	0	20	32	0	284
715-730	69	38	12	0	128	23	0	0	0	32	39	0	341
730-745	60	47	11	0	145	31	0	0	0	32	45	0	371
745-800	68	34	12	0	173	46	0	0	0	34	58	0	425
800-815	50	40	9	0	162	34	0	0	0	25	64	0	384
815-830	49	22	17	0	153	38	0	0	0	28	51	0	358
830-845	52	27	11	0	157	37	0	0	0	27	48	0	359
845-900	58	39	15	0	141	36	0	0	0	27	56	0	372
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	249	159	54	0	539	128	0	0	0	118	174	0	1421
715-815	247	159	44	0	608	134	0	0	0	123	206	0	1521
730-830	227	143	49	0	633	149	0	0	0	119	218	0	1538
745-845	219	123	49	0	645	155	0	0	0	114	221	0	1526
800-900	209	128	52	0	613	145	0	0	0	107	219	0	1473



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	22	65	38	0	51	17	0	0	0	15	104	0	312
415-430	22	60	49	0	59	13	0	0	0	23	130	0	356
430-445	28	84	48	0	69	20	0	0	0	19	128	0	396
445-500	21	50	30	0	50	11	0	0	0	16	120	0	298
500-515	20	58	43	0	66	15	0	0	0	22	151	0	375
515-530	26	62	35	0	64	16	0	0	0	18	159	0	380
530-545	37	63	42	0	63	11	0	0	0	16	163	0	395
545-600	21	58	60	0	50	10	0	0	0	13	154	0	366
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	93	259	165	0	229	61	0	0	0	73	482	0	1362
415-515	91	252	170	0	244	59	0	0	0	80	529	0	1425
430-530	95	254	156	0	249	62	0	0	0	75	558	0	1449
445-545	104	233	150	0	243	53	0	0	0	72	593	0	1448
500-600	104	241	180	0	243	52	0	0	0	69	627	0	1516



WILTEC

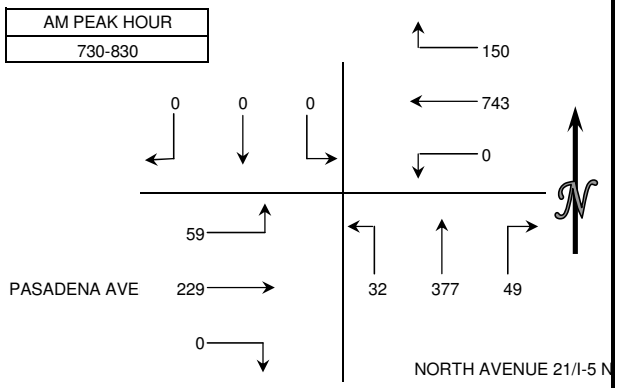
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S NORTH AVENUE 21/I-5 NORTH BOUND ON RAMP
E/W PASADENA AVENUE
CITY: LOS ANGELES

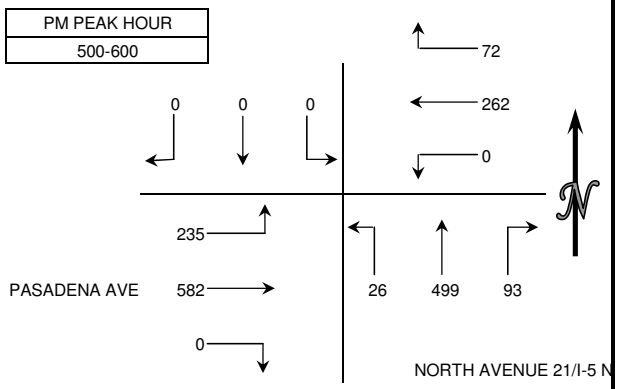
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	0	0	42	109	0	10	97	10	0	30	13	311
715-730	0	0	0	46	140	0	16	94	5	0	35	8	344
730-745	0	0	0	39	182	0	14	85	6	0	50	16	392
745-800	0	0	0	52	174	0	8	129	9	0	73	10	455
800-815	0	0	0	28	199	0	13	82	9	0	57	19	407
815-830	0	0	0	31	188	0	14	81	8	0	49	14	385
830-845	0	0	0	27	179	0	2	71	9	0	41	13	342
845-900	0	0	0	27	141	0	6	71	7	0	59	31	342
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	0	0	0	179	605	0	48	405	30	0	188	47	1502
715-815	0	0	0	165	695	0	51	390	29	0	215	53	1598
730-830	0	0	0	150	743	0	49	377	32	0	229	59	1639
745-845	0	0	0	138	740	0	37	363	35	0	220	56	1589
800-900	0	0	0	113	707	0	35	305	33	0	206	77	1476



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	0	0	24	60	0	14	100	5	0	120	41	364
415-430	0	0	0	23	53	0	17	144	10	0	139	36	422
430-445	0	0	0	35	61	0	19	132	6	0	118	36	407
445-500	0	0	0	27	58	0	12	124	6	0	130	50	407
500-515	0	0	0	21	83	0	23	149	7	0	133	62	478
515-530	0	0	0	15	57	0	17	108	7	0	154	51	409
530-545	0	0	0	22	69	0	24	127	5	0	143	77	467
545-600	0	0	0	14	53	0	29	115	7	0	152	45	415
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	0	0	0	109	232	0	62	500	27	0	507	163	1600
415-515	0	0	0	106	255	0	71	549	29	0	520	184	1714
430-530	0	0	0	98	259	0	71	513	26	0	535	199	1701
445-545	0	0	0	85	267	0	76	508	25	0	560	240	1761
500-600	0	0	0	72	262	0	93	499	26	0	582	235	1769



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

5-LEG INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIOD: 7:00 A.M. TO 9:00 A.M.
INTERSECTION: N/S AVENUE 26/DALY STREET
E/W PASADENA AVENUE
CITY: LOS ANGELES

15 MIN COUNTS																					
	SB AVENUE 26				SB PASADENA AVENUE				WB AVENUE 26				NB DALY STREET				EB PASADENA AVE				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
700-715	25	62	8	0	1	52	33	0	3	9	39	3	2	14	57	7	10	13	13	2	353
715-730	22	72	2	1	1	80	57	1	0	19	46	3	2	13	80	9	7	17	10	5	447
730-745	26	125	8	0	5	83	72	0	0	28	54	2	3	23	120	10	13	21	11	5	609
745-800	24	133	9	2	2	91	92	1	0	22	85	1	4	24	92	16	16	27	18	2	661
800-815	24	88	7	2	3	97	77	1	1	16	61	1	4	20	83	15	10	23	11	3	547
815-830	17	72	7	2	3	93	60	0	0	7	64	3	5	32	75	6	13	20	17	14	510
830-845	20	62	7	0	1	97	76	0	1	9	56	2	6	24	52	9	9	19	11	7	468
845-900	28	84	10	0	2	74	41	1	0	12	60	5	3	19	62	6	12	18	12	7	456
HOUR TOTALS																					
	SB AVENUE 26				SB PASADENA AVENUE				WB AVENUE 26				NB DALY STREET				EB PASADENA AVE				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
700-800	97	392	27	3	9	306	254	2	3	78	224	9	11	74	349	42	46	78	52	14	2070
715-815	96	418	26	5	11	351	298	3	1	85	246	7	13	80	375	50	46	88	50	15	2264
730-830	91	418	31	6	13	364	301	2	1	73	264	7	16	99	370	47	52	91	57	24	2327
745-845	85	355	30	6	9	378	305	2	2	54	266	7	19	100	302	46	48	89	57	26	2186
800-900	89	306	31	4	9	361	254	2	2	44	241	11	18	95	272	36	44	80	51	31	1981

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

5-LEG INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 26/DALY STREET
E/W PASADENA AVENUE
CITY: LOS ANGELES

15 MIN COUNTS																					
	SB AVENUE 26				SB PASADENA AVENUE				WB AVENUE 26				NB DALY STREET				EB PASADENA AVE				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
400-415	8	106	12	0	3	26	43	1	6	24	30	7	19	42	115	12	23	48	30	13	568
415-430	9	101	4	1	4	20	35	0	1	20	32	7	19	39	85	14	21	66	38	9	525
430-445	13	108	11	1	3	25	32	3	3	33	39	3	16	44	111	12	22	71	40	7	597
445-500	8	82	7	1	5	23	39	0	1	25	37	5	14	50	115	17	26	64	35	12	566
500-515	18	86	13	1	6	26	33	1	7	16	25	5	8	52	113	9	28	69	56	9	581
515-530	11	74	8	0	2	26	29	2	4	21	31	9	15	57	108	9	20	64	52	8	550
530-545	13	79	4	2	2	21	44	0	4	33	33	7	10	67	120	14	16	82	36	7	594
545-600	9	84	10	2	5	24	32	1	3	12	26	5	11	72	125	15	28	83	63	15	625
HOUR TOTALS																					
	SB AVENUE 26				SB PASADENA AVENUE				WB AVENUE 26				NB DALY STREET				EB PASADENA AVE				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
400-500	38	397	34	3	15	94	149	4	11	102	138	22	68	175	426	55	92	249	143	41	2256
415-500	48	377	35	4	18	94	139	4	12	94	133	20	57	185	424	52	97	270	169	37	2269
430-530	50	350	39	3	16	100	133	6	15	95	132	22	53	203	447	47	96	268	183	36	2294
445-545	50	321	32	4	15	96	145	3	16	95	126	26	47	226	456	49	90	279	179	36	2291
500-600	51	323	35	5	15	97	138	4	18	82	115	26	44	248	466	47	92	298	207	39	2350

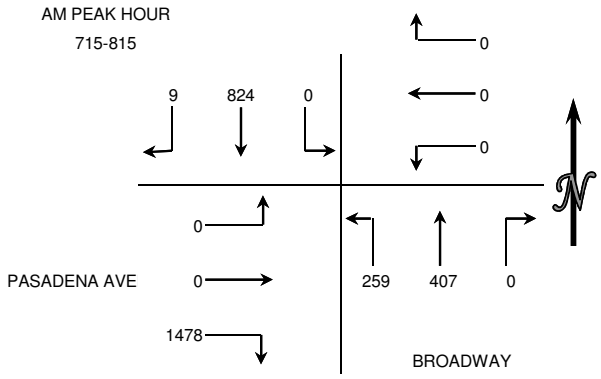
WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

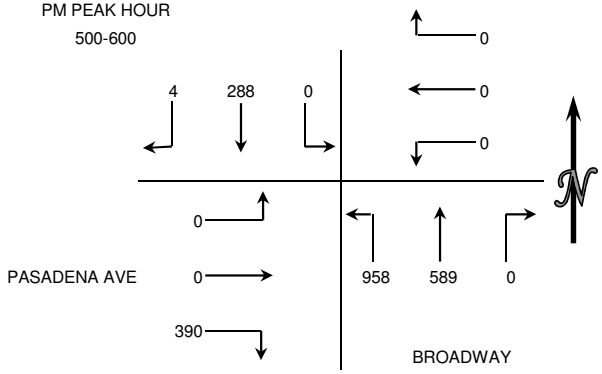
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY NOVEMBER 7, 2007
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S BROADWAY
E/W PASADENA AVENUE
CITY: LOS ANGELES

15 MIN COUNTS						7:00 AM TO 9:00 AM							
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	192	0	0	0	0	0	43	37	347	0	0	619
715-730	2	238	0	0	0	0	0	95	51	403	0	0	789
730-745	4	217	0	0	0	0	0	129	56	370	0	0	776
745-800	2	173	0	0	0	0	0	102	76	308	0	0	661
800-815	1	196	0	0	0	0	0	81	76	397	0	0	751
815-830	2	228	0	0	0	0	0	60	61	403	0	0	754
830-845	2	232	0	0	0	0	0	85	44	331	0	0	694
845-900	3	173	0	0	0	0	0	80	43	406	0	0	705
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	8	820	0	0	0	0	0	369	220	1428	0	0	2845
715-815	9	824	0	0	0	0	0	407	259	1478	0	0	2977
730-830	9	814	0	0	0	0	0	372	269	1478	0	0	2942
745-845	7	829	0	0	0	0	0	328	257	1439	0	0	2860
800-900	8	829	0	0	0	0	0	306	224	1537	0	0	2904



15 MIN COUNTS						4:00 PM TO 6:00 PM							
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	78	0	0	0	0	0	129	102	77	0	0	386
415-430	0	88	0	0	0	0	0	169	160	88	0	0	505
430-445	1	67	0	0	0	0	0	127	177	79	0	0	451
445-500	0	50	0	0	0	0	0	140	210	71	0	0	471
500-515	2	73	0	0	0	0	0	133	274	92	0	0	574
515-530	0	74	0	0	0	0	0	164	255	88	0	0	581
530-545	1	50	0	0	0	0	0	157	201	88	0	0	497
545-600	1	91	0	0	0	0	0	135	228	122	0	0	577
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	1	283	0	0	0	0	0	565	649	315	0	0	1813
415-515	3	278	0	0	0	0	0	569	821	330	0	0	2001
430-530	3	264	0	0	0	0	0	564	916	330	0	0	2077
445-545	3	247	0	0	0	0	0	594	940	339	0	0	2123
500-600	4	288	0	0	0	0	0	589	958	390	0	0	2229



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

5-LEG INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIOD: 7:00 A.M. TO 9:00 A.M.
INTERSECTION: N/S AVENUE 18
E/W SPRING STREET/BROADWAY
CITY: LOS ANGELES

15 MIN COUNTS																					
	SB AVENUE 18				WB BROADWAY				NB AVENUE 18				EB SPRING STREET				EB BROADWAY				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
700-715	0	40	5	2	1	167	218	0	11	2	10	2	1	50	1	0	1	5	65	0	581
715-730	0	57	4	1	0	193	235	2	9	4	7	2	2	71	2	0	2	3	63	0	657
730-745	0	76	9	0	2	206	277	3	14	6	6	5	4	73	2	0	3	3	86	0	775
745-800	1	85	10	3	4	215	270	6	14	3	9	5	2	68	0	0	2	8	70	0	775
800-815	1	95	20	0	5	187	294	4	18	8	7	8	2	64	0	0	3	4	77	0	797
815-830	0	74	12	2	1	189	270	4	18	8	10	3	6	68	5	0	4	6	54	0	734
830-845	0	55	4	3	3	203	341	3	11	4	8	2	1	65	6	1	0	5	46	0	761
845-900	0	47	4	1	5	189	291	2	4	3	14	7	3	88	1	2	6	3	60	0	730
HOUR TOTALS																					
	SB AVENUE 18				WB BROADWAY				NB AVENUE 18				EB SPRING STREET				EB BROADWAY				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
700-800	1	258	28	6	7	781	1000	11	48	15	32	14	9	262	5	0	8	19	284	0	2788
715-815	2	313	43	4	11	801	1076	15	55	21	29	20	10	276	4	0	10	18	296	0	3004
730-830	2	330	51	5	12	797	1111	17	64	25	32	21	14	273	7	0	12	21	287	0	3081
745-845	2	309	46	8	13	794	1175	17	61	23	34	18	11	265	11	1	9	23	247	0	3067
800-900	1	271	40	6	14	768	1196	13	51	23	39	20	12	285	12	3	13	18	237	0	3022

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

5-LEG INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY MARCH 26, 2009
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 18
E/W SPRING STREET/BROADWAY
CITY: LOS ANGELES

15 MIN COUNTS																					
	SB AVENUE 18				WB BROADWAY				NB AVENUE 18				EB SPRING STREET				EB BROADWAY				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
400-415	0	9	3	0	1	65	85	8	10	3	6	1	8	239	17	1	4	2	118	0	580
415-430	1	7	4	0	1	62	84	4	10	7	3	1	5	276	20	1	2	9	118	0	615
430-445	0	6	5	0	1	78	81	4	11	4	3	3	4	271	21	4	0	8	131	0	635
445-500	0	4	4	4	3	70	67	8	5	4	0	1	5	299	24	0	1	5	122	1	627
500-515	0	9	5	0	2	75	72	6	6	4	3	1	6	339	25	0	1	0	125	0	679
515-530	2	9	6	2	3	86	68	2	7	2	2	4	6	363	33	1	2	6	144	0	748
530-545	0	13	12	1	4	76	69	8	8	6	5	3	7	331	31	1	2	4	162	0	743
545-600	1	10	2	1	1	59	68	6	10	3	2	1	6	320	31	3	0	1	124	1	650
HOUR TOTALS																					
	SB AVENUE 18				WB BROADWAY				NB AVENUE 18				EB SPRING STREET				EB BROADWAY				
PERIOD	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	TOTALS
400-500	1	26	16	4	6	275	317	24	36	18	12	6	22	1085	82	6	7	24	489	1	2457
415-500	1	26	18	4	7	285	304	22	32	19	9	6	20	1185	90	5	4	22	496	1	2556
430-530	2	28	20	6	9	309	288	20	29	14	8	9	21	1272	103	5	4	19	522	1	2689
445-545	2	35	27	7	12	307	276	24	26	16	10	9	24	1332	113	2	6	15	553	1	2797
500-600	3	41	25	4	10	296	277	22	31	15	12	9	25	1353	120	5	5	11	555	1	2820

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

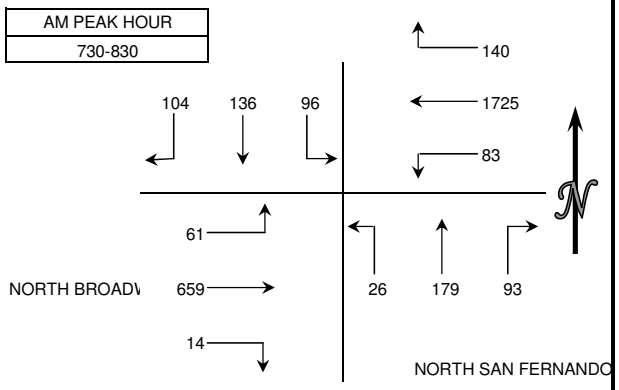
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 1, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S NORTH SAN FERNANDO ROAD
E/W NORTH BROADWAY
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	24	14	13	29	318	8	14	22	5	5	116	13	581
715-730	26	32	22	29	355	13	15	23	4	2	149	15	685
730-745	23	47	27	39	415	15	23	44	5	4	175	18	835
745-800	21	38	22	40	479	29	25	58	3	4	156	9	884
800-815	29	26	19	40	416	24	26	38	12	1	170	15	816
815-830	31	25	28	21	415	15	19	39	6	5	158	19	781
830-845	24	21	19	30	460	8	20	25	10	3	118	18	756
845-900	36	20	20	27	373	7	18	36	19	3	154	25	738

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	94	131	84	137	1567	65	77	147	17	15	596	55	2985
715-815	99	143	90	148	1665	81	89	163	24	11	650	57	3220
730-830	104	136	96	140	1725	83	93	179	26	14	659	61	3316
745-845	105	110	88	131	1770	76	90	160	31	13	602	61	3237
800-900	120	92	86	118	1664	54	83	138	47	12	600	77	3091

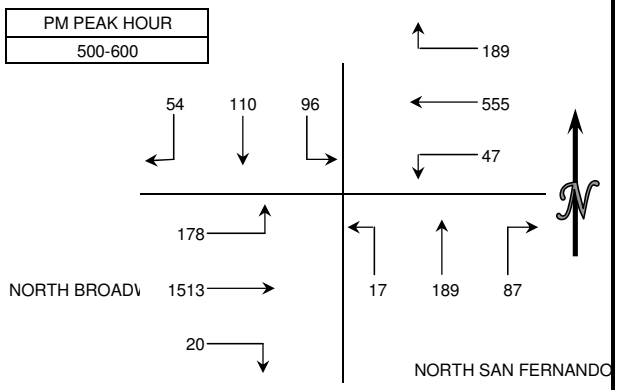


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	14	17	38	29	139	12	17	41	8	2	327	45	689
415-430	17	18	26	27	134	8	14	31	0	3	335	35	648
430-445	14	21	26	35	122	8	21	42	5	3	325	43	665
445-500	5	41	28	39	140	5	16	49	5	5	340	37	710
500-515	16	33	27	42	148	12	18	44	6	10	398	61	815
515-530	14	25	17	40	137	10	24	47	4	4	379	33	734
530-545	14	30	20	48	142	12	20	48	3	4	365	37	743
545-600	10	22	32	59	128	13	25	50	4	2	371	47	763

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	50	97	118	130	535	33	68	163	18	13	1327	160	2712
415-515	52	113	107	143	544	33	69	166	16	21	1398	176	2838
430-530	49	120	98	156	547	35	79	182	20	22	1442	174	2924
445-545	49	129	92	169	567	39	78	188	18	23	1482	168	3002
500-600	54	110	96	189	555	47	87	189	17	20	1513	178	3055



WILTEC

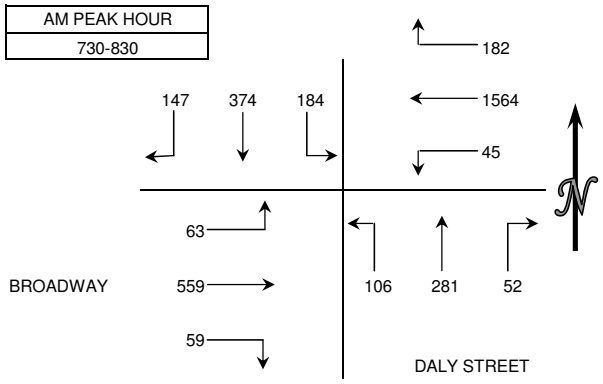
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHE AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: TUESDAY APRIL 14, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S DALY STREET
E/W BROADWAY
CITY: LOS ANGELES

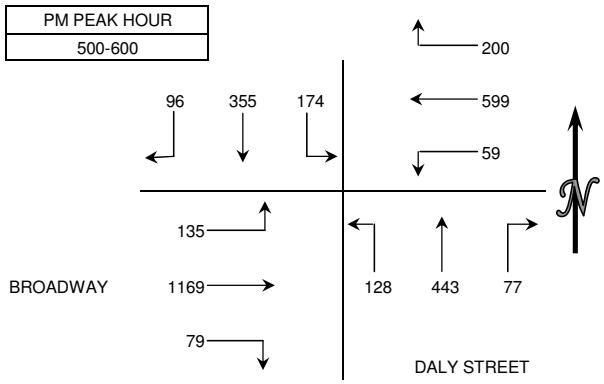
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	28	52	32	32	298	8	13	38	18	11	81	12	623
715-730	23	71	36	41	348	5	9	52	12	10	132	6	745
730-745	31	105	58	54	400	8	10	74	19	11	159	14	943
745-800	33	109	59	39	404	19	17	76	23	19	150	16	964
800-815	48	88	33	47	386	10	12	69	39	13	128	18	891
815-830	35	72	34	42	374	8	13	62	25	16	122	15	818
830-845	27	89	29	29	385	14	16	66	21	11	130	15	832
845-900	36	78	18	34	356	6	13	67	22	13	110	22	775
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	115	337	185	166	1450	40	49	240	72	51	522	48	3275
715-815	135	373	186	181	1538	42	48	271	93	53	569	54	3543
730-830	147	374	184	182	1564	45	52	281	106	59	559	63	3616
745-845	143	358	155	157	1549	51	58	273	108	59	530	64	3505
800-900	146	327	114	152	1501	38	54	264	107	53	490	70	3316



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	28	88	46	46	151	5	25	109	24	29	250	33	834
415-430	20	77	50	44	180	9	28	121	34	18	234	36	851
430-445	22	86	44	44	179	10	13	113	37	20	293	26	887
445-500	26	86	49	39	153	10	28	110	28	17	315	43	904
500-515	21	104	43	57	129	18	20	98	26	23	250	25	814
515-530	20	83	48	50	146	13	23	111	33	26	308	34	895
530-545	29	90	42	53	160	13	12	120	26	19	293	38	895
545-600	26	78	41	40	164	15	22	114	43	11	318	38	910
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	96	337	189	173	663	34	94	453	123	84	1092	138	3476
415-515	89	353	186	184	641	47	89	442	125	78	1092	130	3456
430-530	89	359	184	190	607	51	84	432	124	86	1166	128	3500
445-545	96	363	182	199	588	54	83	439	113	85	1166	140	3508
500-600	96	355	174	200	599	59	77	443	128	79	1169	135	3514



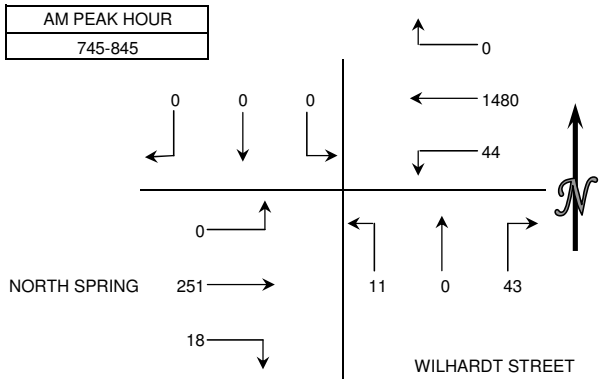
WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

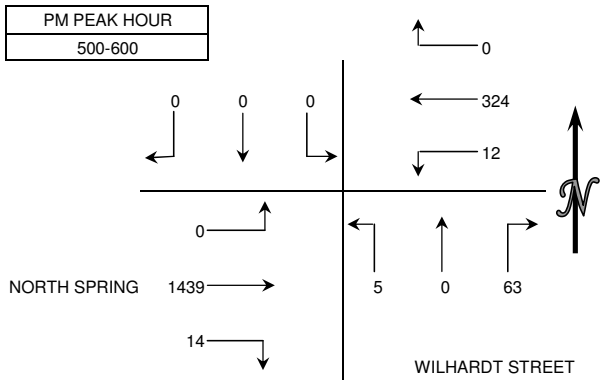
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S WILHARDT STREET
E/W NORTH SPRING STREET
CITY: LOS ANGELES

15 MIN COUNTS					7:00 AM TO 9:00 AM								
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	0	0	0	0	234	5	14	0	1	0	48	0	302
715-730	0	0	0	0	297	5	7	0	1	2	63	0	375
730-745	0	0	0	0	328	6	5	0	0	0	63	0	402
745-800	0	0	0	0	389	8	15	0	1	2	57	0	472
800-815	0	0	0	0	360	13	9	0	3	5	64	0	454
815-830	0	0	0	0	359	15	10	0	3	8	78	0	473
830-845	0	0	0	0	372	8	9	0	4	3	52	0	448
845-900	0	0	0	0	350	12	11	0	2	2	74	0	451
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	0	0	0	0	1248	24	41	0	3	4	231	0	1551
715-815	0	0	0	0	1374	32	36	0	5	9	247	0	1703
730-830	0	0	0	0	1436	42	39	0	7	15	262	0	1801
745-845	0	0	0	0	1480	44	43	0	11	18	251	0	1847
800-900	0	0	0	0	1441	48	39	0	12	18	268	0	1826



15 MIN COUNTS					4:00 PM TO 6:00 PM								
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	0	0	0	0	89	7	40	0	3	10	246	0	395
415-430	0	0	0	0	84	6	29	0	1	3	252	0	375
430-445	0	0	0	0	87	5	23	0	0	4	274	0	393
445-500	0	0	0	0	79	3	23	0	4	7	319	0	435
500-515	0	0	0	0	75	3	23	0	1	3	356	0	461
515-530	0	0	0	0	81	5	19	0	1	2	366	0	474
530-545	0	0	0	0	81	2	12	0	1	8	366	0	470
545-600	0	0	0	0	87	2	9	0	2	1	351	0	452
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	0	0	0	0	339	21	115	0	8	24	1091	0	1598
415-515	0	0	0	0	325	17	98	0	6	17	1201	0	1664
430-530	0	0	0	0	322	16	88	0	6	16	1315	0	1763
445-545	0	0	0	0	316	13	77	0	7	20	1407	0	1840
500-600	0	0	0	0	324	12	63	0	5	14	1439	0	1857



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

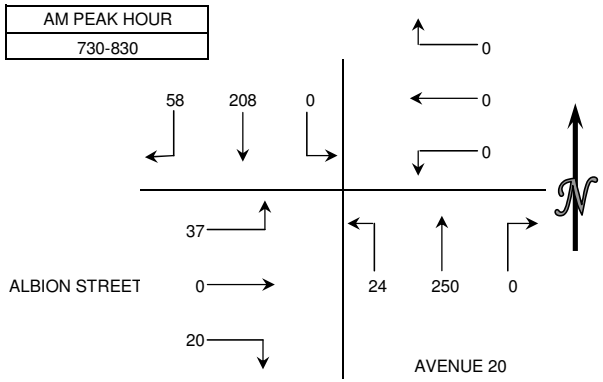
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 20
E/W ALBION STREET
CITY: LOS ANGELES

15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	7	22	0	0	0	0	0	26	6	4	0	9	74
715-730	4	34	0	0	0	0	0	30	2	4	0	9	83
730-745	6	51	0	0	0	0	0	66	4	2	0	6	135
745-800	20	63	0	0	0	0	0	79	10	6	0	11	189
800-815	17	54	0	0	0	0	0	58	6	6	0	6	147
815-830	15	40	0	0	0	0	0	47	4	6	0	14	126
830-845	9	31	0	0	0	0	0	39	3	3	0	7	92
845-900	3	25	0	0	0	0	0	45	3	4	0	7	87

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	37	170	0	0	0	0	0	201	22	16	0	35	481
715-815	47	202	0	0	0	0	0	233	22	18	0	32	554
730-830	58	208	0	0	0	0	0	250	24	20	0	37	597
745-845	61	188	0	0	0	0	0	223	23	21	0	38	554
800-900	44	150	0	0	0	0	0	189	16	19	0	34	452

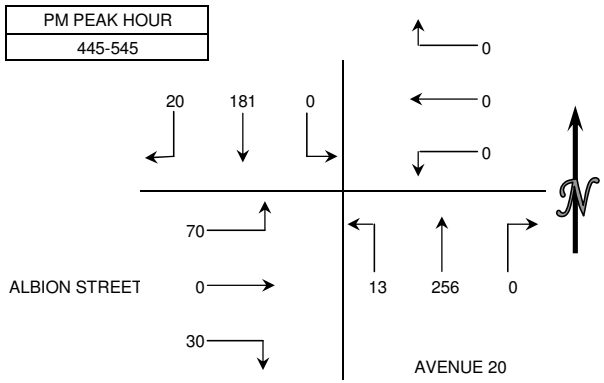


15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	12	43	0	0	0	0	0	63	3	8	0	12	141
415-430	9	33	0	0	0	0	0	46	3	5	0	11	107
430-445	4	35	0	0	0	0	0	61	1	12	0	14	127
445-500	3	49	0	0	0	0	0	61	3	7	0	17	140
500-515	8	45	0	0	0	0	0	76	1	7	0	11	148
515-530	5	42	0	0	0	0	0	58	3	8	0	17	133
530-545	4	45	0	0	0	0	0	61	6	8	0	25	149
545-600	4	27	0	0	0	0	0	43	1	11	0	8	94

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	28	160	0	0	0	0	0	231	10	32	0	54	515
415-515	24	162	0	0	0	0	0	244	8	31	0	53	522
430-530	20	171	0	0	0	0	0	256	8	34	0	59	548
445-545	20	181	0	0	0	0	0	256	13	30	0	70	570
500-600	21	159	0	0	0	0	0	238	11	34	0	61	524



WILTEC

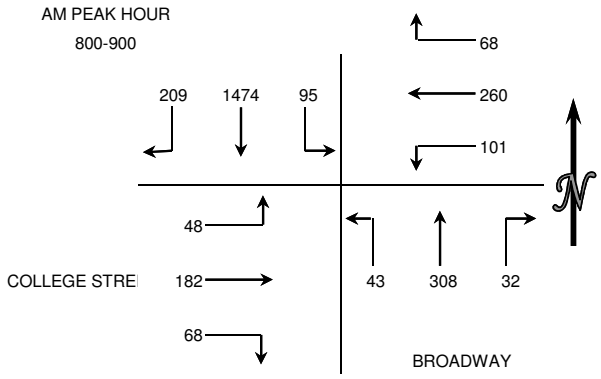
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY NOVEMBER 7, 2007
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S BROADWAY
E/W COLLEGE STREET
CITY: LOS ANGELES

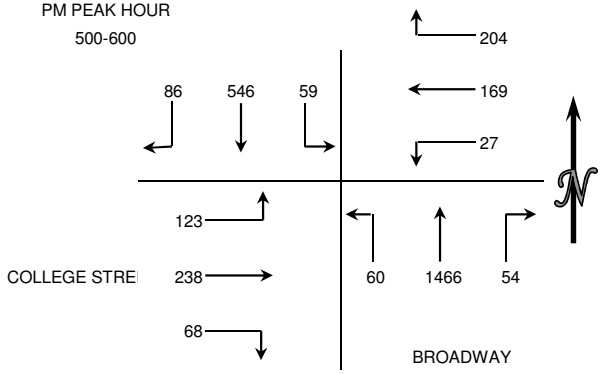
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	59	393	16	17	32	9	5	58	3	7	40	17	656
715-730	49	369	21	11	37	16	2	83	3	12	36	13	652
730-745	54	368	25	27	82	25	11	91	11	12	48	20	774
745-800	33	284	11	12	47	10	2	56	6	8	26	10	505
800-815	44	398	22	18	55	18	6	74	6	15	48	13	717
815-830	60	397	29	16	81	37	8	88	9	19	52	15	811
830-845	49	326	23	16	61	26	9	70	12	12	46	11	661
845-900	56	353	21	18	63	20	9	76	16	22	36	9	699
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	195	1414	73	67	198	60	20	288	23	39	150	60	2587
715-815	180	1419	79	68	221	69	21	304	26	47	158	56	2648
730-830	191	1447	87	73	265	90	27	309	32	54	174	58	2807
745-845	186	1405	85	62	244	91	25	288	33	54	172	49	2694
800-900	209	1474	95	68	260	101	32	308	43	68	182	48	2888



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	24	105	20	26	49	5	9	226	19	7	56	22	568
415-430	33	132	9	29	46	11	8	232	19	20	43	19	601
430-445	30	127	25	36	46	10	21	282	18	17	55	30	697
445-500	29	104	10	47	46	5	11	296	12	19	52	21	652
500-515	27	132	16	57	51	7	12	349	9	17	75	20	772
515-530	22	123	19	57	44	7	14	341	16	17	53	29	742
530-545	15	139	13	46	36	3	16	380	16	18	51	40	773
545-600	22	152	11	44	38	10	12	396	19	16	59	34	813
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	116	468	64	138	187	31	49	1036	68	63	206	92	2518
415-515	119	495	60	169	189	33	52	1159	58	73	225	90	2722
430-530	108	486	70	197	187	29	58	1268	55	70	235	100	2863
445-545	93	498	58	207	177	22	53	1366	53	71	231	110	2939
500-600	86	546	59	204	169	27	54	1466	60	68	238	123	3100



WILTEC

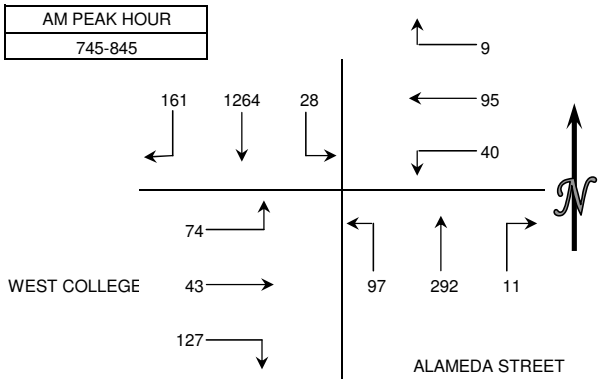
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S ALAMEDA STREET
E/W WEST COLLEGE STREET
CITY: LOS ANGELES

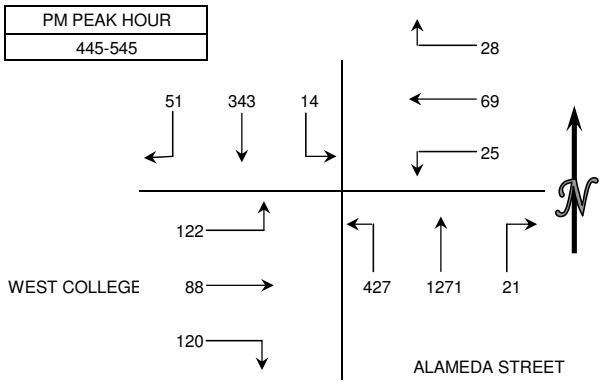
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	15	221	2	4	22	4	3	51	25	32	13	14	406
715-730	22	242	1	1	17	6	3	51	23	44	10	12	432
730-745	27	297	3	4	21	7	0	57	30	31	15	25	517
745-800	37	293	6	0	18	11	2	53	24	30	10	19	503
800-815	38	320	8	2	26	9	2	85	29	30	12	24	585
815-830	39	302	11	5	26	9	5	92	22	40	13	20	584
830-845	47	349	3	2	25	11	2	62	22	27	8	11	569
845-900	26	254	0	2	23	3	5	68	25	29	10	21	466
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	101	1053	12	9	78	28	8	212	102	137	48	70	1858
715-815	124	1152	18	7	82	33	7	246	106	135	47	80	2037
730-830	141	1212	28	11	91	36	9	287	105	131	50	88	2189
745-845	161	1264	28	9	95	40	11	292	97	127	43	74	2241
800-900	150	1225	22	11	100	32	14	307	98	126	43	76	2204



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	13	107	2	8	13	3	1	220	82	27	15	26	517
415-430	9	113	6	6	19	4	6	230	72	33	22	30	550
430-445	13	95	3	7	24	11	10	309	85	25	25	31	638
445-500	13	88	4	8	14	8	6	319	96	29	33	42	660
500-515	14	84	2	3	18	8	4	293	93	24	18	22	583
515-530	12	81	6	10	23	4	6	321	111	29	16	20	639
530-545	12	90	2	7	14	5	5	338	127	38	21	38	697
545-600	12	77	3	4	18	9	6	312	120	36	19	31	647
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	48	403	15	29	70	26	23	1078	335	114	95	129	2365
415-515	49	380	15	24	75	31	26	1151	346	111	98	125	2431
430-530	52	348	15	28	79	31	26	1242	385	107	92	115	2520
445-545	51	343	14	28	69	25	21	1271	427	120	88	122	2579
500-600	50	332	13	24	73	26	21	1264	451	127	74	111	2566



WILTEC

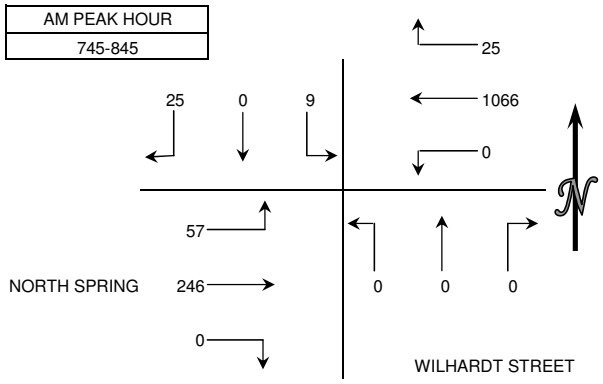
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S WILHARDT STREET
E/W MAIN STREET
CITY: LOS ANGELES

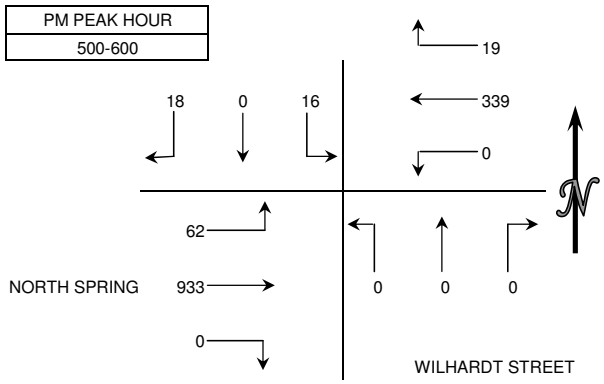
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	4	0	2	3	181	0	0	0	0	0	48	11	249
715-730	5	0	0	3	222	0	0	0	0	0	51	5	286
730-745	3	0	1	1	264	0	0	0	0	0	66	4	339
745-800	6	0	1	4	264	0	0	0	0	0	62	19	356
800-815	6	0	3	8	296	0	0	0	0	0	71	11	395
815-830	6	0	1	7	251	0	0	0	0	0	58	10	333
830-845	7	0	4	6	255	0	0	0	0	0	55	17	344
845-900	2	0	2	4	282	0	0	0	0	0	40	13	343
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	18	0	4	11	931	0	0	0	0	0	227	39	1230
715-815	20	0	5	16	1046	0	0	0	0	0	250	39	1376
730-830	21	0	6	20	1075	0	0	0	0	0	257	44	1423
745-845	25	0	9	25	1066	0	0	0	0	0	246	57	1428
800-900	21	0	10	25	1084	0	0	0	0	0	224	51	1415



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	9	0	2	4	102	0	0	0	0	0	149	37	303
415-430	7	0	2	3	115	0	0	0	0	0	163	32	322
430-445	3	0	2	6	82	0	0	0	0	0	156	27	276
445-500	3	0	6	7	99	0	0	0	0	0	198	16	329
500-515	7	0	1	5	84	0	0	0	0	0	214	21	332
515-530	4	0	4	5	78	0	0	0	0	0	222	19	332
530-545	4	0	9	2	80	0	0	0	0	0	271	14	380
545-600	3	0	2	7	97	0	0	0	0	0	226	8	343
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	22	0	12	20	398	0	0	0	0	0	666	112	1230
415-515	20	0	11	21	380	0	0	0	0	0	731	96	1259
430-530	17	0	13	23	343	0	0	0	0	0	790	83	1269
445-545	18	0	20	19	341	0	0	0	0	0	905	70	1373
500-600	18	0	16	19	339	0	0	0	0	0	933	62	1387



WILTEC

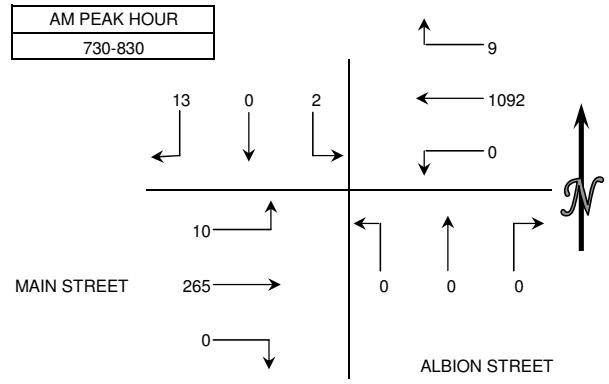
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S ALBION STREET
E/W MAIN STREET
CITY: LOS ANGELES

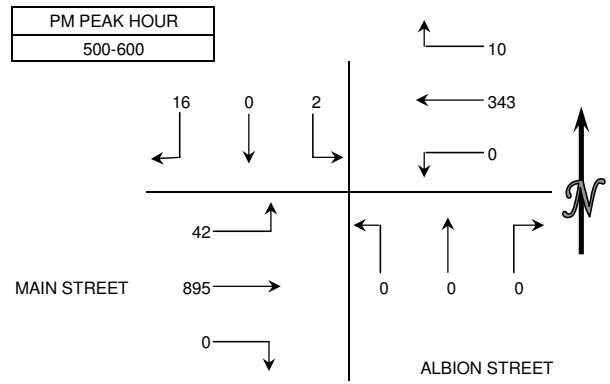
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	6	0	0	2	170	0	0	0	0	0	52	2	232
715-730	0	0	0	0	227	0	0	0	0	0	40	1	268
730-745	2	0	0	3	291	0	0	0	0	0	73	4	373
745-800	0	0	1	3	250	0	0	0	0	0	63	2	319
800-815	3	0	0	2	284	0	0	0	0	0	67	2	358
815-830	8	0	1	1	267	0	0	0	0	0	62	2	341
830-845	7	0	2	4	262	0	0	0	0	0	61	3	339
845-900	3	0	0	2	283	0	0	0	0	0	46	2	336
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	8	0	1	8	938	0	0	0	0	0	228	9	1192
715-815	5	0	1	8	1052	0	0	0	0	0	243	9	1318
730-830	13	0	2	9	1092	0	0	0	0	0	265	10	1391
745-845	18	0	4	10	1063	0	0	0	0	0	253	9	1357
800-900	21	0	3	9	1096	0	0	0	0	0	236	9	1374



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	4	0	0	1	108	0	0	0	0	0	132	4	249
415-430	2	0	0	2	108	0	0	0	0	0	156	7	275
430-445	9	0	2	0	83	0	0	0	0	0	137	7	238
445-500	5	0	0	4	94	0	0	0	0	0	209	7	319
500-515	8	0	1	3	91	0	0	0	0	0	206	9	318
515-530	3	0	0	3	80	0	0	0	0	0	218	12	316
530-545	3	0	0	2	82	0	0	0	0	0	244	12	343
545-600	2	0	1	2	90	0	0	0	0	0	227	9	331
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	20	0	2	7	393	0	0	0	0	0	634	25	1081
415-515	24	0	3	9	376	0	0	0	0	0	708	30	1150
430-530	25	0	3	10	348	0	0	0	0	0	770	35	1191
445-545	19	0	1	12	347	0	0	0	0	0	877	40	1296
500-600	16	0	2	10	343	0	0	0	0	0	895	42	1308



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

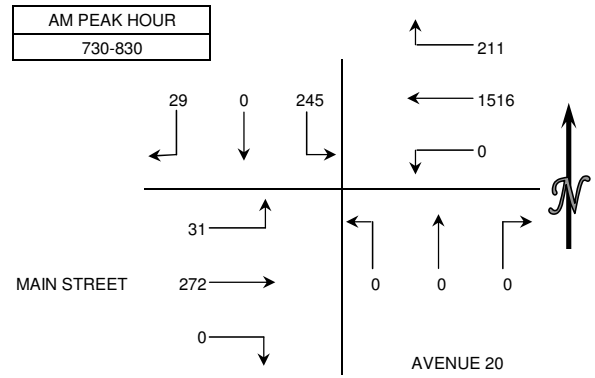
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 20
E/W MAIN STREET
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	5	0	20	20	209	0	0	0	0	0	59	5	318
715-730	6	0	35	32	267	0	0	0	0	0	38	4	382
730-745	9	0	70	54	374	0	0	0	0	0	71	5	583
745-800	7	0	66	68	384	0	0	0	0	0	71	5	601
800-815	4	0	64	64	407	0	0	0	0	0	72	9	620
815-830	9	0	45	25	351	0	0	0	0	0	58	12	500
830-845	10	0	33	20	304	0	0	0	0	0	78	10	455
845-900	10	0	30	22	267	0	0	0	0	0	89	9	427

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	27	0	191	174	1234	0	0	0	0	0	239	19	1884
715-815	26	0	235	218	1432	0	0	0	0	0	252	23	2186
730-830	29	0	245	211	1516	0	0	0	0	0	272	31	2304
745-845	30	0	208	177	1446	0	0	0	0	0	279	36	2176
800-900	33	0	172	131	1329	0	0	0	0	0	297	40	2002

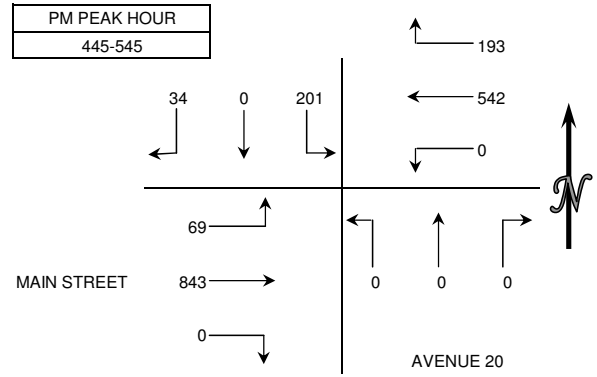


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	7	0	39	44	135	0	0	0	0	0	132	13	370
415-430	8	0	39	43	105	0	0	0	0	0	151	7	353
430-445	10	0	59	50	115	0	0	0	0	0	170	14	418
445-500	6	0	56	53	135	0	0	0	0	0	209	20	479
500-515	13	0	45	49	122	0	0	0	0	0	197	12	438
515-530	7	0	44	40	138	0	0	0	0	0	215	23	467
530-545	8	0	56	51	147	0	0	0	0	0	222	14	498
545-600	8	0	42	27	159	0	0	0	0	0	213	14	463

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	31	0	193	190	490	0	0	0	0	0	662	54	1620
415-515	37	0	199	195	477	0	0	0	0	0	727	53	1688
430-530	36	0	204	192	510	0	0	0	0	0	791	69	1802
445-545	34	0	201	193	542	0	0	0	0	0	843	69	1882
500-600	36	0	187	167	566	0	0	0	0	0	847	63	1866



WILTEC

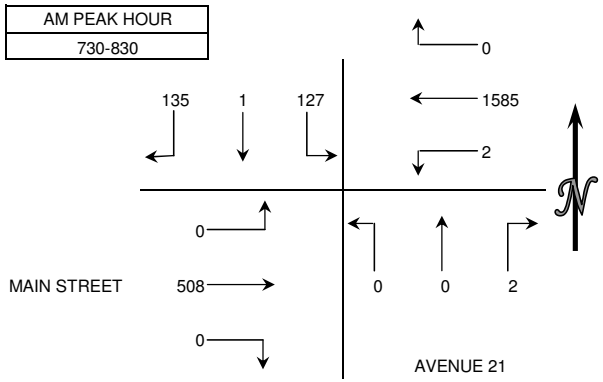
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S AVENUE 21
E/W MAIN STREET
CITY: LOS ANGELES

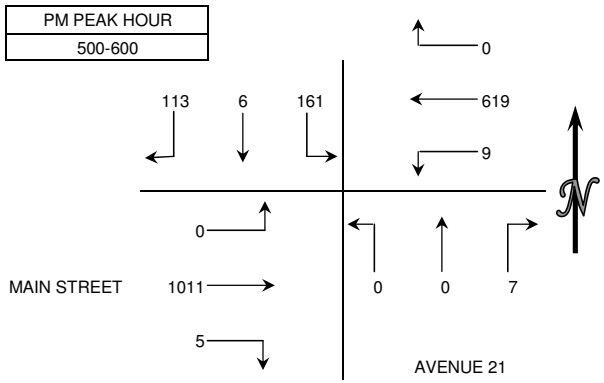
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	24	0	45	0	206	0	0	0	0	0	78	0	353
715-730	17	0	33	0	267	0	0	0	0	0	80	0	397
730-745	35	0	33	0	413	1	0	0	0	0	137	0	619
745-800	36	0	41	0	401	0	1	0	0	0	124	0	603
800-815	40	0	32	0	434	1	0	0	0	0	147	0	654
815-830	24	1	21	0	337	0	1	0	0	0	100	0	484
830-845	32	0	26	0	309	1	2	0	1	1	102	0	474
845-900	26	1	31	0	255	1	1	0	0	0	116	0	431
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	112	0	152	0	1287	1	1	0	0	0	419	0	1972
715-815	128	0	139	0	1515	2	1	0	0	0	488	0	2273
730-830	135	1	127	0	1585	2	2	0	0	0	508	0	2360
745-845	132	1	120	0	1481	2	4	0	1	1	473	0	2215
800-900	122	2	110	0	1335	3	4	0	1	1	465	0	2043



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	27	0	53	0	149	0	2	0	1	0	178	0	410
415-430	15	1	42	0	135	2	5	0	1	1	197	0	399
430-445	20	0	53	0	137	1	4	0	3	2	223	0	443
445-500	27	1	38	0	154	1	3	0	1	3	251	0	479
500-515	21	1	43	0	149	1	1	0	0	0	234	0	450
515-530	33	1	50	0	154	2	2	0	0	0	276	0	518
530-545	24	1	27	0	148	0	3	0	0	0	258	0	461
545-600	35	3	41	0	168	6	1	0	0	5	243	0	502
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	89	2	186	0	575	4	14	0	6	6	849	0	1731
415-515	83	3	176	0	575	5	13	0	5	6	905	0	1771
430-530	101	3	184	0	594	5	10	0	4	5	984	0	1890
445-545	105	4	158	0	605	4	9	0	1	3	1019	0	1908
500-600	113	6	161	0	619	9	7	0	0	5	1011	0	1931



WILTEC

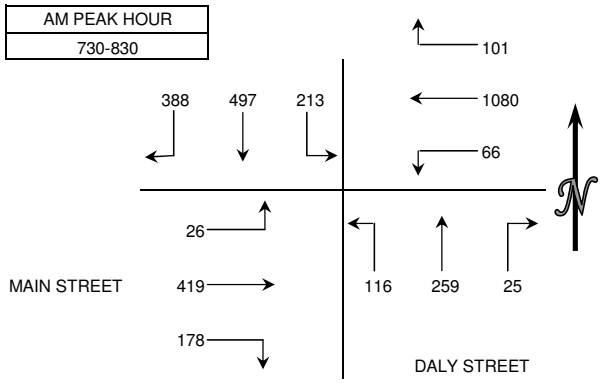
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S DALY STREET
E/W MAIN STREET
CITY: LOS ANGELES

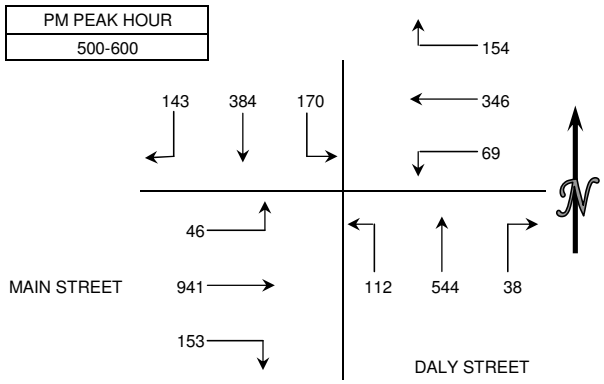
15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	40	81	41	25	170	16	8	39	17	32	70	9	548
715-730	46	79	41	27	190	14	4	44	15	32	73	8	573
730-745	87	135	58	28	284	11	3	60	30	60	94	4	854
745-800	102	148	55	23	288	15	10	74	33	52	122	10	932
800-815	116	116	51	33	299	24	10	71	30	41	124	5	920
815-830	83	98	49	17	209	16	2	54	23	25	79	7	662
830-845	70	90	50	14	203	10	9	51	21	24	86	11	639
845-900	65	83	43	12	190	10	6	42	24	33	93	16	617
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
700-800	275	443	195	103	932	56	25	217	95	176	359	31	2907
715-815	351	478	205	111	1061	64	27	249	108	185	413	27	3279
730-830	388	497	213	101	1080	66	25	259	116	178	419	26	3368
745-845	371	452	205	87	999	65	31	250	107	142	411	33	3153
800-900	334	387	193	76	901	60	27	218	98	123	382	39	2838



15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	41	101	42	25	86	22	15	105	20	64	143	11	675
415-430	32	92	44	39	99	29	19	114	24	72	177	11	752
430-445	26	99	31	45	90	25	14	120	25	59	204	16	754
445-500	20	80	41	38	87	21	10	111	33	46	212	7	706
500-515	26	98	42	35	90	24	15	142	24	49	224	9	778
515-530	36	96	38	43	96	19	6	138	27	36	271	18	824
530-545	33	102	30	31	85	13	10	128	28	37	238	10	745
545-600	48	88	60	45	75	13	7	136	33	31	208	9	753
HOUR TOTALS													
TIME	**1 SBRT**	**2 SBTH**	**3 SBLT**	**4 WBRT**	**5 WBTH**	**6 WBLT**	**7 NBRT**	**8 NBTH**	**9 NBLT**	**10 EBRT**	**11 EBTH**	**12 EBLT**	**TOTAL**
400-500	119	372	158	147	362	97	58	450	102	241	736	45	2887
415-515	104	369	158	157	366	99	58	487	106	226	817	43	2990
430-530	108	373	152	161	363	89	45	511	109	190	911	50	3062
445-545	115	376	151	147	358	77	41	519	112	168	945	44	3053
500-600	143	384	170	154	346	69	38	544	112	153	941	46	3100



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

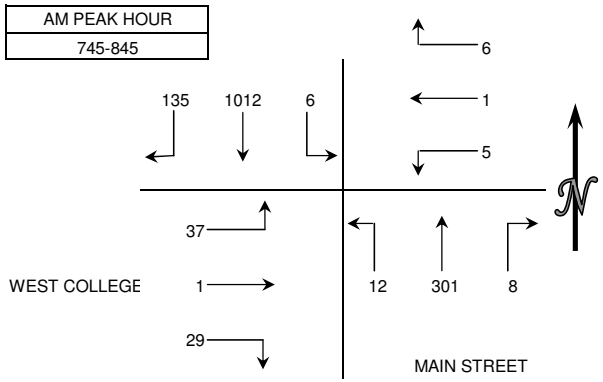
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S MAIN STREET
E/W WEST COLLEGE STREET
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	21	169	1	2	1	1	5	50	4	5	2	8	269
715-730	26	215	1	0	0	2	8	52	3	3	1	5	316
730-745	27	256	1	1	0	1	4	71	1	3	4	7	376
745-800	31	252	2	3	0	1	3	81	2	6	0	8	389
800-815	36	249	1	2	0	0	1	88	4	8	1	10	400
815-830	30	260	1	0	1	3	2	64	4	10	0	9	384
830-845	38	251	2	1	0	1	2	68	2	5	0	10	380
845-900	37	255	5	3	0	1	1	64	3	7	0	7	383

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	105	892	5	6	1	5	20	254	10	17	7	28	1350
715-815	120	972	5	6	0	4	16	292	10	20	6	30	1481
730-830	124	1017	5	6	1	5	10	304	11	27	5	34	1549
745-845	135	1012	6	6	1	5	8	301	12	29	1	37	1553
800-900	141	1015	9	6	1	5	6	284	13	30	1	36	1547

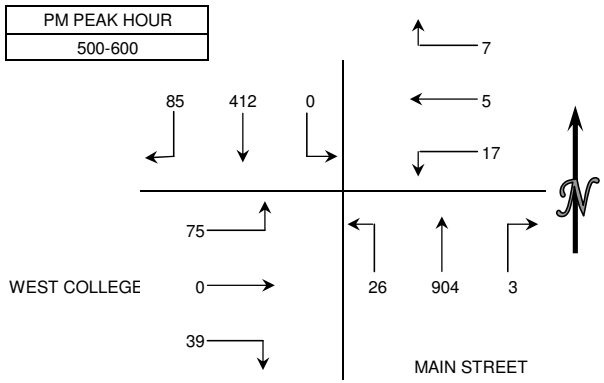


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	15	125	4	4	1	9	1	139	7	8	0	17	330
415-430	18	111	2	2	2	3	3	164	11	8	1	17	342
430-445	23	116	0	4	1	16	0	174	7	7	0	21	369
445-500	14	104	0	2	1	6	2	186	6	12	0	20	353
500-515	23	103	0	4	1	4	1	198	10	8	0	19	371
515-530	22	107	0	2	1	4	0	231	8	8	0	17	400
530-545	19	100	0	1	0	4	1	242	4	13	0	19	403
545-600	21	102	0	0	3	5	1	233	4	10	0	20	399

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	70	456	6	12	5	34	6	663	31	35	1	75	1394
415-515	78	434	2	12	5	29	6	722	34	35	1	77	1435
430-530	82	430	0	12	4	30	3	789	31	35	0	77	1493
445-545	78	414	0	9	3	18	4	857	28	41	0	75	1527
500-600	85	412	0	7	5	17	3	904	26	39	0	75	1573



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

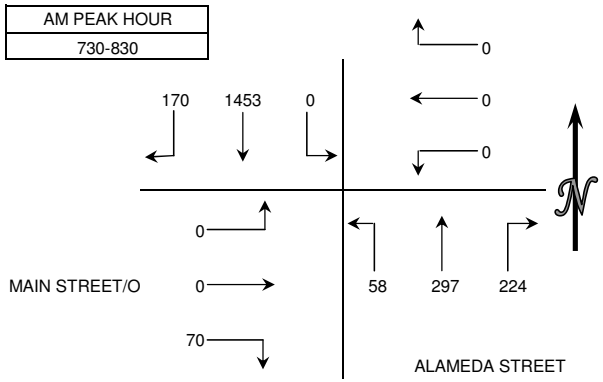
CLIENT: FEHR AND PEERS/ ARUP
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: THURSDAY APRIL 2, 2009
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S ALAMEDA STREET
E/W MAIN STREET/ORD STREET
CITY: LOS ANGELES

15 MIN COUNTS — **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	24	265	0	0	0	0	46	47	12	9	0	0	403
715-730	29	327	0	0	0	0	50	56	19	10	0	0	491
730-745	37	392	0	0	0	0	61	81	10	17	0	0	598
745-800	42	357	0	0	0	0	65	61	13	15	0	0	553
800-815	54	342	0	0	0	0	52	74	23	22	0	0	567
815-830	37	362	0	0	0	0	46	81	12	16	0	0	554
830-845	51	369	0	0	0	0	57	75	14	22	0	0	588
845-900	40	329	0	0	0	0	49	92	23	25	0	0	558

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	132	1341	0	0	0	0	222	245	54	51	0	0	2045
715-815	162	1418	0	0	0	0	228	272	65	64	0	0	2209
730-830	170	1453	0	0	0	0	224	297	58	70	0	0	2272
745-845	184	1430	0	0	0	0	220	291	62	75	0	0	2262
800-900	182	1402	0	0	0	0	204	322	72	85	0	0	2267

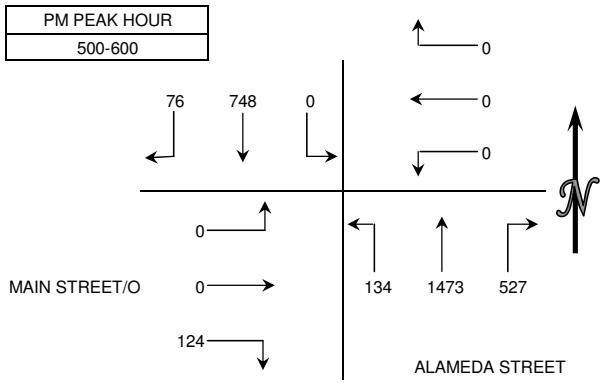


15 MIN COUNTS — **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	19	218	0	0	0	0	82	244	23	29	0	0	615
415-430	14	210	0	0	0	0	107	226	20	26	0	0	603
430-445	16	235	0	0	0	0	115	300	27	39	0	0	732
445-500	12	203	0	0	0	0	121	337	32	28	0	0	733
500-515	18	200	0	0	0	0	100	328	33	33	0	0	712
515-530	20	198	0	0	0	0	127	373	23	33	0	0	774
530-545	17	168	0	0	0	0	154	390	35	30	0	0	794
545-600	21	182	0	0	0	0	146	382	43	28	0	0	802

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	61	866	0	0	0	0	425	1107	102	122	0	0	2683
415-515	60	848	0	0	0	0	443	1191	112	126	0	0	2780
430-530	66	836	0	0	0	0	463	1338	115	133	0	0	2951
445-545	67	769	0	0	0	0	502	1428	123	124	0	0	3013
500-600	76	748	0	0	0	0	527	1473	134	124	0	0	3082



TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by Private Consultant:
National Data & Surveying Service

PROJECT# : 09-5326-003

STREET:
North/South: Mission Rd

East/West: Cesar E Chavez Ave

Day: Wednesday Date: 10/7/2009 Weather: CLEAR

Hours: 7:00-10:00AM & 3:00-6:00PM

School Day: _____ District: _____

	N/B	S/B	E/B	W/B
DUAL-	X	X	X	X
WHEELED	X	X	X	X
BIKES	X	X	X	X
BUSES	X	X	X	X

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	181	745	427	815	180	845	342	730
PM PK 15 MIN	254	545	225	330	388	0	281	530
AM PK HOUR	547	730	1579	730	614	800	1201	715
PM PK HOUR	872	500	839	300	1529	445	1029	500

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	151	260	87	498
8-9	156	256	48	460
9-10	172	249	59	480
3-4	66	389	81	536
4-5	118	511	61	690
5-6	138	664	70	872
6-7	0	0	0	0
TOTAL	801	2329	406	3536

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	17	629	733	1379
8-9	32	672	870	1574
9-10	35	482	584	1101
3-4	43	407	389	839
4-5	34	353	374	761
5-6	33	320	381	734
6-7	0	0	0	0
TOTAL	194	2863	3331	6388

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
0				
1877				
2034				
1581				
1375				
1451				
1606				
0				
9924				

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	227	205	132	564
8-9	267	243	104	614
9-10	207	191	141	539
3-4	393	470	309	1172
4-5	541	551	300	1392
5-6	685	539	260	1484
6-7	0	0	0	0
TOTAL	2320	2199	1246	5765

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	193	967	18	1178
8-9	162	861	52	1075
9-10	118	601	54	773
3-4	95	420	48	563
4-5	73	593	51	717
5-6	103	889	37	1029
6-7	0	0	0	0
TOTAL	744	4331	260	5335

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
0				
1742				
1689				
1312				
1735				
2109				
2513				
0				
11100				

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South MARENGO ST

East/West MISSION RD

Day: TUESDAY Date: March 17, 2009 Weather: SUNNY

Hours: 7-10AM 3-6PM Chekrs: ALAS

School Day: YES District: CENTRAL I/S CODE 9612

	N/B	S/B	E/B	W/B
DUAL-WHEELED	107	350	233	164
BIKES	1	8	8	13
BUSES	164	68	71	30

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	202	7.30	202	8.00	306	7.45	551	7.45
PM PK 15 MIN	207	4.30	313	5.30	435	5.00	330	3.00
AM PK HOUR	739	7.30	746	7.30	1156	7.30	1709	7.45
PM PK HOUR	727	4.15	999	4.45	1715	5.00	1204	3.00

NORTHBOUND Approach — **MARENGO ST**

Hours	Lt	Th	Rt	Total
7-8	161	263	204	628
8-9	155	243	223	621
9-10	123	187	151	461
3-4	135	309	192	636
4-5	167	344	212	723
5-6	128	332	237	697
TOTAL	869	1678	1219	3766

SOUTHBOUND Approach — **DALY ST**

Hours	Lt	Th	Rt	Total
7-8	35	349	249	633
8-9	63	381	277	721
9-10	49	311	278	638
3-4	29	366	257	652
4-5	39	501	287	827
5-6	40	685	250	975
TOTAL	255	2593	1598	4446

TOTAL	**XING S/L**		**XING N/L**	
N-S	Ped	Sch	Ped	Sch
1261	13	1	60	3
1342	16	0	39	0
1099	11	0	28	0
1288	31	0	57	2
1550	18	0	64	7
1672	39	1	40	0
8212	128	2	288	12

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	46	631	371	1048
8-9	78	663	312	1053
9-10	58	547	253	858
3-4	106	721	319	1146
4-5	130	829	342	1301
5-6	164	1138	413	1715
TOTAL	582	4529	2010	7121

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	244	1073	25	1342
8-9	219	1341	19	1579
9-10	232	1015	20	1267
3-4	366	799	39	1204
4-5	469	646	21	1136
5-6	408	561	35	1004
TOTAL	1938	5435	159	7532

TOTAL	**XING W/L**		**XING E/L**	
E-W	Ped	Sch	Ped	Sch
2390	47	5	13	0
2632	48	0	7	0
2125	36	0	5	0
2350	45	0	14	0
2437	61	0	12	0
2719	46	2	21	0
14653	283	7	72	0

(Rev Oct 06)

City Traffic Counters
626.256.4171

File Name : DalyMission
Site Code : 00000000
Start Date : 4/21/05
Page No : 1

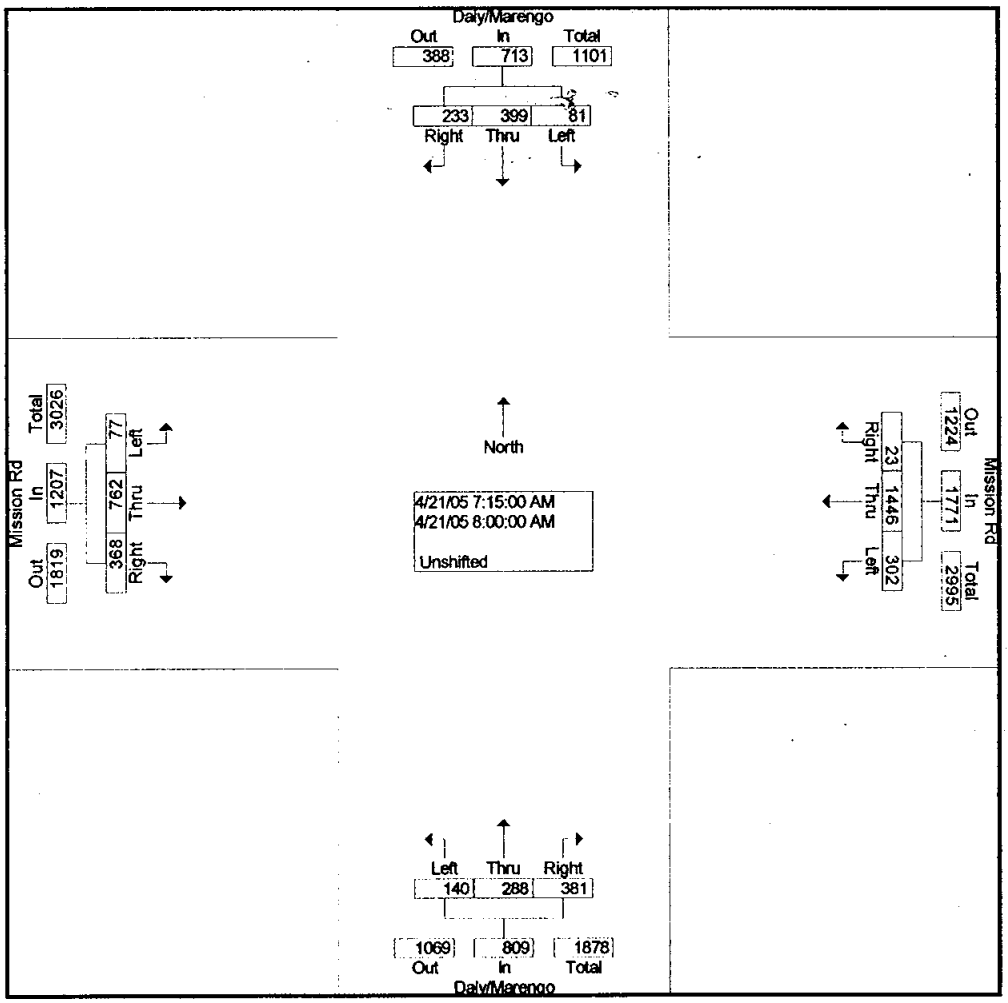
Groups Printed- Unshifted

	Daly/Marengo Southbound			Mission Rd Westbound			Daly/Marengo Northbound			Mission Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	13	59	46	38	301	6	32	33	60	21	154	63	826
07:15 AM	19	101	46	59	323	7	40	75	100	18	172	110	1070
07:30 AM	18	100	63	68	346	6	35	62	102	23	166	100	1089
07:45 AM	24	109	66	80	366	5	36	76	86	16	214	96	1174
Total	74	369	221	245	1336	24	143	246	348	78	706	369	4159
08:00 AM	20	89	58	95	411	5	29	75	93	20	210	62	1167
08:15 AM	13	79	66	63	382	6	48	60	96	12	131	81	1037
08:30 AM	21	72	72	71	383	2	34	48	69	18	160	52	1002
08:45 AM	17	86	76	70	321	5	23	44	76	17	152	59	946
Total	71	326	272	299	1497	18	134	227	334	67	653	254	4152
09:00 AM	17	82	75	64	245	7	27	51	74	17	144	52	855
09:15 AM	13	68	55	50	249	7	27	41	47	22	141	64	784
09:30 AM	12	45	51	75	230	5	23	49	41	26	136	37	730
09:45 AM	16	71	50	59	145	17	23	64	44	21	111	49	670
Total	58	266	231	248	869	36	100	205	206	86	532	202	3039
03:00 PM	9	82	70	101	185	12	25	82	44	43	184	88	925
03:15 PM	11	74	58	103	184	14	16	72	61	29	175	83	880
03:30 PM	8	90	57	135	217	10	30	76	68	32	171	71	965
03:45 PM	9	101	71	97	222	8	32	117	69	23	179	73	1001
Total	37	347	256	436	808	44	103	347	242	127	709	315	3771
04:00 PM	6	81	71	110	170	9	22	91	76	51	255	72	1014
04:15 PM	6	70	71	101	169	8	31	95	54	39	229	77	950
04:30 PM	10	80	53	112	153	15	28	106	53	47	278	78	1013
04:45 PM	4	89	59	80	152	14	38	99	54	49	285	69	992
Total	26	320	254	403	644	46	119	391	237	186	1047	296	3969
05:00 PM	5	96	42	106	175	13	23	116	65	49	290	75	1055
05:15 PM	8	112	52	91	148	16	26	121	59	52	320	100	1105
05:30 PM	9	121	70	89	163	12	24	117	52	49	276	85	1067
05:45 PM	0	98	61	73	151	8	28	96	49	43	261	73	941
Total	22	427	225	359	637	49	101	450	225	193	1147	333	4168
Grand Total	288	2055	1459	1990	5791	217	700	1866	1592	737	4794	1769	23258
Apprch %	7.6	54.1	38.4	24.9	72.4	2.7	16.8	44.9	38.3	10.1	65.7	24.2	
Total %	1.2	8.8	6.3	8.6	24.9	0.9	3.0	8.0	6.8	3.2	20.6	7.6	

City Traffic Counters
626.256.4171

File Name : DalyMission
Site Code : 00000000
Start Date : 4/21/05
Page No : 2

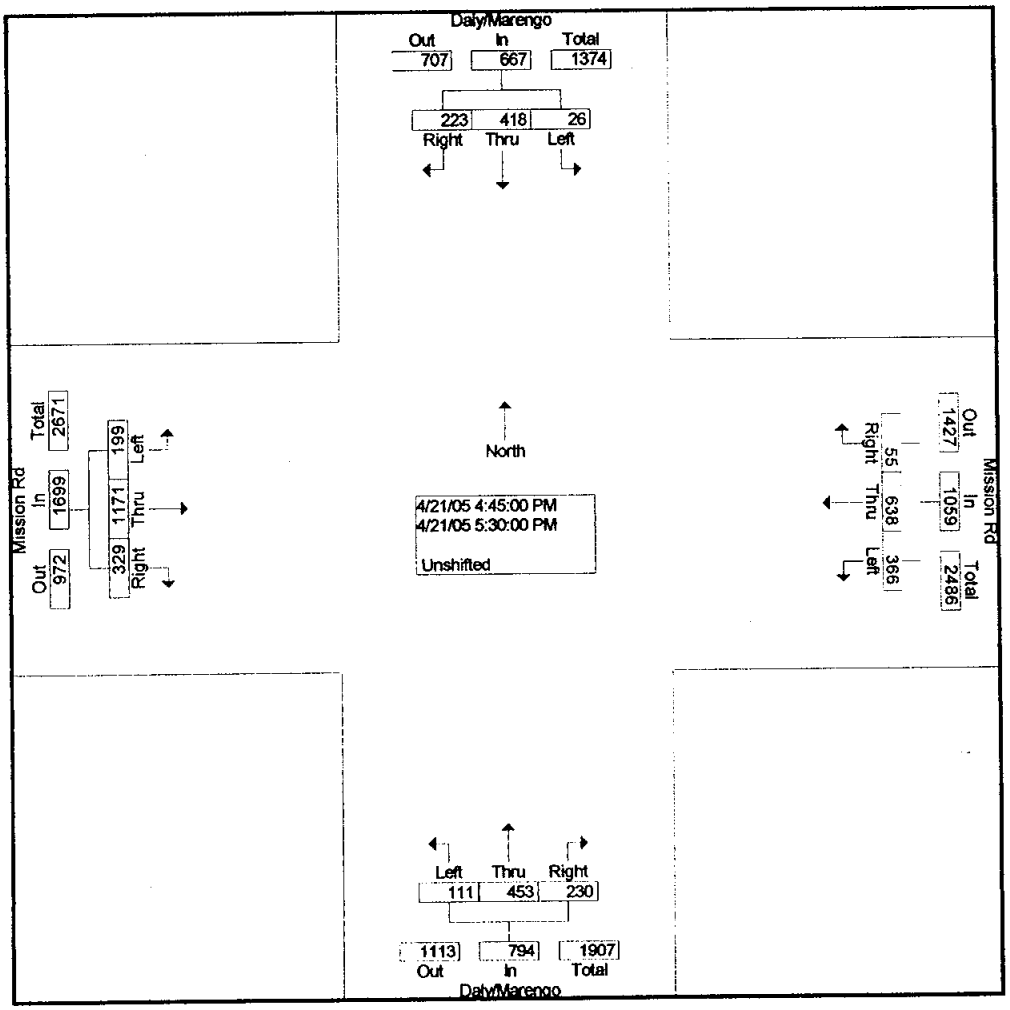
	Daly/Marengo Southbound				Mission Rd Westbound				Daly/Marengo Northbound				Mission Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	81	399	233	713	302	1446	23	1771	140	288	381	809	77	762	368	1207	4500
Percent	11.4	56.0	32.7		17.1	81.6	1.3		17.3	35.6	47.1		6.4	63.1	30.5		
07:45 Volume	24	109	66	199	80	366	5	451	36	76	86	198	16	214	96	326	1174
Peak Factor																	0.958
High Int.	07:45 AM				08:00 AM				07:15 AM				07:45 AM				
Volume	24	109	66	199	95	411	5	511	40	75	100	215	16	214	96	326	
Peak Factor				0.896				0.866				0.941				0.926	



City Traffic Counters
626.256.4171

File Name : DalyMission
Site Code : 00000000
Start Date : 4/21/05
Page No : 3

	Daly/Marengo Southbound				Mission Rd Westbound				Daly/Marengo Northbound				Mission Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	26	418	223	667	366	638	55	1059	111	453	230	794	199	1171	329	1699	4219
Percent	3.9	62.7	33.4		34.6	60.2	5.2		14.0	57.1	29.0		11.7	68.9	19.4		
05:15 Volume	8	112	52	172	91	148	16	255	26	121	59	206	52	320	100	472	1105
Peak Factor																	0.955
High Int.	05:30 PM				05:00 PM				05:15 PM				05:15 PM				
Volume	9	121	70	200	106	175	13	294	26	121	59	206	52	320	100	472	
Peak Factor				0.834				0.901				0.964				0.900	



City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:

North/South GRIFFIN AV / ZONAL AV

East/West MISSION RD

Day: FRIDAY Date: March 20, 2009 Weather: SUNNY

Hours: 7-10AM 3-6PM Chekrs: THOMPSON

School Day: YES District: CENTRAL I/S CODE 44727

	N/B	S/B	E/B	W/B
DUAL-WHEELED	43	64	180	140
BIKES	6	6	8	3
BUSES	36	22	116	42

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	82	7.45	147	7.45	225	7.30	432	7.45
PM PK 15 MIN	126	3.30	95	3.15	384	5.45	226	3.15
AM PK HOUR	249	7.15	501	7.30	871	7.30	1565	7.30
PM PK HOUR	436	4.30	319	3.00	1490	5.00	772	3.00

NORTHBOUND Approach — **ZONAL AV**

Hours	Lt	Th	Rt	Total
7-8	84	92	42	218
8-9	88	57	35	180
9-10	46	43	20	109
3-4	157	147	79	383
4-5	114	173	114	401
5-6	114	167	111	392
TOTAL	603	679	401	1683

SOUTHBOUND Approach — **GRIFFIN AV**

Hours	Lt	Th	Rt	Total
7-8	50	207	184	441
8-9	81	202	175	458
9-10	32	114	117	263
3-4	61	119	139	319
4-5	54	76	109	239
5-6	61	86	98	245
TOTAL	339	804	822	1965

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
659	37	0	36	6
638	64	6	36	0
372	32	0	29	2
702	43	2	25	0
640	13	0	14	0
637	17	0	23	3
3648	206	8	163	11

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	49	490	251	790
8-9	41	533	264	838
9-10	34	390	193	617
3-4	69	667	151	887
4-5	96	902	127	1125
5-6	115	1263	112	1490
TOTAL	404	4245	1098	5747

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	141	1196	33	1370
8-9	105	1246	38	1389
9-10	68	822	34	924
3-4	41	705	26	772
4-5	15	582	13	610
5-6	24	520	26	570
TOTAL	394	5071	170	5635

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
2160	28	0	17	1
2227	40	2	42	1
1541	32	0	31	0
1659	29	0	9	0
1735	32	0	15	0
2060	25	1	6	1
11382	186	3	120	3

(Rev Oct 06)

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 309401
Site Code : 00309401
Start Date : 04/18/2002
Page No : 1

Groups Printed- Turning Movement

	GRIFFIN AVE. ~~Southbound~~ EASTBOUND				MISSION ROAD ~~Westbound~~ SOUTHBOUND				ZONAL AVE. ~~Northbound~~ WESTBOUND				MISSION ROAD ~~Eastbound~~ NORTHBOUND				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	24	36	8	68	1	228	22	251	8	25	29	62	48	94	13	155	536
07:15 AM	22	43	10	75	2	303	22	327	9	20	41	70	57	96	9	162	634
07:30 AM	33	66	16	115	1	347	28	376	10	15	39	64	58	137	15	210	765
07:45 AM	30	68	12	110	2	299	33	334	7	28	32	67	41	144	18	203	714
Total	109	213	46	368	6	1177	105	1288	34	88	141	263	204	471	55	730	2649
08:00 AM	22	83	19	124	2	302	45	349	11	33	37	81	60	137	20	217	771
08:15 AM	33	44	16	93	6	388	47	441	9	17	15	41	52	143	18	213	788
08:30 AM	16	59	17	92	3	317	24	344	6	18	26	50	46	92	9	147	633
08:45 AM	18	19	11	48	4	262	41	307	4	20	40	64	52	93	7	152	571
Total	89	205	63	357	15	1269	157	1441	30	88	118	236	210	465	54	729	2763
09:00 AM	15	40	17	72	1	266	45	312	9	19	35	63	89	101	7	197	644
09:15 AM	23	28	12	63	2	223	14	239	11	20	37	68	60	101	13	174	544
09:30 AM	19	61	8	88	2	202	18	222	7	23	45	75	64	102	12	178	563
09:45 AM	22	31	6	59	3	162	23	188	5	14	31	50	88	89	8	185	482
Total	79	160	43	282	8	853	100	961	32	76	148	256	301	393	40	734	2233
*** BREAK ***																	
03:00 PM	22	31	8	61	8	138	12	158	26	69	61	156	43	152	31	226	601
03:15 PM	29	45	15	89	15	155	9	179	28	82	74	184	52	143	28	223	675
03:30 PM	30	23	13	66	29	208	32	269	29	52	70	151	48	194	37	279	765
03:45 PM	25	20	6	51	20	141	17	178	39	79	77	195	73	196	29	298	722
Total	106	119	42	267	72	642	70	784	122	282	282	686	216	685	125	1026	2763
04:00 PM	27	24	12	63	32	174	24	230	60	75	65	200	47	210	54	311	804
04:15 PM	24	22	6	52	15	138	9	162	44	70	46	160	43	208	21	272	646
04:30 PM	20	21	4	45	13	189	8	210	32	57	54	143	58	292	26	376	774
04:45 PM	26	22	9	57	15	168	12	195	34	76	60	170	31	290	25	346	768
Total	97	89	31	217	75	669	53	797	170	278	225	673	179	1000	126	1305	2992
05:00 PM	25	24	8	57	20	177	10	207	69	81	54	204	47	332	45	424	892
05:15 PM	36	25	8	69	15	149	11	175	56	85	72	213	41	340	34	415	872
05:30 PM	27	20	11	58	18	118	12	148	42	68	41	151	39	404	53	496	853
05:45 PM	25	21	7	53	14	131	11	156	30	61	51	142	31	371	27	429	780
Total	113	90	34	237	67	575	44	686	197	295	218	710	158	1447	159	1764	3397
Grand Total	593	876	259	1728	243	5185	529	5957	585	1107	1132	2824	1268	4461	559	6288	16797
Apprch %	34.3	50.7	15.0		4.1	87.0	8.9		20.7	39.2	40.1		20.2	70.9	8.9		
Total %	3.5	5.2	1.5	10.3	1.4	30.9	3.1	35.5	3.5	6.6	6.7	16.8	7.5	26.6	3.3	37.4	

	GRIFFIN AVE. ~~Southbound~~ EASTBOUND				MISSION ROAD ~~Westbound~~ SOUTHBOUND				ZONAL AVE. ~~Northbound~~ WESTBOUND				MISSION ROAD ~~Eastbound~~ NORTHBOUND				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Intersection	07:30 AM																
Volume	118	261	63	442	11	1336	153	1500	37	93	123	253	211	561	71	843	3038
Percent	26.7	59.0	14.3		0.7	89.1	10.2		14.6	36.8	48.6		25.0	66.5	8.4		
08:15 Volume	33	44	16	93	6	388	47	441	9	17	15	41	52	143	18	213	788
Peak Factor																	0.964
High Int.	08:00 AM				08:15 AM				08:00 AM				08:00 AM				
Volume	22	83	19	124	6	388	47	441	11	33	37	81	60	137	20	217	
Peak Factor				0.891				0.850				0.781				0.971	

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 309401
Site Code : 00309401
Start Date : 04/18/2002
Page No : 2

	GRIFFIN AVE. ~~Southbound~~ EASTBOUND				MISSION ROAD ~~Westbound~~ SOUTHBOUND				ZONAL AVE. ~~Northbound~~ WESTBOUND				MISSION ROAD ~~Eastbound~~ NORTHBOUND				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	113	90	34	237	67	575	44	686	197	295	218	710	158	1447	159	1764	3397
Percent	47.7	38.0	14.3		9.8	83.8	6.4		27.7	41.5	30.7		9.0	82.0	9.0		
05:00 Volume	25	24	8	57	20	177	10	207	69	81	54	204	47	332	45	424	892
Peak Factor																	0.952
High Int.	05:15 PM				05:00 PM				05:15 PM				05:30 PM				
Volume	36	25	8	69	20	177	10	207	56	85	72	213	39	404	53	496	
Peak Factor				0.859				0.829				0.833				0.889	

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 317507
Site Code : 00317507
Start Date : 10/22/2002
Page No : 1

Groups Printed- Turning Movement

	MISSION ROAD Southbound				MAIN ST. Westbound				MISSION ROAD Northbound				VALLEY BLVD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	0	298	18	316	0	0	0	0	13	49	0	62	16	76	26	118	496
07:15 AM	0	385	20	405	0	0	0	0	28	68	0	96	14	96	33	143	644
07:30 AM	0	379	32	411	0	0	0	0	27	74	0	101	16	112	42	170	682
07:45 AM	0	383	50	433	0	0	0	0	24	67	0	91	10	124	65	199	723
Total	0	1445	120	1565	0	0	0	0	92	258	0	350	56	408	166	630	2545
08:00 AM	0	342	31	373	0	0	0	0	27	75	0	102	17	89	54	160	635
08:15 AM	0	370	18	388	0	0	0	0	22	70	0	92	9	83	33	125	605
08:30 AM	0	324	22	346	0	0	0	0	26	64	0	90	11	88	42	141	577
08:45 AM	0	333	15	348	0	0	0	0	25	71	0	96	12	99	38	149	593
Total	0	1369	86	1455	0	0	0	0	100	280	0	380	49	359	167	575	2410
09:00 AM	0	216	22	238	0	0	0	0	21	47	0	68	13	78	31	122	428
09:15 AM	0	219	22	241	0	0	0	0	23	61	0	84	10	77	40	127	452
09:30 AM	0	178	22	200	0	0	0	0	18	53	0	71	11	65	45	121	392
09:45 AM	0	169	14	183	0	0	0	0	24	59	0	83	13	87	39	139	405
Total	0	782	80	862	0	0	0	0	86	220	0	306	47	307	155	509	1677
*** BREAK ***																	
03:00 PM	0	112	34	146	0	0	0	0	43	148	0	191	16	126	42	184	521
03:15 PM	0	140	35	175	0	0	0	0	44	114	0	158	8	140	73	221	554
03:30 PM	0	131	42	173	0	0	0	0	60	148	0	208	6	156	51	213	594
03:45 PM	0	143	37	180	0	0	0	0	54	160	0	214	5	143	60	208	602
Total	0	526	148	674	0	0	0	0	201	570	0	771	35	565	226	826	2271
04:00 PM	0	161	40	201	0	0	0	0	66	175	0	241	6	164	64	234	676
04:15 PM	0	160	34	194	0	0	0	0	76	170	0	246	6	162	78	246	686
04:30 PM	0	148	36	184	0	0	0	0	63	219	0	282	7	137	80	224	690
04:45 PM	0	135	27	162	0	0	0	0	79	228	0	307	12	159	72	243	712
Total	0	604	137	741	0	0	0	0	284	792	0	1076	31	622	294	947	2764
05:00 PM	0	142	47	189	0	0	0	0	84	247	0	331	14	162	87	263	783
05:15 PM	0	122	40	162	0	0	0	0	108	255	5	368	8	201	70	279	809
05:30 PM	0	145	25	170	0	0	0	0	94	273	0	367	5	197	85	287	824
05:45 PM	0	106	34	140	0	0	0	0	83	255	0	338	3	163	81	247	725
Total	0	515	146	661	0	0	0	0	369	1030	5	1404	30	723	323	1076	3141
Grand Total	0	5241	717	5958	0	0	0	0	1132	3150	5	4287	248	2984	1331	4563	14808
Apprch %	0.0	88.0	12.0		0.0	0.0	0.0		26.4	73.5	0.1		5.4	65.4	29.2		
Total %	0.0	35.4	4.8	40.2	0.0	0.0	0.0	0.0	7.6	21.3	0.0	29.0	1.7	20.2	9.0	30.8	

	MISSION ROAD Southbound				MAIN ST. Westbound				MISSION ROAD Northbound				VALLEY BLVD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	0	1489	133	1622	0	0	0	0	106	284	0	390	57	421	194	672	2684
Percent	0.0	91.8	8.2		0.0	0.0	0.0		27.2	72.8	0.0		8.5	62.6	28.9		
07:45 Volume	0	383	50	433	0	0	0	0	24	67	0	91	10	124	65	199	723
Peak Factor																	0.928
High Int.	07:45 AM				6:45:00 AM				08:00 AM				07:45 AM				
Volume	0	383	50	433	0	0	0	0	27	75	0	102	10	124	65	199	
Peak Factor				0.936								0.956				0.844	

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 317507
Site Code : 00317507
Start Date : 10/22/2002
Page No : 2

	MISSION ROAD Southbound				MAIN ST. Westbound				MISSION ROAD Northbound				VALLEY BLVD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	0	515	146	661	0	0	0	0	369	1030	5	1404	30	723	323	1076	3141
Percent	0.0	77.9	22.1		0.0	0.0	0.0		26.3	73.4	0.4		2.8	67.2	30.0		
05:30 Volume	0	145	25	170	0	0	0	0	94	273	0	367	5	197	85	287	824
Peak Factor																	0.953
High Int.	05:00 PM								05:15 PM				05:30 PM				
Volume	0	142	47	189	0	0	0	0	108	255	5	368	5	197	85	287	
Peak Factor				0.874								0.954				0.937	

TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by Private Consultant:
National Data & Surveying Service

PROJECT# : 09-5298-005

STREET:
North/South: State St

East/West: Marengo St

Day: Thursday Date: 9/17/2009 Weather: CLEAR

Hours: 7:00-10:00AM & 3:00-6:00PM

School Day: ____ District: ____

	N/B	S/B	E/B	W/B
DUAL-	X	X	X	X
WHEELED	X	X	X	X
BIKES	X	X	X	X
BUSES	X	X	X	X

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	158	730	82	745	288	745	284	745
PM PK 15 MIN	128	545	126	330	195	330	258	330
AM PK HOUR	596	730	287	745	982	715	1047	715
PM PK HOUR	422	500	360	330	736	330	905	330

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	191	231	114	536
8-9	189	276	68	533
9-10	0	0	0	0
3-4	191	110	61	362
4-5	186	106	63	355
5-6	229	95	98	422
6-7	0	0	0	0
TOTAL	986	818	404	2208

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	46	91	67	204
8-9	96	99	77	272
9-10	0	0	0	0
3-4	79	164	77	320
4-5	71	151	116	338
5-6	63	139	87	289
6-7	0	0	0	0
TOTAL	355	644	424	1423

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
0				
740				
805				
0				
682				
693				
711				
0				
3631				

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	69	671	154	894
8-9	101	532	139	772
9-10	0	0	0	0
3-4	62	516	138	716
4-5	50	501	158	709
5-6	39	529	139	707
6-7	0	0	0	0
TOTAL	321	2749	728	3798

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
6-7	0	0	0	0
7-8	143	743	96	982
8-9	132	572	136	840
9-10	0	0	0	0
3-4	166	636	91	893
4-5	124	615	71	810
5-6	109	628	50	787
6-7	0	0	0	0
TOTAL	674	3194	444	4312

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
0				
1876				
1612				
0				
1609				
1519				
1494				
0				
8110				

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: LOS ANGELES
DATE: THURSDAY, JANUARY 20, 2005
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S HOPE STREET / 110 SB OFF RAMP / 101 SB ON-OFF RAMPS
E/W TEMPLE STREET
FILE NUMBER: 7-AM

	110 SB OFF RAMP			101 SB OFF RAMP											
15 MINUTE	1A	2A	3A	1B	2B	3B	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
700-715	31	26	47	20	68	37	14	124	86	13	22	3	45	81	35
715-730	46	20	39	20	72	46	16	124	81	11	33	4	56	93	43
730-745	39	15	49	18	76	58	17	179	65	15	32	8	44	111	47
745-800	44	20	69	14	73	57	13	174	84	18	26	7	61	159	68
800-815	36	24	72	17	107	59	16	190	87	18	39	3	42	122	59
818-830	25	16	63	15	106	51	18	151	72	17	23	8	52	119	31
830-845	33	28	73	11	76	42	33	137	75	19	23	7	58	110	40
845-900	21	31	58	10	77	31	38	114	80	15	18	9	62	105	37

	110 SB OFF RAMP			101 SB OFF RAMP												
1 HOUR	1A	2A	3A	1B	2B	3B	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
700-800	160	81	204	72	289	198	60	601	316	57	113	22	206	444	193	3016
715-815	165	79	229	69	328	220	62	667	317	62	130	22	203	485	217	3255
730-830	144	75	253	64	362	225	64	694	308	68	120	26	199	511	205	3318
745-845	138	88	277	57	362	209	80	652	318	72	111	25	213	510	198	3310
800-900	115	99	266	53	366	183	105	592	314	69	103	27	214	456	167	3129

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: LOS ANGELES
DATE: THURSDAY, JANUARY 20, 2005
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S HOPE STREET / 110 SB OFF RAMP / 101 SB ON-OFF RAMPS
E/W TEMPLE STREET
FILE NUMBER: 7-PM

	110 SB OFF RAMP			101 SB OFF RAMP											
15 MINUTE	1A	2A	3A	1B	2B	3B	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
400-415	8	13	17	11	16	17	48	211	12	44	111	72	16	100	88
415-430	7	11	15	8	29	19	62	184	19	35	97	97	22	101	80
430-445	9	16	10	7	20	24	77	169	24	43	106	74	20	120	86
445-500	13	14	7	12	12	17	62	178	30	36	119	110	16	140	91
500-515	14	14	9	10	11	25	37	218	58	36	149	128	21	164	110
515-530	15	12	10	7	18	19	49	177	45	34	117	107	20	162	75
530-545	8	15	9	5	13	29	44	167	46	51	122	79	18	153	89
545-600	5	19	12	8	12	17	22	119	28	34	110	114	16	126	59

	110 SB OFF RAMP			101 SB OFF RAMP												
1 HOUR	1A	2A	3A	1B	2B	3B	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
400-500	37	54	49	38	77	77	249	742	85	158	433	353	74	461	345	3232
415-515	43	55	41	37	72	85	238	749	131	150	471	409	79	525	367	3452
430-530	51	56	36	36	61	85	225	742	157	149	491	419	77	586	362	3533
445-545	50	55	35	34	54	90	192	740	179	157	507	424	75	619	365	3576
500-600	42	60	40	30	54	90	152	681	177	155	498	428	75	605	333	3420

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

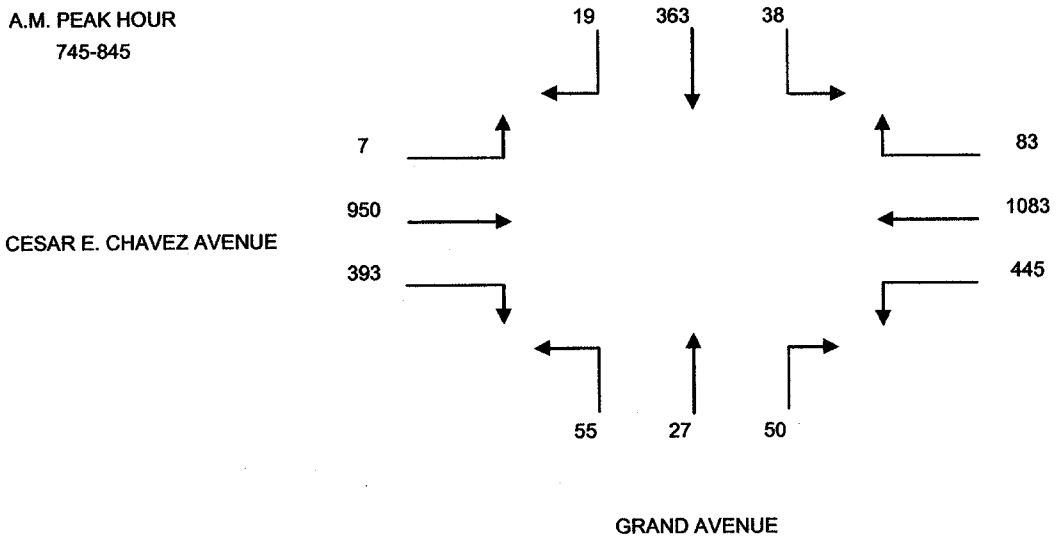
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: LOS ANGELES
DATE: THURSDAY, JANUARY 20, 2005
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S GRAND AVENUE
E/W CESAR E. CHAVEZ AVENUE
FILE NUMBER: 4-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	5	63	4	11	254	135	7	6	12	87	181	5
715-730	8	69	8	10	237	129	11	7	15	86	191	2
730-745	4	88	7	13	291	111	8	7	10	108	259	6
745-800	6	76	10	26	277	120	8	8	13	86	208	2
800-815	3	89	7	21	259	111	11	6	14	113	229	2
818-830	5	99	13	18	263	103	17	8	18	93	243	1
830-845	5	99	8	18	284	111	14	5	10	101	270	2
845-900	6	97	8	11	252	105	13	3	7	98	222	5

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	23	296	29	60	1059	495	34	28	50	367	839	15	3295
715-815	21	322	32	70	1064	471	38	28	52	393	887	12	3390
730-830	18	352	37	78	1090	445	44	29	55	400	939	11	3498
745-845	19	363	38	83	1083	445	50	27	55	393	950	7	3513
800-900	19	384	36	68	1058	430	55	22	49	405	964	10	3500

A.M. PEAK HOUR
745-845



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

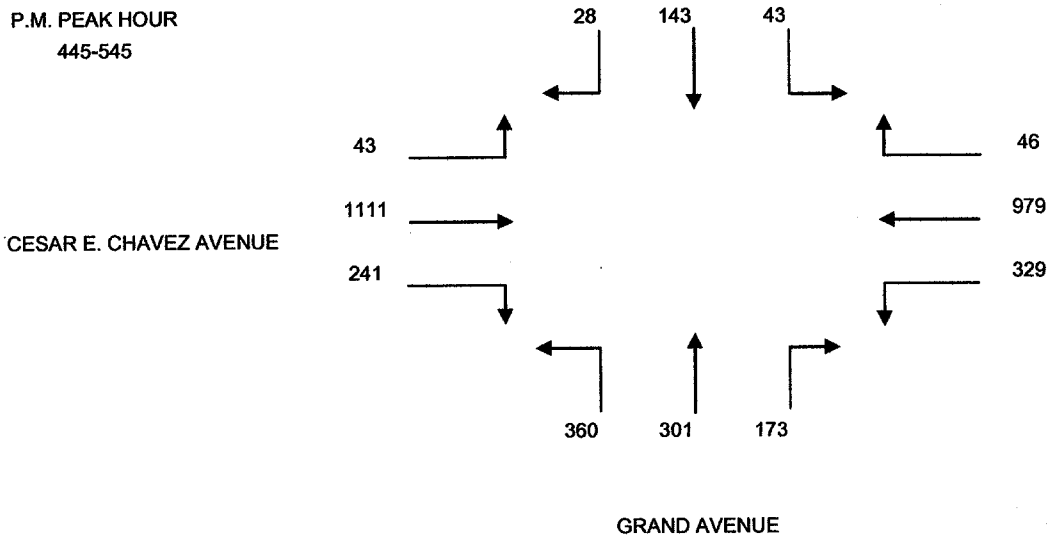
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: LOS ANGELES
DATE: THURSDAY, JANUARY 20, 2005
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S GRAND AVENUE
E/W CESAR E. CHAVEZ AVENUE
FILE NUMBER: 4-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	6	27	8	10	224	83	37	31	58	64	251	5
415-430	7	38	6	8	211	92	28	39	72	65	296	6
430-445	4	22	10	10	213	93	43	43	66	55	263	5
445-500	7	42	8	8	222	88	39	56	85	69	284	8
500-515	8	33	13	12	234	85	52	74	94	65	265	14
515-530	5	38	14	13	217	73	41	84	88	60	267	12
530-545	8	30	8	13	306	83	41	87	93	47	295	9
545-600	4	27	5	15	271	74	34	70	82	51	267	10

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-500	24	129	32	36	870	356	147	169	281	253	1094	24	3415
415-515	26	135	37	38	880	358	162	212	317	254	1108	33	3560
430-530	24	135	45	43	886	339	175	257	333	249	1079	39	3604
445-545	28	143	43	46	979	329	173	301	360	241	1111	43	3797
500-600	25	128	40	53	1028	315	168	315	357	223	1094	45	3791

P.M. PEAK HOUR
445-545



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

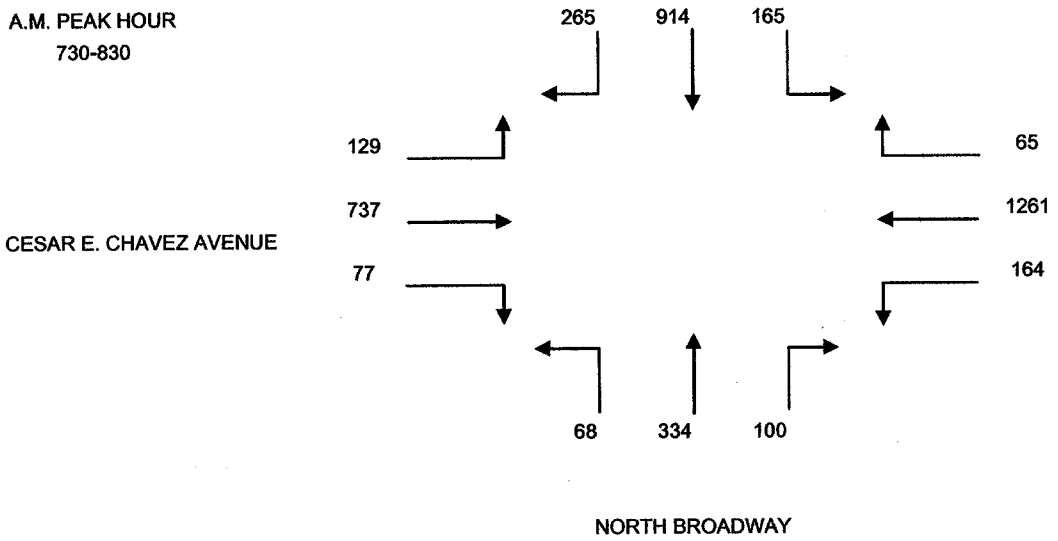
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: LOS ANGELES
DATE: THURSDAY, JANUARY 20, 2005
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S NORTH BROADWAY
E/W CESAR E. CHAVEZ AVENUE
FILE NUMBER: 5-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	77	224	31	18	284	28	27	56	19	8	149	15
715-730	61	198	42	15	295	30	18	71	18	10	168	23
730-745	64	237	33	18	308	42	20	90	16	17	175	41
745-800	80	198	44	14	344	42	23	88	13	15	226	27
800-815	51	252	43	20	293	29	32	67	16	19	171	27
818-830	70	227	45	13	316	51	25	89	23	26	165	34
830-845	60	206	44	10	313	42	21	52	15	20	160	23
845-900	70	218	50	13	310	36	27	69	25	32	170	26

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	282	857	150	65	1231	142	88	305	66	50	718	106	4060
715-815	256	885	162	67	1240	143	93	316	63	61	740	118	4144
730-830	265	914	165	65	1261	164	100	334	68	77	737	129	4279
745-845	261	883	176	57	1266	164	101	296	67	80	722	111	4184
800-900	251	903	182	56	1232	158	105	277	79	.97	666	110	4116

A.M. PEAK HOUR
730-830



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

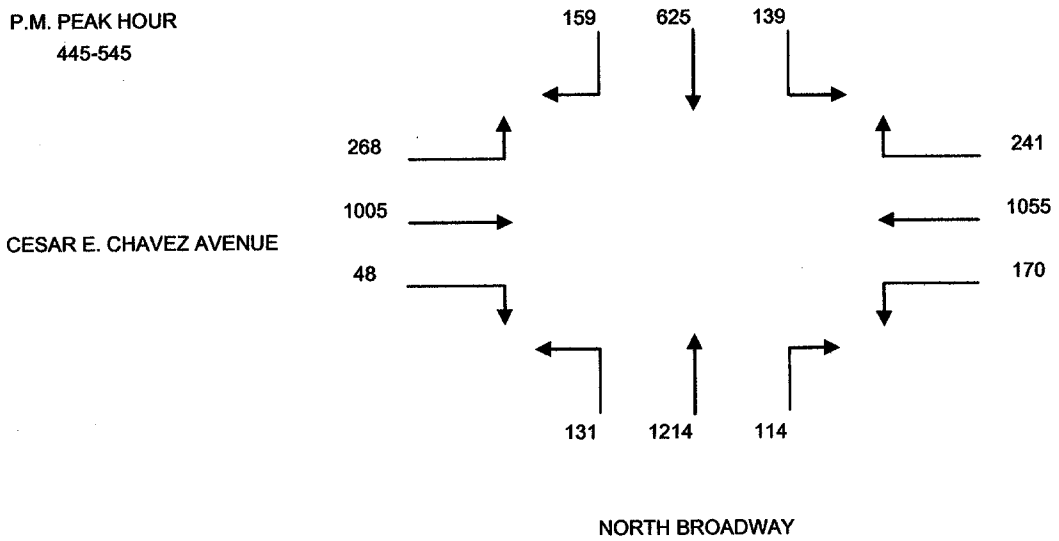
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: LOS ANGELES
DATE: THURSDAY, JANUARY 20, 2005
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S NORTH BROADWAY
E/W CESAR E. CHAVEZ AVENUE
FILE NUMBER: 5-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	38	111	35	47	232	49	29	196	27	16	231	68
415-430	56	121	37	37	211	41	33	244	23	13	247	45
430-445	32	158	27	43	245	47	28	243	25	12	251	62
445-500	37	165	35	54	269	45	37	289	33	13	267	72
500-515	46	153	35	44	258	49	27	345	31	12	251	63
515-530	45	154	33	61	279	36	26	288	25	10	233	68
530-545	31	153	36	82	249	40	24	292	42	13	254	65
545-600	36	126	35	75	230	40	26	229	33	15	215	64

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-500	163	555	134	181	957	182	127	972	108	54	996	247	4676
415-515	171	597	134	178	983	182	125	1121	112	50	1016	242	4911
430-530	160	630	130	202	1051	177	118	1165	114	47	1002	265	5061
445-545	159	625	139	241	1055	170	114	1214	131	48	1005	268	5169
500-600	158	586	139	262	1016	165	103	1154	131	50	953	260	4977

P.M. PEAK HOUR
445-545



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by Crain & Associates

STREET:
North/South: HILL STREET

East/West: ALPINE STREET

Day: AM WEDNESDAY Date: MARCH 16, 2005 Weather: CLEAR
PM WEDNESDAY MARCH 16, 2005
Hours: 7-9 AM 4-6 PM

School Day: YES District: LOS ANGELES

	N/B	S/B	E/B	W/B
DUAL-WHEELED	N/A	N/A	N/A	N/A
BIKES	N/A	N/A	N/A	N/A
BUSES	N/A	N/A	N/A	N/A

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	65	8:45	501	7:30	53	7:45	123	7:45
PM PK 15 MIN	366	5:30	363	5:00	106	5:00	100	5:00
AM PK HOUR	208	8:00	1,933	7:00	171	7:15	471	7:30
PM PK HOUR	1,386	4:45	1,326	4:45	378	4:45	343	4:15

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	12	151	12	175
8 - 9	18	169	21	208
4 - 5	21	1,122	55	1,198
5 - 6	18	1,233	71	1,322
TOTAL	69	2,675	159	2,903

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	59	1,820	54	1,933
8 - 9	38	1,568	44	1,650
4 - 5	96	746	43	885
5 - 6	66	1,188	44	1,298
TOTAL	259	5,322	185	5,766

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
2,108	N/A	N/A	N/A	N/A
1,858	N/A	N/A	N/A	N/A
2,083	N/A	N/A	N/A	N/A
2,620	N/A	N/A	N/A	N/A
8,669	N/A	N/A	N/A	N/A

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	22	96	31	149
8 - 9	31	89	29	149
4 - 5	106	158	31	295
5 - 6	120	188	31	339
TOTAL	279	531	122	932

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	125	240	30	395
8 - 9	107	246	59	412
4 - 5	38	134	158	330
5 - 6	26	125	143	294
TOTAL	296	745	390	1,431

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
544	N/A	N/A	N/A	N/A
561	N/A	N/A	N/A	N/A
625	N/A	N/A	N/A	N/A
633	N/A	N/A	N/A	N/A
2,363	N/A	N/A	N/A	N/A

TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by Crain & Associates

STREET:
North/South: BROADWAY

East/West: ALPINE STREET

Day: AM THURSDAY — Date: MARCH 17, 2005 — Weather: CLEAR
PM THURSDAY — MARCH 17, 2005
Hours: 7-9 AM 4-6 PM

School Day: YES — District: LOS ANGELES

	N/B	S/B	E/B	W/B
DUAL-WHEELED	N/A	N/A	N/A	N/A
BIKES	N/A	N/A	N/A	N/A
BUSES	N/A	N/A	N/A	N/A

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	112	8:00	414	7:15	57	7:45	140	7:45
PM PK 15 MIN	366	5:45	160	4:00	110	5:00	117	5:00
AM PK HOUR	421	7:45	1,541	7:15	189	7:00	445	7:45
PM PK HOUR	1,356	5:00	591	4:00	359	4:45	403	4:30

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	22	251	58	331
8 - 9	19	309	90	418
4 - 5	46	979	58	1,083
5 - 6	51	1,227	78	1,356
TOTAL	138	2,766	284	3,188

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	50	1,317	127	1,494
8 - 9	108	1,271	142	1,521
4 - 5	54	480	57	591
5 - 6	45	510	32	587
TOTAL	257	3,578	358	4,193

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
1,825	N/A	N/A	N/A	N/A
1,939	N/A	N/A	N/A	N/A
1,674	N/A	N/A	N/A	N/A
1,943	N/A	N/A	N/A	N/A
7,381	N/A	N/A	N/A	N/A

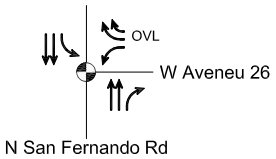
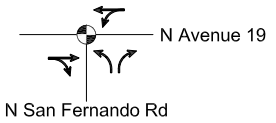
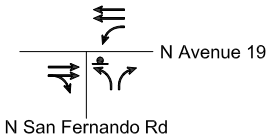
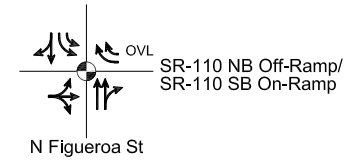
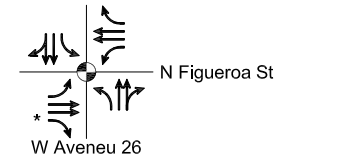
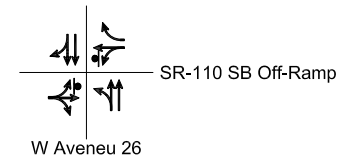
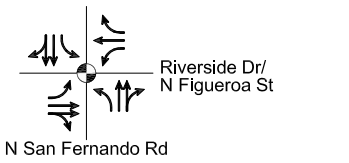
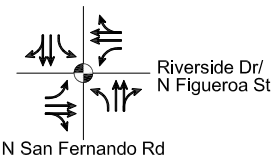
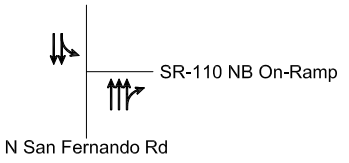
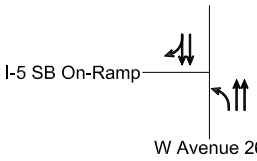
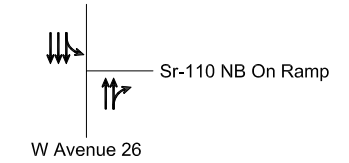
EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	19	141	29	189
8 - 9	18	116	20	154
4 - 5	65	169	41	275
5 - 6	83	200	42	325
TOTAL	185	626	132	943

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	99	255	30	384
8 - 9	89	273	39	401
4 - 5	67	202	88	357
5 - 6	22	189	141	352
TOTAL	277	919	298	1,494

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
573	N/A	N/A	N/A	N/A
555	N/A	N/A	N/A	N/A
632	N/A	N/A	N/A	N/A
677	N/A	N/A	N/A	N/A
2,437	N/A	N/A	N/A	N/A

	EXISTING (2009) CONDITIONS	CUMULATIVE (2035) NO PROJECT CONDITIONS	CUMULATIVE (2035) PLUS PROJECT CONDITIONS
1. N San Fernando Rd & W Avenue 26		Same As Existing Conditions	Same As Existing Conditions
2. N San Fernando Rd & N Aveneue 19			Same As Cumulative (2035) No Project Conditions
3. N Figueroa St & SR-110 NB Off-Ramp/ SR-110 SB On-Ramp		Same As Existing Conditions	
4. W Avenue 26 & N Figueroa St		Same As Existing Conditions	Same As Existing Conditions
5. W Avenue 26 & SR-110 SB Off-Ramp		Same As Existing Conditions	Same As Existing Conditions
6. N San Fernando Rd & Riverside Dr/N Figueroa St		Same As Existing Conditions	
7. N San Fernando Rd & SR-110 NB On-Ramp		Same As Existing Conditions	Same As Existing Conditions
8. W Avenue 26 & I-5 SB On-Ramp		Same As Existing Conditions	Same As Existing Conditions
9. W Avenue 26 & SR-110 NB On-Ramp		Same As Existing Conditions	Same As Existing Conditions

Legend

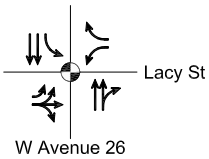
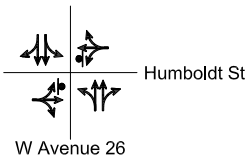
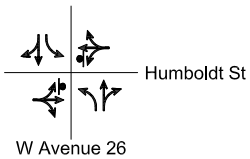
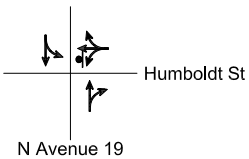
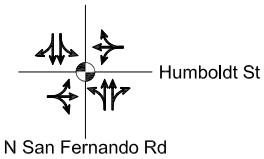
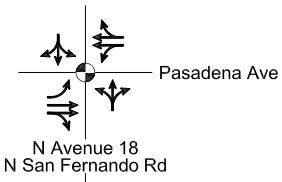
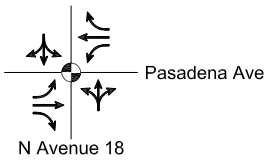
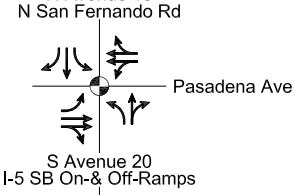
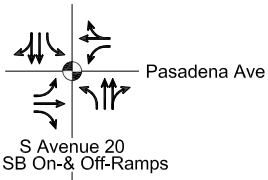
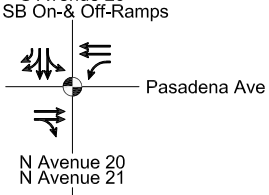
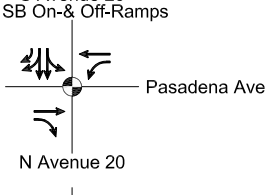
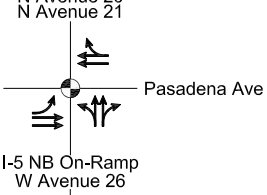
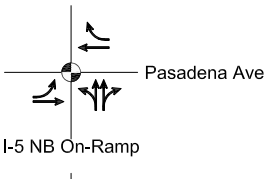
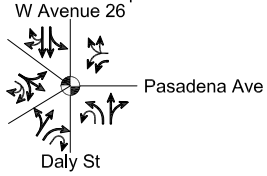
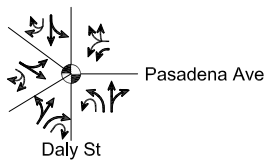
- Signalized
- * Defacto Right-Turn
- Stop Control
- OVL Right-turn Overlap
- Free Free Right-Turn

FEHR & PEERS
TRANSPORTATION CONSULTANTS

May 24, 2010 JS
N:\Jobs\Active\2300s\2334 – Cornfields Arroyo Seco\Graphics\ACAD\2334_Lane_Configs.dwg

LANE CONFIGURATIONS

APPENDIX A

	EXISTING (2009) CONDITIONS	CUMULATIVE (2035) NO PROJECT CONDITIONS	CUMULATIVE (2035) PLUS PROJECT CONDITIONS
10. W Avenue 26 & I-5 Northbound Off-Ramp/ Lacy St		Same As Existing Conditions	Same As Existing Conditions
11. W Avenue 26 & Humboldt St		Same As Existing Conditions	
12. N Avenue 19 & Humboldt St		Same As Existing Conditions	Same As Future Conditions
13. N San Fernando Rd & Humboldt St		Same As Existing Conditions	Same As Existing Conditions
14. N Avenue 18 & Pasadena Ave		Same As Existing Conditions	
15. N San Fernando Rd/ S Avenue 20 & Pasadena Ave		Same As Existing Conditions	
16. I-5 Southbound On-& Off-Ramps/ N Avenue 20 & Pasadena Ave		Same As Existing Conditions	
17. I-5 Northbound On-Ramp/ N Avenue 21 & Pasadena Ave		Same As Existing Conditions	
18. W Aveneu 26/Daly St & Pasadena Ave		Same As Existing Conditions	

Legend

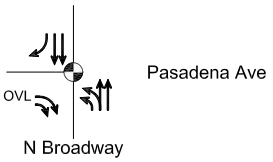
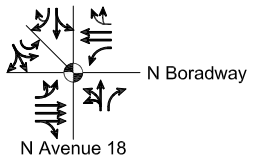
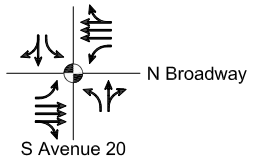
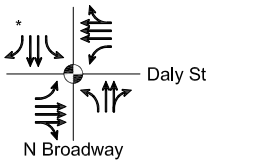
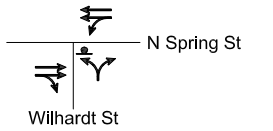
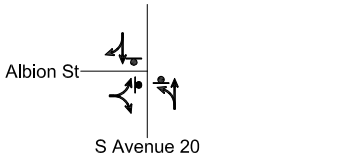
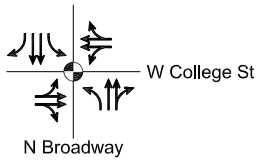
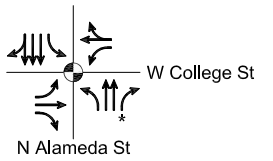
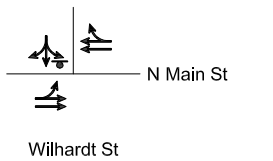
- Signalized
- * Defacto Right-Turn
- Stop Control
- OVL Right-turn Overlap
- Free Free Right-Turn

FEHR & PEERS
TRANSPORTATION CONSULTANTS

May 24, 2010 JS
N:\Jobs\Active\2300s\2334 – Cornfields Arroyo Seco\Graphics\ACAD\2334_Lane_Configs.dwg

LANE CONFIGURATIONS

APPENDIX A

	EXISTING (2009) CONDITIONS	CUMULATIVE (2035) NO PROJECT CONDITIONS	CUMULATIVE (2035) PLUS PROJECT CONDITIONS
19. N Broadway & Pasadena Ave		Same As Existing Conditions	Same As Existing Conditions
20. N Avenue 18 & N Spring St/N Broadway		Same As Existing Conditions	Same As Existing Conditions
21. S Avenue 20 & N Broadway		Same As Existing Conditions	Same As Existing Conditions
22. Daly St & N Broadway		Same As Existing Conditions	Same As Existing Conditions
23. Wilhardt St & N Spring St		Same As Existing Conditions	Same As Existing Conditions
24. S Avenue 20 & Albion St		Same As Existing Conditions	Same As Existing Conditions
25. N Broadway & W College St		Same As Existing Conditions	Same As Existing Conditions
26. N Alameda St & W College St		Same As Existing Conditions	Same As Existing Conditions
27. Wilhardt St & N Main St		Same As Existing Conditions	Same As Existing Conditions

Legend

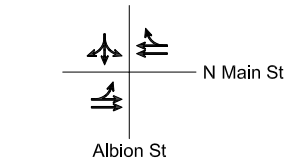
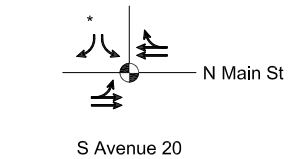
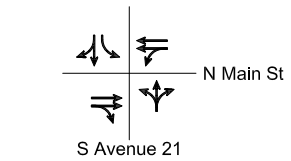
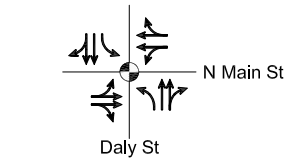
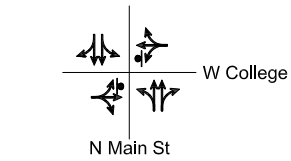
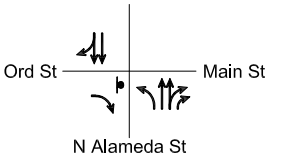
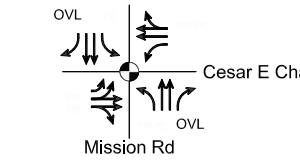
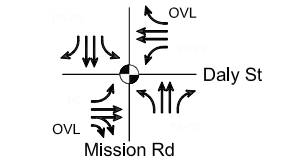
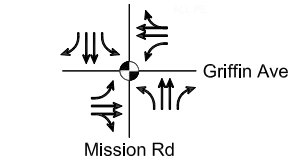
- Signalized
- * Defacto Right-Turn
- Stop Control
- OVL Right-turn Overlap
- Free Free Right-Turn

FEHR & PEERS
TRANSPORTATION CONSULTANTS

May 24, 2010 JS
N:\Jobs\Active\2300s\2334 – Cornfields Arroyo Seco\Graphics\ACAD\2334_Lane_Configs.dwg

LANE CONFIGURATIONS

APPENDIX A

	EXISTING (2009) CONDITIONS	CUMULATIVE (2035) NO PROJECT CONDITIONS	CUMULATIVE (2035) PLUS PROJECT CONDITIONS
28. Albion St & N Main St		Same As Existing Conditions	Same As Existing Conditions
29. S Avenue 20 & N Main St		Same As Existing Conditions	Same As Existing Conditions
30. S Avenue 21 & N Main St		Same As Existing Conditions	Same As Existing Conditions
31. Daly St & N Main St		Same As Existing Conditions	Same As Existing Conditions
32. N Main St & W College St		Same As Existing Conditions	Same As Existing Conditions
33. N Alameda St & N Main St/Ord St		Same As Existing Conditions	Same As Existing Conditions
34. Mission Rd & Cesar E Chavez Ave		Same As Existing Conditions	Same As Existing Conditions
35. Mission Rd & Daly St		Same As Existing Conditions	Same As Existing Conditions
36. Mission Rd & Griffin Ave		Same As Existing Conditions	Same As Future Conditions

Legend

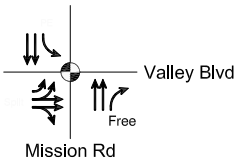
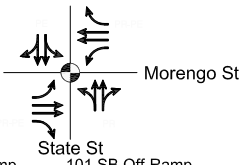
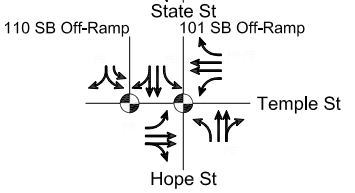
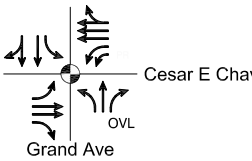
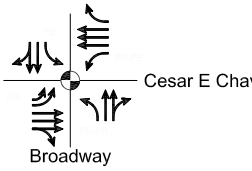
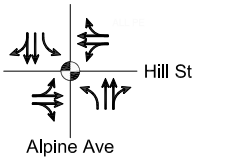
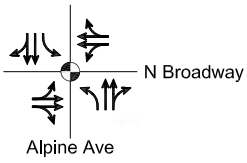
- Signalized
- * Defacto Right-Turn
- Stop Control
- OVL Right-turn Overlap
- Free Free Right-Turn

FEHR & PEERS
TRANSPORTATION CONSULTANTS

May 24, 2010 JS
N:\Jobs\Active\2300s\2334 – Cornfields Arroyo Seco\Graphics\ACAD\2334_Lane_Configs.dwg

LANE CONFIGURATIONS

APPENDIX A

	EXISTING (2009) CONDITIONS	CUMULATIVE (2035) NO PROJECT CONDITIONS	CUMULATIVE (2035) PLUS PROJECT CONDITIONS
37. Mission Rd & Valley Blvd		Same As Existing Conditions	Same As Future Conditions
38. State St & Marengo St		Same As Existing Conditions	Same As FutureConditions
39. Hope St & Temple St		Same As Existing Conditions	Same As Existing Conditions
40. Grand Ave & Cesar E Chavez Ave		Same As Existing Conditions	Same As Existing Conditions
41. Broadway & Cesar E Chavez Ave		Same As Existing Conditions	Same As Existing Conditions
42. Hill St & Alpine Ave		Same As Existing Conditions	Same As Existing Conditions
43. N Broadway & Alpine Ave		Same As Existing Conditions	Same As Existing Conditions

Legend

- Signalized
- * Defacto Right-Turn
- Stop Control
- OVL Right-turn Overlap
- Free Free Right-Turn

FEHR & PEERS
TRANSPORTATION CONSULTANTS

May 24, 2010 JS
N:\Jobs\Active\2300s\2334 – Cornfields Arroyo Seco\Graphics\ACAD\2334_Lane_Configs.dwg

LANE CONFIGURATIONS

APPENDIX A

City of Pasadena - Department of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

QuicNet System Parameters

Group Assignment: NONE
Field Master Assignment: NONE
System Reference Number: 17
Commications Channel: UDP:8001, IP:10.95.3.16
Drop Address: 9
Area Number: 1
Area Address: 17

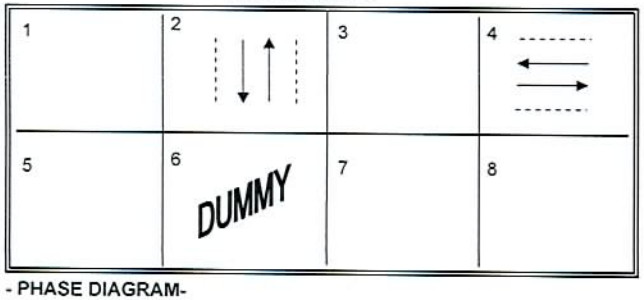
N/S Street Name: Fair Oaks Avenue
E/W Street Name: Glenarm Street

Notes:
Serial Number: 270 Econolite

QuicNet Pro

SUPERSEDED TIMING SHEET		DATE
		5/27/1999
TIMING BY:	DP	6/9/2004
REVIEWED BY:	VK	6/9/2004
IMPLEMENTED BY:	DP,VK	9/7/2004

CHANGE	BY	DATE
CHANGED FDW:PH2 WAS 6 AND PH4 9	DP	11/13/2009
LA County synch.Time(TSSP) Fair Oaks Corridor	PD,EI	1/25/2011
Field implemented	DP	4/25/2011



- PHASE DIAGRAM-

REGISTERED PROFESSIONAL ENGINEER
NORMAN M. BACULINAO
No. 50721
Exp. 09/30/2011
CIVIL
STATE OF CALIFORNIA

Excl Ped Assignment	_____
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	5.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

		Phase 1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	7	0	10	0	7	0	0
	Extension	0.0	4.0	0.0	3.0	0.0	2.5	0.0	0.0
	Max	0	50	0	25	0	50	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	3.9	0.0	3.2	0.0	3.9	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	5	0	5	0	0	0	0
	Ped Clear - FDW	0	10	0	15	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	18	0	18	0	18	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	3.0	0.0	3.0	0.0	2.5	0.0	0.0
	Max Gap	0.0	4.8	0.0	4.8	0.0	2.5	0.0	0.0
	Reduce Every	0.0	1.7	0.0	1.7	0.0	1.7	0.0	0.0

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk								
Alternate Ped Clear								
Alternate Minimum								
Alternate Extension								

Alternate Timing - Bank 1

Red Lock	_____	Red Rest	_____
Yellow Lock	_____	Dual Entry	_____
Simultaneous Gap	12345678	Sequential Timing	12345678
Rest In Walk	_____	Inhibit Ped Reservice	_____
Advance Walk	_____	Semi-Actuated	_____
Flashing Walk	_____	Guaranteed Passage	_____
Max Extension	_____	Conditional Service	_____

Phase Functions - Page 1

Minimum Recall	_2__6__	Soft Recall	_____
Ped Recall	_____	External Recall	_____
Maximum Recall	_____	Manual Control Calls	12345678
Green Flash	_____	Fast Green Flash	_____
Overlap Green Flash	_____	Fast Overlap G. Flash	_____
PPLT FYA	_____	Semi Act	_____

Phase Functions - Page 2

ORIGINAL

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

City of Pasadena - Departn :nt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Clear Phases	
Delay	0
Clear Time	0

Railroad - 1

Clear Phases	
Limited Service Phases	
Delay	0
Clear Time	0

Railroad - 2

Railroad Preempt Parameters

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 1

	Delay	Clear	Clear Phases
EV - A	0	0	
EV - B	0	0	
EV - C	0	0	
EV - D	0	0	

Emergency Vehicle Preempt

SE - 1	
SE - 2	
EV - A	
EV - B	
EV - C	
EV - D	

Preempt Priority

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	22									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 2

City of Pasadena - Departr. ɔnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

Transition Type	0.3
Coord Extra Functions	
Phase 1 - Minimum	0
Phase 2 - Minimum	20
Phase 3 - Minimum	0
Phase 4 - Minimum	24
Phase 5 - Minimum	0
Phase 6 - Minimum	20
Phase 7 - Minimum	0
Phase 8 - Minimum	0

Note: The *Ring-Barrier Sum* of these Minimums will be the Minimum Cycle Length During Transition

Coordination - General

Coord Extra
1 = Programmed Walk Time for Sync Phases
2 = Always Terminate Sync Phase Peds
3 = Use "Floating Force Off"
4 =
5 = Use "Start of Green" for Sync Point

Transition Type
0.X = Shortway
1.X = Lengthen Only
2.X = Shorten Only
X.1 thru X.4 = Number of Cycles to get "In Step"

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Cycle	0	0	0	0	80	80	90	90	120
Offset - 1	0	0	0	0	35	36	46	36	57
Offset - 2	0	0	0	0	0	0	0	0	0
Offset - 3	0	0	0	0	0	0	0	0	0
Zone Offset	0	0	0	0	0	0	0	0	0
Ring Offset	0	0	0	0	0	0	0	0	0
Hold Release	255	255	255	255	255	255	255	255	255
Ped Adjust	0	0	0	0	0	0	0	0	0
Force Off - 1	0	0	0	0	0	0	0	0	0
Force Off - 2	0	0	0	0	0	0	0	0	0
Force Off - 3	0	0	0	0	0	0	0	0	0
Force Off - 4	0	0	0	0	24	24	28	29	33
Force Off - 5	0	0	0	0	0	0	0	0	0
Force Off - 6	0	0	0	0	0	0	0	0	0
Force Off - 7	0	0	0	0	0	0	0	0	0
Force Off - 8	0	0	0	0	0	0	0	0	0

Coordination - Cycle, Offsets, & Force Offs

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End	10	10	10	10	10	10	10	10	10
Perm 1 - Veh Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 1 - Ped Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 2 - Begin	0	0	0	0	0	0	0	0	0
Perm 2 - End	0	0	0	0	0	0	0	0	0
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin	0	0	0	0	0	0	0	0	0
Perm 3 - End	0	0	0	0	0	0	0	0	0
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Sync Phases	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__
Lag Phases	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8
Pre-Timed Phases									

Coordination - Permissives & Phase Sequence

City of Pasadena - Departn ;nt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignmrnts	Detector Attributes	Detector Set Assignments	Input File Slots	
1	39	0.0	0.0	_2_____	___45_7_	123_____	2I2U	NB, ADV, ALL
2	40	0.0	0.0	_____6__	___45_7_	123_____	6J2U	NBLT, HOLDING
3	41	0.0	1.0	___4____	_____67_	123_____	4I6U	WB, TYPE 3, LN1, LN2
4	42	0.0	0.0	_____8	___45_7_	123_____	8J6U	
5	43	0.0	0.0	_2_____	___45_7_	123_____	2I2L	SB, ADV, ALL
6	44	0.0	0.0	_____6__	___45_7_	123_____	6J2L	SBLT, HOLDING
7	45	0.0	1.0	___4____	_____67_	123_____	4I6L	EB, TYPE 3, LN1,LN2
8	46	0.0	0.0	_____8	___45_7_	123_____	8J6L	
9	47	0.0	1.0	_2_____	_____67_	123_____	2I4U/L	
10	48	0.0	1.0	_____6__	_____67_	123_____	6J4U/L	
11	49	0.0	1.0	___4____	_____67_	123_____	4I8U/L	
12	50	0.0	1.0	_____8	_____67_	123_____	8J8U/L	
13	55	0.0	0.0	____5___	___45_7_	123_____	5J1U/L	
14	56	0.0	0.0	1_____	___45_7_	123_____	1I1U/L	
15	57	0.0	0.0	_____7_	___45_7_	123_____	7J5U/L	
16	58	0.0	0.0	__3_____	___45_7_	123_____	3I5U/L	
17	59	0.0	0.0	_____	___45_7_	123_____	5J9U	
18	60	0.0	0.0	_____	___45_7_	123_____	1I9U	
19	61	0.0	0.0	_____	___45_7_	123_____	7J9L	
20	62	0.0	0.0	_____	___45_7_	123_____	3I9L	
21	63	0.0	0.0	_2_____	_____67_	123_____	2I3U	
22	64	0.0	0.0	_____6__	___45_7_	123_____	6J3U	
23	65	0.0	0.0	___4____	___45_7_	123_____	4I7U	WB, ADV, ALL
24	66	0.0	0.0	_____8	___45_7_	123_____	8J7U	
25	67	0.0	0.0	_2_____	_2_____	123_____	2I12U	Φ2 PED
26	68	0.0	0.0	_____	_2_____	123_____	6I13U	Φ6 PED
27	69	0.0	0.0	___4____	_2_____	123_____	4I12L	Φ4 PED
28	70	0.0	0.0	_____	_2_____	123_____	8I13L	Φ8 PED
29	76	0.0	1.0	_2_____	_____67_	123_____	2I3L	SB, TYPE 3, LN1,LN2
30	77	0.0	0.0	_____6__	___45_7_	123_____	6J3L	
31	78	0.0	0.0	___4____	___45_7_	123_____	4I7L	EB, ADV, ALL
32	79	0.0	0.0	_____8	___45_7_	123_____	8J7L	
	54	0.0	0.0	_____	___45_7_	123_____	J11U	
	75	0.0	0.0	_____	___45_7_	123_____	J11L	

Detector Assignments

	C-1 Pin #
Flash Sense	81
External Permit - 1	0
External Permit - 2	0
Exclusive Ped Omit	0
Max. Term Inhibit	0
Max. 2	0
External Lag Phases	0
External Max. Recall	0
Stop Time	82
Manual Control Enable	80
Manual Cont. Advance	53
External Min. Recall	0

General Inputs

	C-1 Pin #
Plan 1	0
Plan 2	0
Plan 3	0
Plan 4	0
Plan 5	0
Plan 6	0
Plan 7	0
Plan 8	0
Plan 9	0
Free	0
Flash	0

Coordination Plan Inputs

	C-1 Pin #
Railroad - 1	0
Railroad - 2	0
Special Event - 1	0
Special Event - 2	0
Gate Down	
EV - A	71
EV - B	72
EV - C	73
EV - D	74

Preempt Inputs

	C-1 Pin #
Phase Bank - 2	0
Phase Bank - 3	0
Detector Set - 2	0
Detector Set - 3	0
Overlap Vehicle Set - 2	0
Overlap Vehicle Set - 3	0

Bank & Set Inputs

	C-1 Pin #
Door Ajar	
UPS Battery	
UPS Power	
Cabinet Temperature	

	C-1 Pin #
Alarm - 1	
Alarm - 2	
Alarm - 3	
Alarm - 4	

Alarm Inputs

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Detector Assignments
1 = Detector Set 1
2 = Detector Set 2
3 = Detector Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

SYSTEM DETECTORS

DIR	LANE	DESCRIPTION	C1 PIN	SLOT		DIR	LANE	DESCRIPTION	C1 PIN	SLOT
WB	2	SYS DET # 1	60	I9U				SYS DET # 5	54	J11U
WB	1	SYS DET # 2	62	I9L				SYS DET # 6	75	J11L
EB	2	SYS DET # 3	59	J9U				SYS DET # 7	47	I4U
EB	1	SYS DET # 4	61	J9L				SYS DET # 8	49	I8U

City of Pasadena - Department of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number	0	0	0	0	0	0	0	0
Vehicle Set 1								
Vehicle Set 2								
Vehicle Set 3								
Negative Vehicle								
Negative Ped								
Green Omit								
Green Clear Omit								
Green Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

AND Gates

22	NAND 1	NAND 2	NAND 3	NAND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A	0	0	0	0	0	0
Input - B	0	0	0	0	0	0
Output	0	0	0	0	0	0

2 Input - OR Gates

	OR 7	OR 8
Input - A	0	0
Input - B	0	0
Input - C	0	0
Input - D	0	0
Output	0	0

4 Input - OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input	0	0	0	0
Output	0	0	0	0

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0
Output	0	0	0	0	0	0

DELAY Gates

City of Pasadena - Departr. ɜnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

	C-1 Pin #
Advance Warning - 1	0
Advance Warning - 2	0
Detector Failure	0
Flasher - Alternating 1	0
Flasher - Alternating 2	0
Fast Flasher	0
On Line	0
Exclusive - Walk	0
Exclusive - Don't Walk	0

General Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Time of Day Outputs

	C-1 Pin #
Plan - 1	0
Plan - 2	0
Plan - 3	0
Plan - 4	0
Plan - 5	0
Plan - 6	0
Plan - 7	0
Plan - 8	0
Plan - 9	0
Free	0
Flash	

Coordination Plan Out

	Ped Phase
Ped 2-P Loadswitch	2
Ped 4-P Loadswitch	4
Ped 6-P Loadswitch	6
Ped 8-P Loadswitch	8

Ped Loadswitch Assignment

	C-1 Pin #
Dial - 2	0
Dial - 3	0
Offset - 1	0
Offset - 2	0
Offset - 3	0
Free	0
Flash	0

Seven Wire Outputs

	C-1 Pin #	
	On	Flash
Railroad - 1	0	
Railroad - 2	0	
Special Event - 1	0	
Special Event - 2	0	
Preempt Failure	0	
EV - A	0	
EV - B	0	
EV - C	0	
EV - D	0	
Any Preempt	0	

Preemption Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Special Event Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Special Function Output

	Phase Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0

Phase Output Redirection

	Overlap Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0

Overlap Output Redirection

City of Pasadena - Departr. ent of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0	1234567	12345678	0	1	14	1
1	1_____7	12345678	6	0	5	1
2	_23456_	12345678	6	0	6	1
3	_23456_	12345678	9	30	5	1
4	_23456_	12345678	15	30	7	1
5	_23456_	12345678	19	0	5	1
6	1234568	12345678	20	0	14	1
7	_____		0	0	0	0
8	_____		0	0	0	0
9	_____		0	0	0	0
10	_____		0	0	0	0
11	_____		0	0	0	0
12	_____		0	0	0	0
13	_____		0	0	0	0
14	_____		0	0	0	0
15	_____		0	0	0	0
16	_____		0	0	0	0
17	_____		0	0	0	0
18	_____		0	0	0	0
19	_____		0	0	0	0
20	_____		0	0	0	0
21	_____		0	0	0	0
22	_____		0	0	0	0
23	_____		0	0	0	0
24	_____		0	0	0	0
25	_____		0	0	0	0
26	_____		0	0	0	0
27	_____		0	0	0	0
28	_____		0	0	0	0
29	_____		0	0	0	0
30	_____		0	0	0	0
31	_____		0	0	0	0

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0	_____		0	0	0	_____
1	_____		0	0	0	_____
2	_____		0	0	0	_____
3	_____		0	0	0	_____
4	_____		0	0	0	_____
5	_____		0	0	0	_____
6	_____		0	0	0	_____
7	_____		0	0	0	_____
8	_____		0	0	0	_____
9	_____		0	0	0	_____
10	_____		0	0	0	_____
11	_____		0	0	0	_____
12	_____		0	0	0	_____
13	_____		0	0	0	_____
14	_____		0	0	0	_____
15	_____		0	0	0	_____

Time of Day Function Events

TOD Functions

0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Vehicle Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Vehicle Max Recall
10 = Soft Recall
11= Max Extension 2
12 = Conditional Service
13 = Lag Free Phases
14, Bit 1 = Local Override
14, Bit 4 = Disable Det Off Monitoring
15 = TOD Outputs

City of Pasadena - Departr. ɜnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

#	Holiday Type	Day	Month	Year
0		0	0	0
1		0	0	0
2		0	0	0
3		0	0	0
4		0	0	0
5		0	0	0
6		0	0	0
7		0	0	0
8		0	0	0
9		0	0	0
10		0	0	0
11		0	0	0
12		0	0	0
13		0	0	0
14		0	0	0
15		0	0	0
16		0	0	0
17		0	0	0
18		0	0	0
19		0	0	0
20		0	0	0
21		0	0	0
22		0	0	0
23		0	0	0
24		0	0	0
25		0	0	0
26		0	0	0
27		0	0	0
28		0	0	0
29		0	0	0
30		0	0	0
31		0	0	0

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0		0	0	0	0
1		0	0	0	0
2		0	0	0	0
3		0	0	0	0
4		0	0	0	0
5		0	0	0	0
6		0	0	0	0
7		0	0	0	0
8		0	0	0	0
9		0	0	0	0
10		0	0	0	0
11		0	0	0	0
12		0	0	0	0
13		0	0	0	0
14		0	0	0	0
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		0	0	0	0
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0
29		0	0	0	0
30		0	0	0	0
31		0	0	0	0

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0		0	0	0	
1		0	0	0	
2		0	0	0	
3		0	0	0	
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	
9		0	0	0	
10		0	0	0	
11		0	0	0	
12		0	0	0	
13		0	0	0	
14		0	0	0	
15		0	0	0	

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1	1	1	12	31
2				
3				
4				
5				
6				
7				
8				

Season Definitions

City of Pasadena - Departr. ent of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ GLENARM STREET - NO. 316

Red Start Time	5.0
Yellow Start Phases	_____
First Green Phases	_2___6__
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Startup

Max ON Time	7
Max OFF Time	255
Chatter	45

Detector Check

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Advance Warning Signs

Flash Entry Phases	_____
Flash Phases Yellow	_____
Flash Overlaps Yellow	_____
Flash Type	

Flash Setup

Exclusive Phases	_____
Protect / Permissive	_____
Disable Yellow Range	_____
Extra One	1_3_5___
Lag Phases - Free	_2_4_6_8

Configuration

Permitted Phases	_2_4_6__
Restricted Phases	_____
Disable Overlap Range	_____
Extra Two	___4___

Configuration

Keyboard Beep	0
Backlight Timeout	0
Spec Evnt 1 - Ltd Serv Interval	0
Spec Evnt 2 - Ltd Serv Interval	0
Red Revert	2.0

Miscellaneous

Spring Month (Begin)	3
Spring Week (Begin)	2
Fall Month (End)	11
Fall Week (End)	1

Daylight Savings Time

Manual Plan	0
Manual Offset	0

Manual

Manual Plan
1 thru 9 = Coordination Plan 1 thru 9
14 = Free
15 = Flash

Extra One
1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =

Extra Two
1 =
2 =
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignor P/P on EV
6 =
7 =
8 =

Flash Type
0 = All On-Off (12345678-0)
1 = Main-Side (1256-3478)
2 = Ping Pong (1234-5678
3 = Ring Pairs (1638-5247)

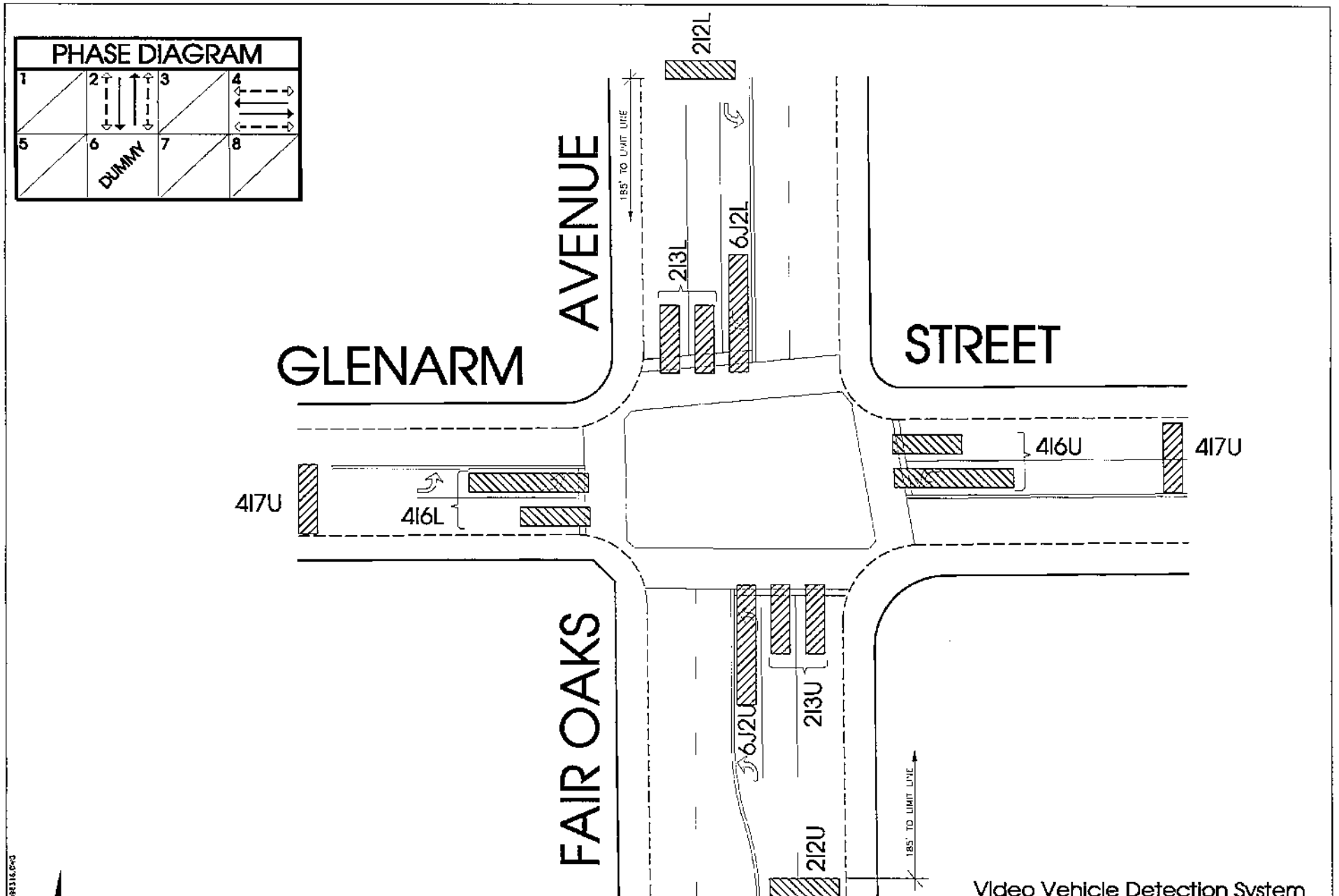
Address	9			
Area Number	1			
Area Address	17			
IP Port	8001			
IP Address	10	95	3	16
Subnet Mask	255	255	0	0
Gateway	0	0	0	0

Ethernet Port Address

Serial Port

	Port 1	Port 2	Port 3	Port 4
Address		9		
Area Number		1		
Area Address		17		
Comm Time Out		5		
CTS Delay		15		
RTS Hold		15		
Baud Rate		1200		
Data Format		8,1		

Communications Parameters



CITY OF PASADENA–DEPARTMENT OF TRANSPORTATION

INTERSECTION NAME: FAIR OAKS AVENUE/GLENARM STREET

SHEET 1 OF 1

INTERSECTION NUMBER 316

DRAWN BY: DAVID PHAN | SCALE: 1"=40' | CAD NUMBER CAD98316

Date: APRIL 12, 2005/KA398316.DWG

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

QuicNet System Parameters

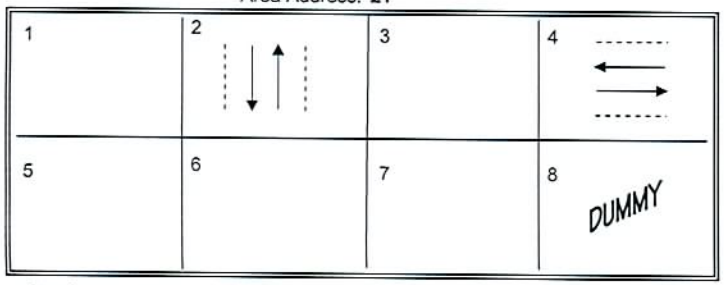
Group Assignment: **4001**
Field Master Assignment: **NONE**
System Reference Number: **21**
Commications Channel: **UDP:8001:10.95.3.17**
Drop Address: **4**
Area Number: **1**
Area Address: **21**

N/S Street Name: **Marengo Avenue**
E/W Street Name: **Glenarm Street**

Last *QuicNet* Database Change:

Notes:
Serial Number: ~~747~~ 751

SUPERSEDED TIMING SHEET		DATE
		11/14/1996
TIMING BY:	DP	6/10/2004
REVIEWED BY:	VK	6/10/2004
IMPLEMENTED BY:	DP, VK	6/30/2004



- PHASE DIAGRAM-

CHANGE	BY	DATE

Excl Ped Assignment	_____
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	5.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	4	0	4	0	0	0	4
	Extension	0.0	4.0	0.0	4.0	0.0	0.0	0.0	2.5
	Max	0	35	0	40	0	0	0	40
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	3.1	0.0	3.9	0.0	0.0	0.0	3.9
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	7	0	7	0	0	0	0
	Ped Clear - FDW	0	14	0	14	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	18	0	18	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	3.0	0.0	3.0	0.0	0.0	0.0	2.5
	Max Gap	0.0	4.8	0.0	4.8	0.0	0.0	0.0	2.5
	Reduce Every	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock	_____	Red Rest	_____
Yellow Lock	_____	Dual Entry	4 8
Simultaneous Gap	12345678	Sequential Timing	_____
Rest In Walk	_____	Inhibit Ped Reservice	_____
Advance Walk	_____	Semi-Actuated	_____
Flashing Walk	_____	Guaranteed Passage	_____
Max Extension	12345678	Conditional Service	_____

Phase Functions - Page 1

Minimum Recall	4 8	Soft Recall	_____
Ped Recall	_____	External Recall	_____
Maximum Recall	_____	Manual Control Calls	12345678
Green Flash	_____	Fast Green Flash	_____
Overlap Green Flash	_____	Fast Overlap G. Flash	_____

Phase Functions - Page 2

ORIGINAL

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	4	0	4	0	0	0	4
	Extension	0.0	4.0	0.0	4.0	0.0	0.0	0.0	2.5
	Max	0	35	0	40	0	0	0	40
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	3.1	0.0	3.9	0.0	0.0	0.0	3.9
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	7	0	7	0	0	0	0
	Ped Clear - FDW	0	14	0	14	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	18	0	18	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	3.0	0.0	3.0	0.0	0.0	0.0	2.5
	Max Gap	0.0	4.8	0.0	4.8	0.0	0.0	0.0	2.5
	Reduce Every	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	4	0	4	0	0	0	4
	Extension	0.0	4.0	0.0	4.0	0.0	0.0	0.0	2.5
	Max	0	35	0	40	0	0	0	40
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	3.1	0.0	3.9	0.0	0.0	0.0	3.9
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	7	0	7	0	0	0	0
	Ped Clear - FDW	0	14	0	14	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	18	0	18	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	3.0	0.0	3.0	0.0	0.0	0.0	2.5
	Max Gap	0.0	4.8	0.0	4.8	0.0	0.0	0.0	2.5
	Reduce Every	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

City of Pasadena - Departm nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Clear Phases	
Delay	0
Clear Time	0

Railroad - 1

Clear Phases	
Limited Service Phases	
Delay	0
Clear Time	0

Railroad - 2

Railroad Preempt Parameters

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 1

	Delay	Clear	Clear Phases
EV - A	0	0	
EV - B	0	0	
EV - C	0	0	
EV - D	0	0	

Emergency Vehicle Preempt

SE - 1	
SE - 2	
EV - A	
EV - B	
EV - C	
EV - D	

Preempt Priority

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	22									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 2

City of Pasadena - Departm nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

Transition Type	0.3
Coord Extra Functions	_____
Phase 1 - Minimum	0
Phase 2 - Minimum	22
Phase 3 - Minimum	0
Phase 4 - Minimum	23
Phase 5 - Minimum	0
Phase 6 - Minimum	0
Phase 7 - Minimum	0
Phase 8 - Minimum	23

Coordination - General

Note: The Ring-Barrier Sum of these Minimums will be the Minimum Cycle Length During Transition

Coord Extra
1 = Programmed Walk Time for Sync Phases
2 = Always Terminate Sync Phase Peds
3 = Use "Floating Force Off"
4 =
5 = Use "Start of Green" for Sync Point

Transition Type
0.X = Shortway
1.X = Lengthen Only
2.X = Shorten Only
X.1 thru X.4 = Number of Cycles to get "In Step"

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Cycle	70				70	70	80		
Offset - 1	54				54	54	15		
Offset - 2	0				0	0	0		
Offset - 3	0				0	0	0		
Zone Offset	0				0	0	0		
Ring Offset	0				0	0	0		
Hold Release	255				255	255	255		
Ped Adjust	0				0	0	0		
Force Off - 1	0				0	0	0		
Force Off - 2	32				32	32	38		
Force Off - 3	0				0	0	0		
Force Off - 4	0				0	0	0		
Force Off - 5	0				0	0	0		
Force Off - 6	0				0	0	0		
Force Off - 7	0				0	0	0		
Force Off - 8	0				0	0	0		

Coordination - Cycle, Offsets, & Force Offs

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End	10				10	10	10		
Perm 1 - Veh Phases	12345678				12345678	12345678	12345678		
Perm 1 - Ped Phases	12345678				12345678	12345678	12345678		
Perm 2 - Begin	0				0	0	0		
Perm 2 - End	0				0	0	0		
Perm 2 - Veh Phases	_____				_____	_____	_____		
Perm 2 - Ped Phases	_____				_____	_____	_____		
Perm 3 - Begin	0				0	0	0		
Perm 3 - End	0				0	0	0		
Perm 3 - Veh Phases	_____				_____	_____	_____		
Perm 3 - Ped Phases	_____				_____	_____	_____		
Max Inhibit Phases									
Max Recall Phases	_____				_____	_____	_____		
Sync Phases	_4_8				_4_8	_4_8	_4_8		
Lag Phases	_2_4_6_8				_2_4_6_8	_2_4_6_8	_2_4_6_8		
Pre-Timed Phases	_____				_____	_____	_____		

Coordination - Permissives & Phase Sequence

City of Pasadena - Departm nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number	0	0	0	0	0	0	0	0
Vehicle Set 1								
Vehicle Set 2								
Vehicle Set 3								
Negative Vehicle								
Negative Ped								
Green Omit								
Green Clear Omit								
Green Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

AND Gates

22

	NAND 1	NAND 2	NAND 3	NAND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A	0	0	0	0	0	0
Input - B	0	0	0	0	0	0
Output	0	0	0	0	0	0

2 Input - OR Gates

	OR 7	OR 8
Input - A	0	0
Input - B	0	0
Input - C	0	0
Input - D	0	0
Output	0	0

4 Input - OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input	0	0	0	0
Output	0	0	0	0

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0
Output	0	0	0	0	0	0

DELAY Gates

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignmmnts	Detector Attributes	Detector Set Assignments	Input File Slots	
1	39	0.0	0.0	2	45 7	123	2I2U	SB, ADV, ALL
2	40	5.0	0.0	2	45 7	123	2J2U	SBRT
3	41	0.0	0.0	4	45 7	123	4I6U	EB, ADV, ALL
4	42	0.0	0.0	8	45 7	123	8J6U	EBLT
5	43	0.0	0.0	2	45 7	123	2I2L	NB, ADV, ALL
6	44	0.0	0.0	6	45 7	123	6J2L	
7	45	0.0	1.0	4	67	123	4I6L	WB, TYPE 3, LN 1
8	46	0.0	0.0	8	45 7	123	8J6L	WBLT
9	47	0.0	0.0	2	67	123	I-4	
10	48	0.0	1.0	6	67	123	J-4	
11	49	0.0	0.0	4	67	123	I-8	
12	50	0.0	0.0	8	45 7	123	J-8	
13	55	0.0	0.0	5	45 7	123	J-1	
14	56	0.0	0.0	1	45 7	123	I-1	
15	57	0.0	0.0	7	45 7	123	J-5	
16	58	0.0	0.0	3	45 7	123	I-5	
17	59	0.0	0.0		45 7	123	5J9U	
18	60	0.0	0.0		45 7	123	1I9U	
19	61	0.0	0.0		45 7	123	7J9L	
20	62	0.0	0.0		45 7	123	3I9L	
21	63	0.0	1.0	2	67	123	2I3U	SB, TYPE 3, LN 1
22	64	0.0	0.0	6	67	123	6J3U	
23	65	0.0	0.0	4	45 7	123	4I7U	EB, ADV, ALL
24	66	5.0	0.0	8	45 7	123	4J7U	EBRT
25	67	0.0	0.0	2	2	123	I-12U	PED
26	68	0.0	0.0	6	2	123	I-13U	PED
27	69	0.0	0.0	4	2	123	I-12L	PED
28	70	0.0	0.0	8	2	123	I-13L	PED
29	76	0.0	1.0	2	67	123	2I3L	NB, TYPE 3, LN 1
30	77	0.0	0.0	6	67	123	6J3L	
31	78	0.0	1.0	4	67	123	4I7L	EB, TYPE 3, LN 1
32	79	0.0	0.0	8	67	123	8J7L	

Detector Assignments

	C-1 Pin #
Flash Sense	81
External Permit - 1	0
External Permit - 2	0
Exclusive Ped Omit	0
Max. Term Inhibit	0
Max. 2	0
External Lag Phases	0
External Max. Recall	0
Stop Time	82
Manual Control Enable	80
Manual Cont. Advance	53
External Min. Recall	0

General Inputs

	C-1 Pin #
Plan 1	0
Plan 2	0
Plan 3	0
Plan 4	0
Plan 5	0
Plan 6	0
Plan 7	0
Plan 8	0
Plan 9	0
Free	0
Flash	0

Coordination Plan Inputs

	C-1 Pin #
Railroad - 1	0
Railroad - 2	0
Special Event - 1	0
Special Event - 2	0
Gate Down	
EV - A	71
EV - B	72
EV - C	73
EV - D	74

Preempt Inputs

	C-1 Pin #
Phase Bank - 2	0
Phase Bank - 3	0
Detector Set - 2	0
Detector Set - 3	0
Overlap Vehicle Set - 2	0
Overlap Vehicle Set - 3	0

Bank & Set Inputs

	C-1 Pin #
Door Ajar	
UPS Battery	
UPS Power	
Cabinet Temperature	

	C-1 Pin #
Alarm - 1	
Alarm - 2	
Alarm - 3	
Alarm - 4	

Alarm Inputs

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Detector Assignments
1 = Detector Set 1
2 = Detector Set 2
3 = Detector Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

	C-1 Pin #
Advance Warning - 1	0
Advance Warning - 2	0
Detector Failure	0
Flasher - Alternating 1	0
Flasher - Alternating 2	0
Fast Flasher	0
On Line	0
Exclusive - Walk	0
Exclusive - Don't Walk	0

General Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Time of Day Outputs

	C-1 Pin #
Plan - 1	0
Plan - 2	0
Plan - 3	0
Plan - 4	0
Plan - 5	0
Plan - 6	0
Plan - 7	0
Plan - 8	0
Plan - 9	0
Free	0
Flash	

Coordination Plan Out

	Ped Phase
Ped 2-P Loadswitch	2
Ped 4-P Loadswitch	4
Ped 6-P Loadswitch	6
Ped 8-P Loadswitch	8

Ped Loadswitch Assignment

	C-1 Pin #
Dial - 2	0
Dial - 3	0
Offset - 1	0
Offset - 2	0
Offset - 3	0
Free	0
Flash	0

Seven Wire Outputs

	C-1 Pin #	
	On	Flash
Railroad - 1	0	
Railroad - 2	0	
Special Event - 1	0	
Special Event - 2	0	
Preempt Failure	0	
EV - A	0	
EV - B	0	
EV - C	0	
EV - D	0	
Any Preempt	0	

Preemption Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Special Event Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	
Output - 6	
Output - 7	
Output - 8	

Special Function Output

	Phase Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0

Phase Output Redirection

	Overlap Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0

Overlap Output Redirection

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0	1234567		0	0	14	1
1	1____7		6	0	5	1
2	_23456_		6	0	6	1
3	_23456_		9	30	5	1
4	_23456_		15	30	7	1
5	_23456_		19	0	5	1
6	1234568		20	0	14	1
7	_____		0	0	0	0
8	_____		0	0	0	0
9	_____		0	0	0	0
10	_____		0	0	0	0
11	_____		0	0	0	0
12	_____		0	0	0	0
13	_____		0	0	0	0
14	_____		0	0	0	0
15	_____		0	0	0	0
16	_____		0	0	0	0
17	_____		0	0	0	0
18	_____		0	0	0	0
19	_____		0	0	0	0
20	_____		0	0	0	0
21	_____		0	0	0	0
22	_____		0	0	0	0
23	_____		0	0	0	0
24	_____		0	0	0	0
25	_____		0	0	0	0
26	_____		0	0	0	0
27	_____		0	0	0	0
28	_____		0	0	0	0
29	_____		0	0	0	0
30	_____		0	0	0	0
31	_____		0	0	0	0

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0	_____		0	0	0	_____
1	_____		0	0	0	_____
2	_____		0	0	0	_____
3	_____		0	0	0	_____
4	_____		0	0	0	_____
5	_____		0	0	0	_____
6	_____		0	0	0	_____
7	_____		0	0	0	_____
8	_____		0	0	0	_____
9	_____		0	0	0	_____
10	_____		0	0	0	_____
11	_____		0	0	0	_____
12	_____		0	0	0	_____
13	_____		0	0	0	_____
14	_____		0	0	0	_____
15	_____		0	0	0	_____

Time of Day Function Events

TOD Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Vehicle Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Vehicle Max Recall
10 = Soft Recall
11= Max Extension 2
12 = Conditional Service
13 = Lag Free Phases
14, Bit 1 = Local Override
14, Bit 4 = Disable Det Off Monitoring
15 = TOD Outputs

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

#	Holiday Type	Day	Month	Year
0		0	0	0
1		0	0	0
2		0	0	0
3		0	0	0
4		0	0	0
5		0	0	0
6		0	0	0
7		0	0	0
8		0	0	0
9		0	0	0
10		0	0	0
11		0	0	0
12		0	0	0
13		0	0	0
14		0	0	0
15		0	0	0
16		0	0	0
17		0	0	0
18		0	0	0
19		0	0	0
20		0	0	0
21		0	0	0
22		0	0	0
23		0	0	0
24		0	0	0
25		0	0	0
26		0	0	0
27		0	0	0
28		0	0	0
29		0	0	0
30		0	0	0
31		0	0	0

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0		0	0	0	0
1		0	0	0	0
2		0	0	0	0
3		0	0	0	0
4		0	0	0	0
5		0	0	0	0
6		0	0	0	0
7		0	0	0	0
8		0	0	0	0
9		0	0	0	0
10		0	0	0	0
11		0	0	0	0
12		0	0	0	0
13		0	0	0	0
14		0	0	0	0
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		0	0	0	0
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0
29		0	0	0	0
30		0	0	0	0
31		0	0	0	0

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0		0	0	0	
1		0	0	0	
2		0	0	0	
3		0	0	0	
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	
9		0	0	0	
10		0	0	0	
11		0	0	0	
12		0	0	0	
13		0	0	0	
14		0	0	0	
15		0	0	0	

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1	1	1	12	31
2				
3				
4				
5				
6				
7				
8				

Season Definitions

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: MARENGO AVENUE @ GLENARM STREET - NO. 317

Red Start Time	5.0
Yellow Start Phases	_____
First Green Phases	__4__8
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Startup

Max ON Time	7
Max OFF Time	255
Chatter	45

Detector Check

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Advance Warning Signs

Flash Entry Phases	_____
Flash Phases Yellow	_____
Flash Overlaps Yellow	_____
Flash Type	

Flash Setup

Exclusive Phases	_____
Protect / Permissive	_____
Disable Yellow Range	_____
Extra One	1_3_5__
Lag Phases - Free	_2_4_6_8

Configuration

Permitted Phases	_2_4__8
Restricted Phases	_____
Disable Overlap Range	_____
Extra Two	__4__

Configuration

Keyboard Beep	
Backlight Timeout	
Spec Evnt 1 - Ltd Serv Interval	0
Spec Evnt 2 - Ltd Serv Interval	0
Red Revert	2.0

Miscellaneous

Spring Month (Begin)	
Spring Week (Begin)	
Fall Month (End)	
Fall Week (End)	

Daylight Savings Time

Manual Plan	
Manual Offset	

Manual

Manual Plan
1 thru 9 = Coordination Plan 1 thru 9
14 = Free
15 = Flash

Extra One
1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =

Extra Two
1 =
2 =
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignor P/P on EV
6 =
7 =
8 =

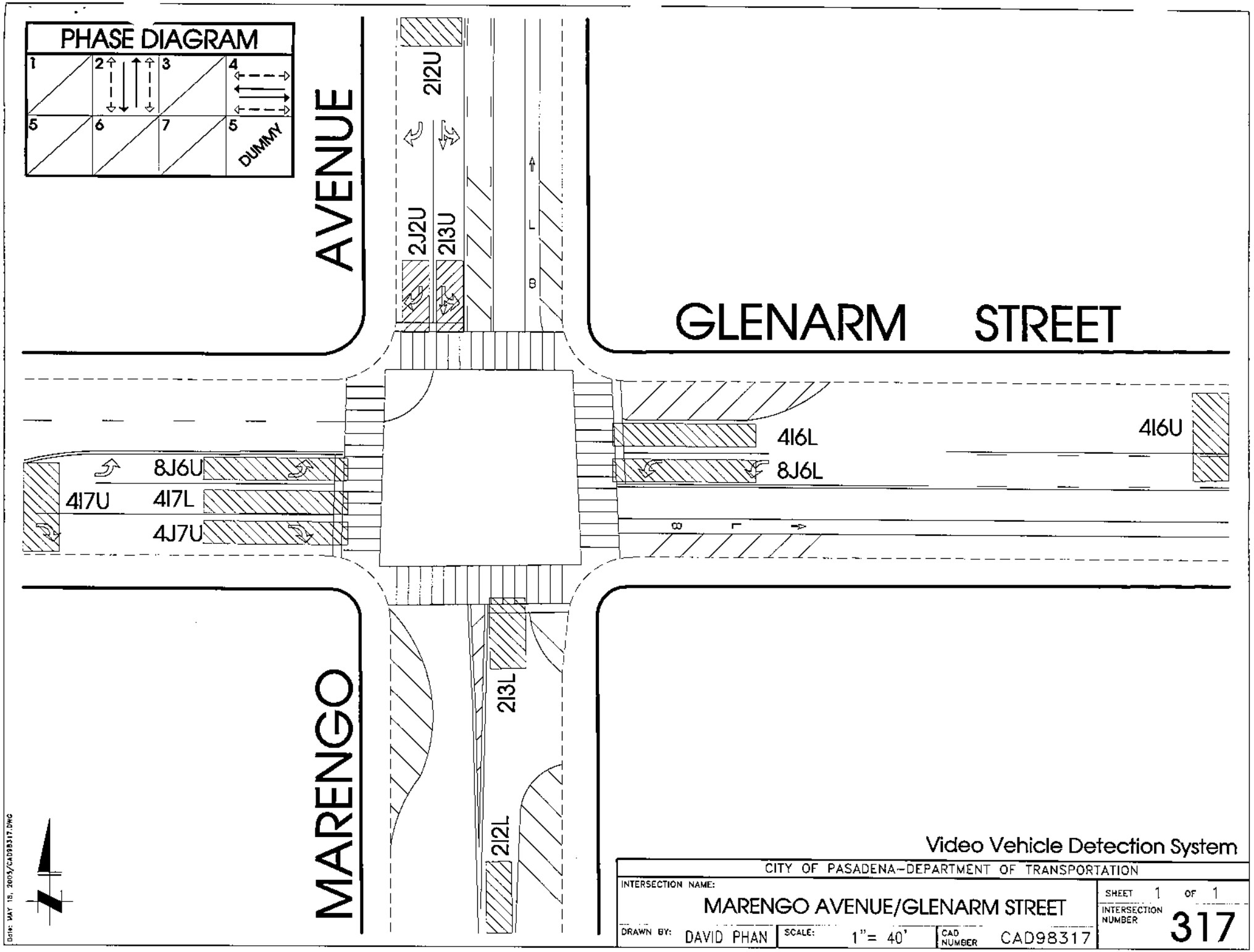
Flash Type
0 = All On-Off (12345678-0)
1 = Main-Side (1256-3478)
2 = Ping Pong (1234-5678
3 = Ring Pairs (1638-5247)

Address	4			
Area Number	1			
Area Address	21			
IP Port	8001			
IP Address	10	95	3	17
Subnet Mask	255	255	0	0
Gateway	0	0	0	0

Ethernet Port Address

	Serial Port			
	Port 1	Port 2	Port 3	Port 4
Address		4		
Area Number		1		
Area Address		21		
Comm Time Out		5		
CTS Delay		15		
RTS Hold		15		
Baud Rate		1200		
Data Format		8,1		

Communications Parameters


PHASE DIAGRAM
1
2
3
4
5
6
7
5
DUMMY
AVENUE
2J2U
2I2U
2I3U
GLENARM STREET
4I6L
4I6U
8J6L
8J6U
4I7U
4I7L
4J7U
MARENGO
2I3L
2I2L
Video Vehicle Detection System
CITY OF PASADENA-DEPARTMENT OF TRANSPORTATION
INTERSECTION NAME:
MARENGO AVENUE/GLENARM STREET
SHEET 1 OF 1
INTERSECTION NUMBER
317
DRAWN BY: DAVID PHAN
SCALE: 1"= 40'
CAD NUMBER CAD98317
Date: MAY 18, 2005/CAD98317.DWG

City of Pasadena - Departm nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

QuicNet System Parameters

Group Assignment: **4001**
Field Master Assignment: **NONE**
System Reference Number: **15**
Commications Channel: **UDP: 8001: 10.95.3.48**
Drop Address: **10**
Area Number: **1**
Area Address: **15**

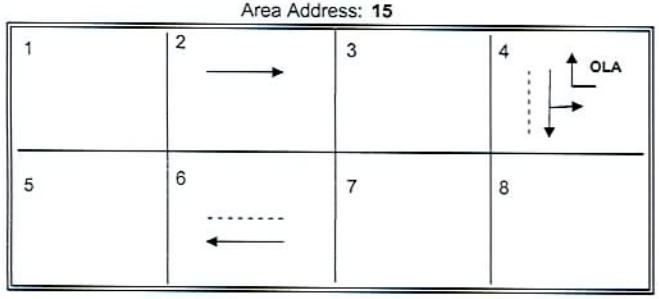
N/S Street Name: **Raymond Avenue**
E/W Street Name: **Glenarm Street**

Notes:
Serial Number: 842

QuicNet Pro

SUPERSEDED TIMING SHEET		DATE
		3/10/2005
TIMING BY:	DP	2/1/2008
REVIEWED BY:	JS	2/4/2008
IMPLEMENTED BY:	DP	2/4/2008

CHANGE	BY	DATE



- PHASE DIAGRAM-

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	4	0	4	0	10	0	0
	Extension	0.0	4.0	0.0	4.0	0.0	4.0	0.0	0.0
	Max	0	30	0	25	0	30	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	3.1	0.0	3.9	0.0	3.1	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	5	0	7	0	0
	Ped Clear - FDW	0	0	0	17	0	18	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	18	0	18	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0
	Max Gap	0.0	4.8	0.0	4.8	0.0	3.0	0.0	0.0
	Reduce Every	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap	12345678	Sequential Timing	12345678
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	12345678
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	
PPLT FYA		Semi Act	

Phase Functions - Page 2

ORIGINAL

City of Pasadena - Departn ,nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Clear Phases	6
Delay	35
Clear Time	17

Railroad - 1

Clear Phases	
Limited Service Phases	
Delay	0
Clear Time	0

Railroad - 2

Railroad Preempt Parameters

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 1

	Delay	Clear	Clear Phases
EV - A	0	0	
EV - B	0	0	
EV - C	0	0	
EV - D	0	0	

Emergency Vehicle Preempt

SE - 1	
SE - 2	
EV - A	
EV - B	
EV - C	
EV - D	

Preempt Priority

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 2

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

Transition Type	0.3
Coord Extra Functions	
Phase 1 - Minimum	0
Phase 2 - Minimum	10
Phase 3 - Minimum	0
Phase 4 - Minimum	26
Phase 5 - Minimum	0
Phase 6 - Minimum	29
Phase 7 - Minimum	0
Phase 8 - Minimum	0

Coordination - General

Note: The Ring-Barrier Sum of these Minimums will be the Minimum Cycle Length During Transition

Coord Extra
1 = Programmed Walk Time for Sync Phases
2 = Always Terminate Sync Phase Peds
3 = Use "Floating Force Off"
4 =
5 = Use "Start of Green" for Sync Point

Transition Type
0.X = Shortway
1.X = Lengthen Only
2.X = Shorten Only
X.1 thru X.4 = Number of Cycles to get "In Step"

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Cycle	70	0	0	0	70	80	80	0	0
Offset - 1	0	0	0	0	5	29	57	0	0
Offset - 2	0	0	0	0	0	0	0	0	0
Offset - 3	0	0	0	0	0	0	0	0	0
Zone Offset	0	0	0	0	0	0	0	0	0
Ring Offset	0	0	0	0	0	0	0	0	0
Hold Release	255	255	255	255	255	255	255	255	255
Ped Adjust	0	0	0	0	0	0	0	0	0
Force Off - 1	0	0	0	0	0	0	0	0	0
Force Off - 2	0	0	0	0	0	0	0	0	0
Force Off - 3	0	0	0	0	0	0	0	0	0
Force Off - 4	34	0	0	0	29	29	29	0	0
Force Off - 5	0	0	0	0	0	0	0	0	0
Force Off - 6	0	0	0	0	0	0	0	0	0
Force Off - 7	0	0	0	0	0	0	0	0	0
Force Off - 8	0	0	0	0	0	0	0	0	0

Coordination - Cycle, Offsets, & Force Offs

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End	10	10	10	10	10	10	10	10	10
Perm 1 - Veh Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 1 - Ped Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 2 - Begin	0	0	0	0	0	0	0	0	0
Perm 2 - End	0	0	0	0	0	0	0	0	0
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin	0	0	0	0	0	0	0	0	0
Perm 3 - End	0	0	0	0	0	0	0	0	0
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Sync Phases	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__	_2___6__
Lag Phases	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8
Pre-Timed Phases									

Coordination - Permissives & Phase Sequence

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number	9	0	0	0	0	0	0	0
Vehicle Set 1	4							
Vehicle Set 2	4							
Vehicle Set 3	4							
Negative Vehicle	2 6							
Negative Ped	6							
Green Omit								
Green Clear Omit								
Green Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

AND Gates

	NAND 1	NAND 2	NAND 3	NAND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A	0	0	0	0	0	0
Input - B	0	0	0	0	0	0
Output	0	0	0	0	0	0

2 Input - OR Gates

	OR 7	OR 8
Input - A	0	0
Input - B	0	0
Input - C	0	0
Input - D	0	0
Output	0	0

4 Input - OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input	0	0	0	0
Output	0	0	0	0

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0
Output	0	0	0	0	0	0

DELAY Gates

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignmrnts	Detector Attributes	Detector Set Assignments	Input File Slots	
1	39	0.0	0.0	2	45 7	123	2I2U	EBLT, HOLDING
2	40	0.0	0.0	6	45 7	123	6J2U	WB, 1st VEH, LN1
3	41	0.0	1.0	4	67	123	4I6U	SBLT,TYPE3, LN1, LN2
4	42	0.0	0.0	8	45 7	123	8J6U	
5	43	0.0	1.0	2	67	123	2I2L	EB,TYPE3,LN1, LN2
6	44	7.0	0.0	6	45 7	123	6J2L	WBRT, HOLDING
7	45	7.0	0.0	4	45 7	123	4I6L	SBRT, HOLDING
8	46	0.0	0.0	8	45 7	123	8J6L	
9	47	0.0	1.0	2	67	123	2I4U/L	
10	48	0.0	1.0	6	67	123	6J4U/L	
11	49	0.0	1.0	4	67	123	4I8U/L	
12	50	0.0	1.0	8	67	123	8J8U/L	
13	55	0.0	0.0	5	45 7	123	5J1U/L	
14	56	0.0	0.0	1	45 7	123	1I1U/L	
15	57	0.0	0.0	7	45 7	123	7J5U/L	
16	58	0.0	0.0	3	45 7	123	3I5U/L	
17	59	0.0	0.0		45 7	123	5J9U	
18	60	0.0	0.0		45 7	123	1I9U	
19	61	0.0	0.0		45 7	123	7J9L	
20	62	0.0	0.0		45 7	123	3I9L	
21	63	0.0	0.0	2	45 7	123	2I3U	
22	64	0.0	0.0	6	45 7	123	6J3U	
23	65	0.0	0.0	4	45 7	123	4I7U	SB, ADV, ALL
24	66	0.0	0.0	8	45 7	123	8J7U	
25	67	0.0	0.0		2	123	I-12U	2 PED
26	68	0.0	0.0	6	2	123	I-13U	6 PED
27	69	0.0	0.0	4	2	123	I-12L	4 PED
28	70	0.0	0.0		2	123	I-13L	8 PED
29	76	0.0	0.0	2	45 7	123	2I3L	EB, ADV, ALL
30	77	0.0	0.0	6	45 7	123	6J3L	
31	78	0.0	0.0	4	45 7	123	4I7L	
32	79	0.0	0.0	8	45 7	123	8J7L	
	54	0.0	0.0		45 7	123	J11U	
	75	0.0	0.0		45 7	123	J11L	

Detector Assignments

	C-1 Pin #
Flash Sense	81
External Permit - 1	0
External Permit - 2	0
Exclusive Ped Omit	0
Max. Term Inhibit	0
Max. 2	0
External Lag Phases	0
External Max. Recall	0
Stop Time	82
Manual Control Enable	80
Manual Cont. Advance	53
External Min. Recall	0

General Inputs

	C-1 Pin #
Plan 1	0
Plan 2	0
Plan 3	0
Plan 4	0
Plan 5	0
Plan 6	0
Plan 7	0
Plan 8	0
Plan 9	0
Free	0
Flash	0

Coordination Plan Inputs

	C-1 Pin #
Railroad - 1	52
Railroad - 2	0
Special Event - 1	0
Special Event - 2	0
Gate Down	
EV - A	0
EV - B	72
EV - C	73
EV - D	74

Preempt Inputs

	C-1 Pin #
Phase Bank - 2	0
Phase Bank - 3	0
Detector Set - 2	0
Detector Set - 3	0
Overlap Vehicle Set - 2	0
Overlap Vehicle Set - 3	0

Bank & Set Inputs

	C-1 Pin #
Door Ajar	
UPS Battery	
UPS Power	
Cabinet Temperature	

	C-1 Pin #
Alarm - 1	
Alarm - 2	
Alarm - 3	
Alarm - 4	

Alarm Inputs

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Detector Assignments
1 = Detector Set 1
2 = Detector Set 2
3 = Detector Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

SYSTEM DETECTORS

DIR	LANE	DESCRIPTION	C1 PIN	SLOT	DIR	LANE	DESCRIPTION	C1 PIN	SLOT
		SYS DET # 1	60	I9U			SYS DET # 5	54	J11U
		SYS DET # 2	62	I9L			SYS DET # 6	75	J11L
		SYS DET # 3	59	J9U			SYS DET # 7	47	I4U
		SYS DET # 4	61	J9L			SYS DET # 8	49	I8U

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

	C-1 Pin #
Advance Warning - 1	0
Advance Warning - 2	0
Detector Failure	0
Flasher - Alternating 1	0
Flasher - Alternating 2	0
Fast Flasher	0
On Line	0
Exclusive - Walk	0
Exclusive - Don't Walk	0

General Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Time of Day Outputs

	C-1 Pin #
Plan - 1	0
Plan - 2	0
Plan - 3	0
Plan - 4	0
Plan - 5	0
Plan - 6	0
Plan - 7	0
Plan - 8	0
Plan - 9	0
Free	0
Flash	

Coordination Plan Out

	Ped Phase
Ped 2-P Loadswitch	
Ped 4-P Loadswitch	4
Ped 6-P Loadswitch	6
Ped 8-P Loadswitch	

Ped Loadswitch Assignment

	C-1 Pin #
Dial - 2	0
Dial - 3	0
Offset - 1	0
Offset - 2	0
Offset - 3	0
Free	0
Flash	0

Seven Wire Outputs

	C-1 Pin #	
	On	Flash
Railroad - 1	0	
Railroad - 2	0	
Special Event - 1	0	
Special Event - 2	0	
Preempt Failure	0	
EV - A	0	
EV - B	0	
EV - C	0	
EV - D	0	
Any Preempt	0	

Preemption Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Special Event Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	
Output - 6	
Output - 7	
Output - 8	

Special Function Output

	Phase Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0

Phase Output Redirection

	Overlap Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	37	0	0	0	0	0	0	0
Green	35	0	0	0	0	0	0	0

Overlap Output Redirection

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0	1234567	12345678	0	0	E	1
1			0	0	0	0
2			0	0	0	0
3			0	0	0	0
4			0	0	0	0
5			0	0	0	0
6			0	0	0	0
7			0	0	0	0
8			0	0	0	0
9			0	0	0	0
10			0	0	0	0
11			0	0	0	0
12			0	0	0	0
13			0	0	0	0
14			0	0	0	0
15			0	0	0	0
16			0	0	0	0
17			0	0	0	0
18			0	0	0	0
19			0	0	0	0
20			0	0	0	0
21			0	0	0	0
22			0	0	0	0
23			0	0	0	0
24			0	0	0	0
25			0	0	0	0
26			0	0	0	0
27			0	0	0	0
28			0	0	0	0
29			0	0	0	0
30			0	0	0	0
31			0	0	0	0

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0			0	0	0	
1			0	0	0	
2			0	0	0	
3			0	0	0	
4			0	0	0	
5			0	0	0	
6			0	0	0	
7			0	0	0	
8			0	0	0	
9			0	0	0	
10			0	0	0	
11			0	0	0	
12			0	0	0	
13			0	0	0	
14			0	0	0	
15			0	0	0	

Time of Day Function Events

TOD Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Vehicle Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Vehicle Max Recall
10 = Soft Recall
11= Max Extension 2
12 = Conditional Service
13 = Lag Free Phases
14, Bit 1 = Local Override
14, Bit 4 = Disable Det Off Monitoring
15 = TOD Outputs

City of Pasadena - Departn nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

#	Holiday Type	Day	Month	Year
0		0	0	0
1		0	0	0
2		0	0	0
3		0	0	0
4		0	0	0
5		0	0	0
6		0	0	0
7		0	0	0
8		0	0	0
9		0	0	0
10		0	0	0
11		0	0	0
12		0	0	0
13		0	0	0
14		0	0	0
15		0	0	0
16		0	0	0
17		0	0	0
18		0	0	0
19		0	0	0
20		0	0	0
21		0	0	0
22		0	0	0
23		0	0	0
24		0	0	0
25		0	0	0
26		0	0	0
27		0	0	0
28		0	0	0
29		0	0	0
30		0	0	0
31		0	0	0

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0		0	0	0	0
1		0	0	0	0
2		0	0	0	0
3		0	0	0	0
4		0	0	0	0
5		0	0	0	0
6		0	0	0	0
7		0	0	0	0
8		0	0	0	0
9		0	0	0	0
10		0	0	0	0
11		0	0	0	0
12		0	0	0	0
13		0	0	0	0
14		0	0	0	0
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		0	0	0	0
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0
29		0	0	0	0
30		0	0	0	0
31		0	0	0	0

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0		0	0	0	
1		0	0	0	
2		0	0	0	
3		0	0	0	
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	
9		0	0	0	
10		0	0	0	
11		0	0	0	
12		0	0	0	
13		0	0	0	
14		0	0	0	
15		0	0	0	

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1	1	1	12	31
2				
3				
4				
5				
6				
7				
8				

Season Definitions

City of Pasadena - Departn ,nt of Transportation - TMC

INTERSECTION: RAYMOND AVENUE @ GLENARM STREET - NO. 348

Red Start Time	5.0
Yellow Start Phases	_____
First Green Phases	_2__6__
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Startup

Max ON Time	7
Max OFF Time	255
Chatter	45

Detector Check

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Advance Warning Signs

Flash Entry Phases	_____
Flash Phases Yellow	_____
Flash Overlaps Yellow	_____
Flash Type	

Flash Setup

Exclusive Phases	_____
Protect / Permissive	_____
Disable Yellow Range	_____
Extra One	1_3_5__
Lag Phases - Free	_2_4_6_8

Configuration

Permitted Phases	_2_4_6__
Restricted Phases	_____
Disable Overlap Range	_____
Extra Two	__4____

Configuration

Keyboard Beep	
Backlight Timeout	
Spec Evnt 1 - Ltd Serv Interval	
Spec Evnt 2 - Ltd Serv Interval	
Red Revert	2.0

Miscellaneous

Spring Month (Begin)	3
Spring Week (Begin)	2
Fall Month (End)	11
Fall Week (End)	1

Daylight Savings Time

Manual Plan	0
Manual Offset	0

Manual

Manual Plan
1 thru 9 = Coordination Plan 1 thru 9
14 = Free
15 = Flash

Extra One
1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =

Extra Two
1 =
2 = i2 Siemens
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignor P/P on EV
6 =
7 =
8 =

Flash Type
0 = All On-Off (12345678-0)
1 = Main-Side (1256-3478)
2 = Ping Pong (1234-5678
3 = Ring Pairs (1638-5247)

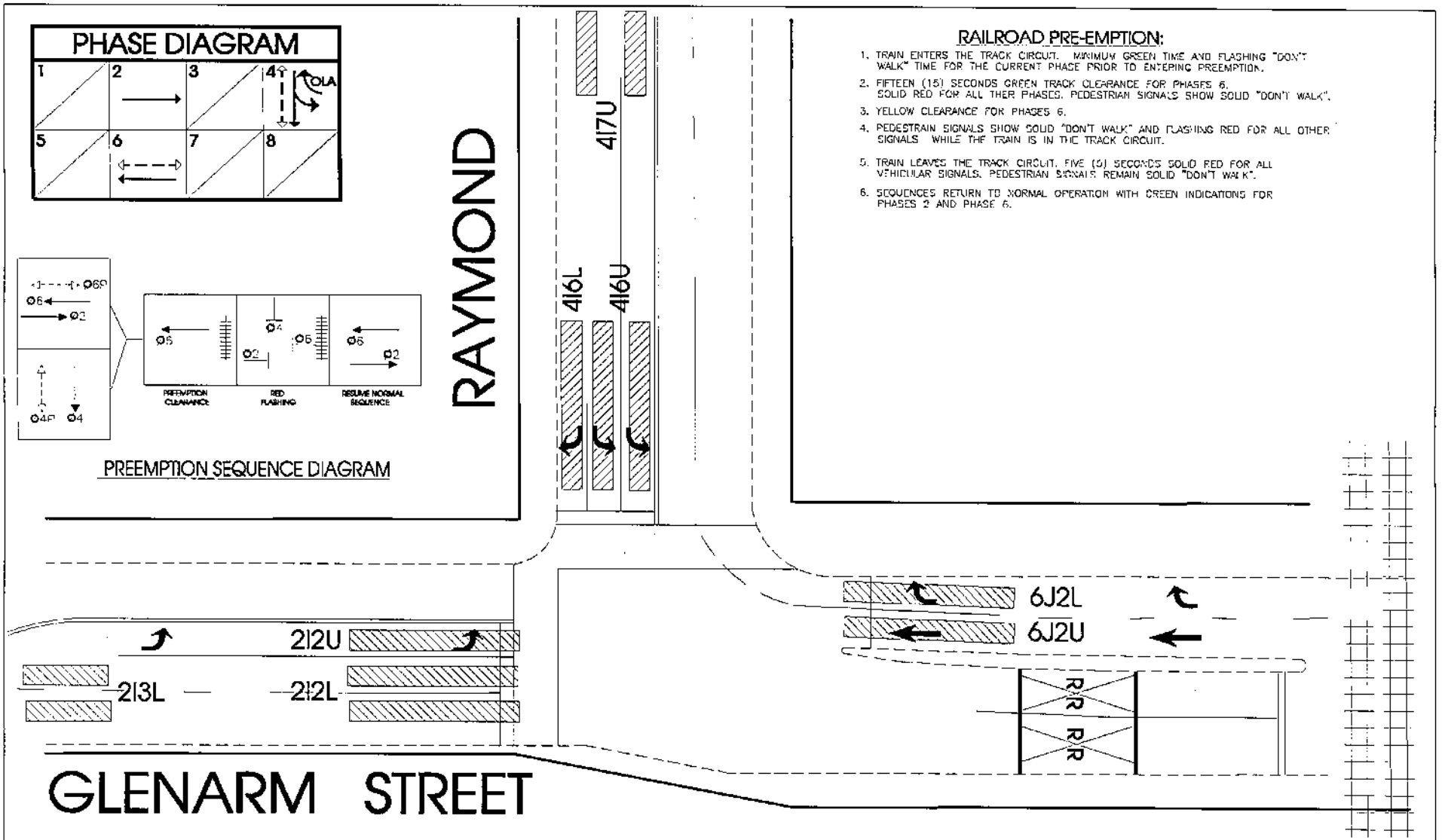
Address	10			
Area Number	1			
Area Address	15			
IP Port	8001			
IP Address	10	95	3	48
Subnet Mask	255	255	0	0
Gateway	0	0	0	0

Ethernet Port Address

Serial Port

	Port 1	Port 2	Port 3	Port 4
Address		10		
Area Number		1		
Area Address		15		
Comm Time Out		5		
CTS Delay		15		
RTS Hold		15		
Baud Rate		1200		
Data Format		8,1		

Communications Parameters



RAILROAD PRE-EMPTION:

1. TRAIN ENTERS THE TRACK CIRCUIT. MINIMUM GREEN TIME AND FLASHING "DON'T WALK" TIME FOR THE CURRENT PHASE PRIOR TO ENTERING PREEMPTION.
2. FIFTEEN (15) SECONDS GREEN TRACK CLEARANCE FOR PHASES 6, SOLID RED FOR ALL THER PHASES. PEDESTRIAN SIGNALS SHOW SOLID "DON'T WALK".
3. YELLOW CLEARANCE FOR PHASES 6.
4. PEDESTRAIN SIGNALS SHOW SOLID "DON'T WALK" AND FLASHING RED FOR ALL OTHER SIGNALS WHILE THE TRAIN IS IN THE TRACK CIRCUIT.
5. TRAIN LEAVES THE TRACK CIRCUIT. FIVE (5) SECONDS SOLID RED FOR ALL VEHICULAR SIGNALS. PEDESTRIAN SIGNALS REMAIN SOLID "DON'T WALK".
6. SEQUENCES RETURN TO NORMAL OPERATION WITH GREEN INDICATIONS FOR PHASES 2 AND PHASE 6.

ETHERNET PORT ADDRESS ITERIS Vantage Edge 2 Camera	
Edge Connect=	10.95.203.48
CAMERA # 1 =	
CAMERA # 2 =	
CAMERA # 3 =	_
CAMERA # 4 =	_
SUBNET=255.255.0.0 & GATEWAY 10.95.0.254	

ch# = CHANNEL ASSIGMENT

Video Vehicle Detection System

CITY OF PASADENA-DEPARTMENT OF TRANSPORTATION

INTERSECTION NAME: RAYMOND AVENUE/GLENARM STREET

SHEET 1 OF 1

INTERSECTION NUMBER 348

DRAWN BY: DAVID PHAN | SCALE: NO SCALE | CAD NUMBER CAD98348

Date: SEPT 18, 2010/CAD98348.DWG

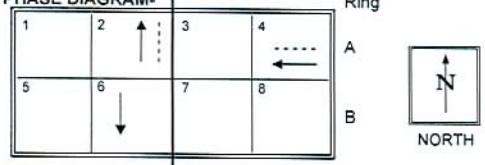
INTERSECTION NO: 712 OPERATION: STA
INTERSECTION: PASADENA AVENUE @ GLENARM STREET

TIMING BY: DP Date 10/15/09
REVIEWED BY: CALTRANS\ME Date 10/28/09
IMPLEMENTED BY: CALTRANS\ME Date 10/28/09
SUPERSEDED TIMING SHEET: 01/27/98

RAILROAD PREEMPT: NO
EMRG VEH PREEMPT: NO
PROGRAMMED FLASH OPERATION: NO

PROGRAM 222P

- PHASE DIAGRAM-



- CONFIGURATION DATA -

(Keystrokes: E + E + Interval)

NOTE "E" KEY ENABLED (F-9-E > 0)

		PHASE 1	2	3	4	5	6	7	8
0	EXCLU PH								
1	RR1 TK CL								
2	RR2 TK CL								
3	RR2 LTD SV								
4	PRT/PERMIS								
5	OLA GOMIT								
6	OLB GOMIT								
7	OLC GOMIT								
8	OLD GOMIT								
9	OV FL YEL								
A	EMVEH A								
B	EMVEH B								
C	EMVEH C								
D	EMVEH D								
E	EXTRA	1		3					
F	IC SELECT		2						

-OVERLAP LOAD SWITCH ASSIGNMENT D-0-

A	(0-8)
B	(0-8)
C	(0-8)
D	(0-8)

-EXTRA :(E+E+E)
1-TBC TYPE 1
3-DAYLIGHT SAV
4-EV ADVANCE
7-PRETIMED
8-SPLIT RING

- ICSEL : (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
4-FLH/FREE
5-SIMPLEX OUT

(Keystrokes: E + F + Interval)

		PHASE 1	2	3	4	5	6	7	8
0									
1	RR OLAP A								
2	RR OLAP B								
3	RR OLAP C								
4	RR OLAP D								
5	PED 2P		2						
6	PED 6P								
7	PED 4P				4				
8	PED 8P								
9	FLSH YELLW								
A	OVERLAP A								
B	OVERLAP B								
C	OVERLAP C								
D	OVERLAP D								
E	RESTRICT								
F	ASSIGNS								

OVERLAP TIMING (KeyStroke: F+CirCode+O'LAP)

	9 Grn	C Yel	D Red
o'lap A	##	##	##
o'lap B	##	##	##
o'lap C	##	##	##
o'lap D	##	##	##

- ASSIGNS: (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
8-SPEC FUNCTION

- PHASE TIMING -

(Keystrokes: F + Phase + Interval)

INTERVAL		PHASE 1	2	3	4	5	6	7	8
WALK	0	0	5	0	7	0	0	0	0
FLASH D/W	1	0	14	0	12	0	0	0	0
MIN GREEN	2	0	20	0	7	0	20	0	0
TYPE 3 DET	3	0	0	0	0	0	0	0	0
ADD/VEH	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VEH EXTEN ●	5	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
MAX GAP ●	6	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
MIN GAP ●	7	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
MAX EXTEN	8	0	10	0	10	0	10	0	0
MAX 2	9	0	0	0	0	0	0	0	0
	A								
CALL TO PHASE	B	0	0	0	0	0	0	0	0
REDUCE BY	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REDUCE EVERY	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOW	E	0.0	3.6	0.0	3.6	0.0	3.6	0.0	0.0
RED CLEAR	F	0.0	1.0	0.0	0.5	0.0	1.0	0.0	0.0

PREEMPT E		
RRI DLY		0
RRI CLR		1
EVA DLY		2
EVA CLR		3
EVB DLY		4
EVB CLR		5
EVC DLY		6
EVC CLR		7
EVD DLY		8
EVC CLR		9
RR2 DLY		A
EVC CLR		B
EV CLR ♦		C
EV DLY ♦		D
RR CLR ♦		E
RR DLY ♦		F

(Keystrokes: F + F + Function #)

FUNCTION	PHASE 1	2	3	4	5	6	7	8
PERMIT ☼		2		4		6		
RED LOCK								
YEL LCK								
VEH RECALL		2				6		
PED RECALL		2						
PEDS			observe only					
REST IN WLK		2						
RED REST								
DBL ENTRY								
MAX RECALL								
MAX 2								
COND SERVE								
RR1 EXIT Ø								
Y STARTUP Ø				4				
FIRST Ø		2				6		

Local Data & ID	
CHANNEL NUMBER	0
NUMBER OF LOCATIONS ON CHANNEL :	3
DROP NUMBER C-0-0=	4
CNTR ACCCESS CODE F-0-8=	2
F-0-9=	200
COMM CABLE INFO TRUNK:	W1
NETWORK:	W4
PAIRS:	3,4
Max Initial F-0-E=	20
Red Revert F-0-F=	4.0
All Red Start F-C-0=	5.0

●= MUST BE SAME FOR NON-DENSITY OPERATON

♦ = TIMER (observe only) ☼ =Phases permitted must be set with a power down exceeding 2 seconds

- COORDINATION TIMING -

C Page (F-9-F)=1
For Plans 1-10

(Keystorkes: C + Plan + Feature)

FEATURE		PLAN 1	2	3	4	5	6	7	8	9	A
CYCLE	0	60	60	60						120	
FORCE 1	1	0	0	0						0	
FORCE 2	2	0	0	0						0	
FORCE 3	3	0	0	0						0	
FORCE 4	4	34	34	34						34	
FORCE 5	5	0	0	0						0	
FORCE 6	6	0	0	0						0	
FORCE 7	7	0	0	0						0	
FORCE 8	8	0	0	0						0	
RING OFFSET	9	0	0	0						0	
OFFSET	A	35	45	45						35	
	B										
	C										
PERMISSIVE	D	5	5	5						5	
	E										
	F										

▭ = NOT USED

- SYNCHRONIZED PHASES -

(Keystrokes: C + E + Plan #)

PLAN	PHASE 1	2	3	4	5	6	7	8
0			observe only					
1 (SYNC 1)		2				6		
2 (SYNC 2)		2				6		
3 (SYNC 3)		2				6		
4 (SYNC 4)								
5 (SYNC 5)								
6 (SYNC 6)								
7 (SYNC 7)								
8 (SYNC 8)								
9 (SYNC 9)		2				6		
A (SYNC A)								
B								
C								
D								
E								
F								

- LAG PHASES -

(Keystrokes: C + F + Plan #)

PLAN	PHASE 1	2	3	4	5	6	7	8
0			observe only					
1 (LAG 1)		2		4		6		8
2 (LAG 2)		2		4		6		8
3 (LAG 3)		2		4		6		8
4 (LAG 4)								
5 (LAG 5)								
6 (LAG 6)								
7 (LAG 7)								
8 (LAG 8)								
9 (LAG 9)		2		4		6		8
A (LAG A)								
B								
C								
D								
E								
F								

SET C-0-1 = 0

- Maximum Green Time Per Phase Summary Table (Plan 1-10)

	PLAN 1	2	3	4	5	6	7	8	9	A
PHASE 1										
PHASE 2										
PHASE 3										
PHASE 4										

	PLAN 1	2	3	4	5	6	7	8	9	A
PHASE 5										
PHASE 6										
PHASE 7										
PHASE 8										

ORIGINAL

INTERSECTION NO: 712

INTERSECTION: PASADENA AVENUE @ GLENARM STREET

DRIVEWAY FLASH

Driveway flash: NO

Keystrokes: (C-E-A)

PHASE	1	2	3	4	5	6	7	8

MISC COORD. PARAMETERS	Phase 1	2	3	4	5	6	7	8
Coord. Ped. Recall (C-E-0)								
Coord. Max. Veh. Recall (C-E-B)								
Coord. Lag Phs. Recall (C-F-B)								
Uncoord. Lag Phs. (C-F-0)		2		4		6		8

- DETECTOR TIMING -

* LOCAL DETECTORS *

Dir	Ln	Description	C1 Pin	Input File Slot	Delay Code	Delay Sec	Carryover Code	Carryover 1/10s
			39	2I2U	D10		D30	
			40	6J2U	D11		D31	
WB	LT	1st Vehicle	41	4I6U	D12	0	D32	0.0
			42	8J6U	D13		D33	
			43	2I2L	D14		D34	
			44	6J2L	D15		D35	
WB	RT	1st Vehicle	45	4I6L	D16	5	D36	0.0
			46	8J6L	D17		D37	
			47	2I4U	D18		D38	
				2I4L				
			48	6J4U	D19		D39	
				6J4L				
			49	4I8U	D1A		D3A	
				4I8L				
			50	8J8U	D1B		D3B	
				8J8L				
			55	5J1U	D1C		D3C	
				5J1L				
			56	1I1U	D1D		D3D	
				1I1L				

Dir	Ln	Description	C1 Pin	Input File Slot	Delay Code	Delay Sec	Carryover Code	Carryover 1/10s
			57	7J5U	D1E		D3E	
				7J5L				
			58	3I5U	D1F		D3F	
				3I5L				
			59	5J9U	D20		D40	
			60	1I9U	D21		D41	
			61	7J9L	D22		D42	
			62	3I9L	D23		D43	
			63	2I3U	D24		D44	
			64	6J3U	D25		D45	
			65	4I7U	D26		D46	
			66	8J7U	D27		D47	
			67	2I12U	D28		D48	
			68	6I13U	D29		D49	
			69	4I12L	D2A		D4A	
			70	8I13L	D2B		D4B	
			76	2I3L	D2C		D4C	
			77	6J3L	D2D		D4D	
			78	4I7L	D2E		D4E	
			79	8J7L	D2F		D4F	

* SYSTEM DETECTORS *

	Dir	Ln	Description	C1 Pin	Input File Slot
1				60	I9U
2				62	I9L
3				59	J9U
4				61	J9L

	Dir	Ln	Description	C1 Pin	Input File Slot
5				54	J11U
6				75	J11L
7				47	I4U
8				49	I8U

332 Cabinet Input File Layout

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
U	1E, C	2E,C ( ) 39	2C,C ( ) 63	SD7	3E,C	4E, C ( ) 41	4E, C ( ) 65	SD8	SD1 ( ) 60		ADV ( ) 80	2 ● ( ) 67	6 ● ( ) 68	◆ ( ) 81	"I"
L	( ) 56	2E,C ( ) 43	2E,C ( ) 76	(2✲) 47	0 58	4E, C ( ) 45	4E, C ( ) 78	(4✲) 49	SD2 ( ) 62		●● ( ) 53	4 ● ( ) 69	8 ● ( ) 70	◆◆ ( ) 82	FILE
U	5E, C	6E,C ( ) 40	6E,C ( ) 64	SF1	7E,C	8E,C ( ) 42	8E,C ( ) 66	SF2	SD3 ( ) 59		SD5 ( ) 54	EV A ( ) 71	EV B ( ) 72	RR1 ( ) 51	"J"
L	( ) 55	6C,C ( ) 44	6E,C ( ) 77	(6✲) 48	0 57	8C,C ( ) 46	8E,C ( ) 79	(8✲) 50	SD4 ( ) 81		SD6 ( ) 75	EV C ( ) 73	EV D ( ) 74	RR2 ( ) 52	FILE

( ) = Alternate function, software selectable. E - F - 0 > 0

ALTERNATE INPUTS ENABLED:

LEGEND:

- ✲ - CALL
- ● - PED PB
- ●● - ADVEN
- ◆ - FL SENS
- ◆◆ - STOP TM

-TIME OF DAY FUNCTIONS-

(Keystrokes: 7+Event #)

		TIME	FUNCT	S	M	T	W	T	F	S
	0	21 00	3		2	3	4	5	6	
	1	05 00	3		2	3	4	5	6	
	2									
E	3									
V	4									
E	5									
N	6									
T	7									
	8									
	9									
	A									
	B									
	C									
	D									
	E									
	F									

-FUNCTION BY PHASE/BIT-

(Keystrokes: D-F-Event#)

	1	2	3	4	5	6	7	8
0				4				
1								
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D								
E								
F								

TIME OF DAY LOCAL FUNCTION CODES

- 0 - PERMIT
- 1 - RED LOCK
- 2 - YELLOW LOCK
- 3 - VEH RECALL
- 4 - PED RECALL
- 5 - RESERVED
- 6 - REST IN WALK
- 7 - RED REST
- 8 - DBL ENTRY
- 9 - VEH MAX RCL
- 1 - SOFT RECALL
- B - MAX 2
- C - COND SERVE
- D - TOD LAG PHASE BIT
- E - 1-LOCAL OVERIDE
- F - TOD OUTPUTS BIT
- 1 - TOD OUTPUT 1
- 2 - TOD OUTPUT 2

- TIME BASE COORDINATION SCHEDULE-

(Keystrokes: 9 + Event #)

EVENTS 0-15, D-0-E=0

		TIME	PLAN	PG	S	M	T	W	T	F	S
	D	00 00	1	A	1	2	3	4	5	6	7
	1	06 30	2	A		2	3	4	5	6	
	2	09 00	1	A		2	3	4	5	6	
E	3	14 30	3	A		2	3	4	5	6	
V	4	18 00	1	A		2	3	4	5	6	
E	5										
N	6										
T	7										
	8										
	9										
	A										
	B										
	C										
	D										
	E										
	F										

EVENTS 16-31, D-0-E>0

	TIME	PLAN	PG	S	M	T	W	T	F	S
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

-NOTE:

PLAN-1..A, E(FREE), F(FLASH): PAGE=A,B,C

COORDINATION PLANS 1-10 ARE ON PAGE A

COORDINATION PLANS 11-20 ARE ON PAGE B

COORDINATION PLANS 21-30 ARE ON PAGE C

INTERSECTION NO: 712
INTERSECTION: PASADENA AVENUE @ GLENARM STREET

- Assignable Dectector Inputs - (Set F-9-F=31)

Keystroke Y	C1 Pin # C+O+Y	Attributes C + 1 + Y 1	2	3	4	5	6	7	8	Phases C + 2 + Y 1	2	3	4	5	6	7	8
0	39				4	5		7			2						
1	40				4	5		7							6		
2	41				4	5		7					4				
3	42				4	5		7									8
4	43				4	5		7			2						
5	44				4	5		7							6		
6	45				4	5		7					4				
7	46				4	5		7									8
8	47						6	7			2						
9	48						6	7							6		
A	49						6	7					4				
B	50						6	7									8
C	55				4	5		7						5			
D	56				4	5		7		1							
E	57				4	5		7								7	
F	58				4	5		7				3					
Y	C+4+Y	C + 5 + Y								C + 6 + Y							
0	59				4	5		7						5			
1	60				4	5		7		1							
2	61				4	5		7								7	
3	62				4	5		7				3					
4	63				4	5		7			2						
5	64				4	5		7							6		
6	65				4	5		7					4				
7	66				4	5		7									8
8	67		2								2						
9	68		2														
A	69		2										4				
B	70		2														
C	76				4	5		7			2						
D	77				4	5		7							6		
E	78				4	5		7					4				
F	79				4	5		7									8

Attribute Bits

1 - Full Time Delay
2 - Pedestrian PB
3 - Not Assigned
4 - Not Assigned
5 - Extension
6 - Type 3
7 - Calling
8 - Not Assigned

- Assignable Function Inputs -

Keystroke Y	Function	C1 Pin # C+D+Y	Keystroke Y	Function	C1 Pin # C+E+Y
0	Special Func. 1	0	0	EVA Preempt	7 1
1	Special Func. 2	0	1	EVB Preempt	7 2
4	Stop Time	8 2	2	EVC Preempt	7 3
5	Flash Sense	8 1	3	EVD Preempt	7 4
6	Adv. Enable	5 3	4	RR1 Preempt	5 1
7	Advance	8 0	5	RR2 Preempt	5 2

C Page (F-9-F)=2 **- COORDINATION TIMING -**
For Plans 11-20 (Keystrokes: C + Plan + Feature)

FEATURE		PLAN 1	2	3	4	5	6	7	8	9	A
CYCLE	0										
FORCE 1	1										
FORCE 2	2										
FORCE 3	3										
FORCE 4	4										
FORCE 5	5										
FORCE 6	6										
FORCE 7	7										
FORCE 8	8										
RING OFFSET	9										
OFFSET	A										
	B										
	C										
PERMISSIVE	D										
	E										
	F										

☐ = NOT USED

- SYNCHRONIZED PHASES -
(Keystrokes. C + E + Plan #)

PLAN	PHASE 1	2	3	4	5	6	7	8
0			observe only					
1 (SYNC 1)								
2 (SYNC 2)								
3 (SYNC 3)								
4 (SYNC 4)								
5 (SYNC 5)								
6 (SYNC 6)								
7 (SYNC 7)								
8 (SYNC 8)								
9 (SYNC 9)								
A (SYNC A)								
B								
C								
D								
E								
F								

- LAG PHASES -
(Keystrokes: C + F + Plan #)

PLAN	PHASE 1	2	3	4	5	6	7	8
0			observe only					
1 (LAG 1)								
2 (LAG 2)								
3 (LAG 3)								
4 (LAG 4)								
5 (LAG 5)								
6 (LAG 6)								
7 (LAG 7)								
8 (LAG 8)								
9 (LAG 9)								
A (LAG A)								
B								
C								
D								
E								
F								

- Maximum Green Time Per Phase Summary Table (Plan 11-20)

	PLAN 1	2	3	4	5	6	7	8	9	A
PHASE 1										
PHASE 2										
PHASE 3										
PHASE 4										

	PLAN 1	2	3	4	5	6	7	8	9	A
PHASE 5										
PHASE 6										
PAHSE 7										
PHASE 8										

C Page (F-9-F)=3 **- COORDINATION TIMING -**
For Plans 21-30 (Keystrokes: C + Plan + Feature)

FEATURE		PLAN 1	2	3	4	5	6	7	8	9	A
CYCLE	0										
FORCE 1	1										
FORCE 2	2										
FORCE 3	3										
FORCE 4	4										
FORCE 5	5										
FORCE 6	6										
FORCE 7	7										
FORCE 8	8										
RING OFFSET	9										
OFFSET	A										
	B										
	C										
PERMISSIVE	D										
	E										
	F										

☐ = NOT USED

- SYNCHRONIZED PHASES -
(Keystrokes: C + E + Plan #)

PLAN	PHASE 1	2	3	4	5	6	7	8
0			observe only					
1 (SYNC 1)								
2 (SYNC 2)								
3 (SYNC 3)								
4 (SYNC 4)								
5 (SYNC 5)								
6 (SYNC 6)								
7 (SYNC 7)								
8 (SYNC 8)								
9 (SYNC 9)								
A (SYNC A)								
B								
C								
D								
E								
F								

- LAG PHASES -
(Keystrokes: C + F + Plan #)

PLAN	PHASE 1	2	3	4	5	6	7	8
0			observe only					
1 (LAG 1)								
2 (LAG 2)								
3 (LAG 3)								
4 (LAG 4)								
5 (LAG 5)								
6 (LAG 6)								
7 (LAG 7)								
8 (LAG 8)								
9 (LAG 9)								
A (LAG A)								
B								
C								
D								
E								
F								

- Maximum Green Time Per Phase Summary Table (Plan 21-30)

	PLAN 1	2	3	4	5	6	7	8	9	A
PHASE 1										
PHASE 2										
PHASE 3										
PHASE 4										

	PLAN 1	2	3	4	5	6	7	8	9	A
PHASE 5										
PHASE 6										
PAHSE 7										
PHASE 8										

per S903 and S909(Sheet 1 and 2)

156

3/4"C 54

16391 H.1059

220

3/4"C 54

6591 H.1051

INSTALL TELEPHONE SERVICE AND 120/240 V. SIGNAL AND LIGHTING CONDUCTORS TO #6 PULL BOX.

2"C 2

2"C 3

R49

12" HEAD

TYPE "C" MH

REMOVE (By Others)

6-4" FIBRE

4' COVER

2-3" FIBRE LATS TO CURB

3' COVER

6 P.B.

#6 P.B. FOR SERVICE

SEE NOTE 1

2-2"C

2"C 1

2P

8P

30'

18'

18817 H.1062

1"C

24'

PROHIBIT PARKING

8-4" FIBRE

8P1

8P2

ONLY

(4I6J)

(4I6L)

PROHIBIT PARKING

NOTES (

1. INSTALL A SPECIAL PR
CONTROLLER WITH 3-
A TWO FUNCTION TIM

City of Pasadena *Department of Transportation* *Traffic Management Center*

INTERSECTION NO: 806	OPERATION PT	REVIEWED BY: VK	DATE: 10/10/2003	EMRG VEH PREEMPT	NO
INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET		IMPLEMENTED BY: DP	DATE: 10/10/2003		
		SUPERSEDED TIMING SHEET:	12/18/1997	PROGRAMMED FLASH	YES

PHASE

	Interval	1	2	3	4	5	6	7	8
0	WALK	0	5	0	5	0	0	0	0
1	DONT WALK	0	17	0	15	0	0	0	0
2	MIN INITIAL	0	10	0	10	0	0	0	0
3	TYPE 3 LIMIT	0	0	0	0	0	0	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	MAX GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	MAX LIMIT	0	50	0	40	0	0	0	0
9	MAXIMUM 2	0	0	0	0	0	0	0	0
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	MIN PED CLR	0	0	0	0	0	0	0	0
C	COND SRV MIN	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	YELLOW	0.0	3.9	0.0	3.6	0.0	0.0	0.0	0.0
F	RED CLEAR	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

PHASE BANK 1 < C + 0 + F = 1 >

ALTERNATE TIMING

		9	A	B	C	D
1	Ph. 1	0	0	0	0	0
2	Ph. 2	0	0	0	0	0
3	Ph. 3	0	0	0	0	0
4	Ph. 4	0	0	0	0	0
5	Ph. 5	0	0	0	0	0
6	Ph. 6	0	0	0	0	0
7	Ph. 7	0	0	0	0	0
8	Ph. 8	0	0	0	0	0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

ALL RED START: <F/ + C + 0> =	5.0
RED REVERT: <F/ 1 + 0 + F> =	2.0
FLASH START: <F/ 1 + 0 + E> =	0.0

PREEMPT

	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	
EV DLY	
RR CLR	
RR DLY	

PHASE FUNCTION FLAGS

		Column F
0	PERMIT	2 4
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	2 4
4	PED RECALL	2 4
5	PEDESTRIANS	observe only
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	12345678
E	YELLOW START	
F	FIRST PHASES	2

< C + 0 + F = 1 >

SPECIALS

		Column F
0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	12345678
5	SEQ TIMING	12345678
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9		
A	MAX EXTEN	12345678
B	INH PED RSRV	
C	SEMI ACTUA.	
D	O'LAP STRT UP	
E	STRT VEH CALL	12345678
F	STRT PED CALL	2 4 6 8

Specials <C + 0 + F = 2>

Controller Intervals

0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
(C/0 + A + 1) = 0
AUTO = 0 FREE = 14
PLAN = 1 - 9 FLASH= 15

MANUAL OFFSET SELECT:
(C/0 + B + 1) = 0
AUTO = 0 OFFSET B = 2
OFFSET A = 1 OFFSET C = 3

COMM ADDRESS:
(C/0 + 0 + 0) = 5

ZONE NUMBER:
(C/0 + 0 + 1) = NONE

AREA NUMBER:
(C/0 + 0 + 2) = NONE

AREA ADDRESS:
(C/0 + 0 + 3) = NONE

I2 CHANNEL	I2 PORT #	TRUNK	NETWORK	PAIRS
202	12	W1	W3	11,12

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >
2) Key stroke: PAGE + COLUMN + ROW

EXCL. PED. OPERATION:
WALK:
(F/1+0+0) = 0
DONT WALK:
(F/1+0+1) = 0
RED CLEAR:
(F/1+0+2) = 0.0

IC SELECT
2 = 2Way Comm
3 = 7 Wire Slave
4 = Flash/Free
5 = Simplex Master
7 = 7 Wire Master

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero >

CONTROLLER CONFIGURATION FLAGS

		Column E
0	EXCLUSIVE	
1	RR 1 CLEAR	
2	RR 2 CLEAR	
3	RR 2 LTD SRV	
4	PROT/PERM	
5	FLH TO PREMT	
6	FLASH ENTRY	
7	DSABL MIN YEL	
8	DSABL OVP YEL	
9	OVP FLH YEL	
A	EM. VEH. A	
B	EM. VEH. B	
C	EM. VEH. C	
D	EM. VEH. D	
E	EXTRA 1	1 3
F	IC SELECT	2

< C + 0 + E = 125 >

		Column F
0		
1	EXT PERMIT 1	
2	EXT PERMIT 2	
3	EXCLU PED	
4	PREEMPT NON-L	
5	PED 2 P OUT	2
6	PED 6 P OUT	
7	PED 4 P OUT	4
8	PED 8 P OUT	
9	FLH YELLOW	
A		
B		
C		
D		
E	RESTRICTED	
F	EXTRA 2	

< C + 0 + E = 125 >

EXTRA 2
1 = AWB On during Phase Initial
2 = FYA/Installed
4 = QuicNet/4

FLASH TO PREMPT
1 = EV A
2 = EV B
3 = EV C
4 = EV D
5 = RR 1
6 = RR2
7 = SE 1
8 = SE 2

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
6 = International Ped.
7 = Clear Outputs During Flash
8 = Split Ring Operation

- PHASE DIAGRAM-

RING

1	2	3	4
5	6	7	8

A
B

Program: 233 Type 170 I2

i2 System

NORTH

REGISTERED PROFESSIONAL ENGINEER
NORMAN M. BACULINAO
No. 50721
Exp. 09/30/2011
CIVIL
STATE OF CALIFORNIA

INTERSECTION NO: 806

INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET

SYSTEM DETECTORS

	Dir	Ln	Description	C1 Pin	Input File Slot		Dir	Ln	Description	C1 Pin	Input File Slot
1 5			SYS DET #1	60	I9U				SYS DET #5	54	J11U
2 6			SYS DET #2	62	I9L				SYS DET #6	75	J11L
3 7			SYS DET #3	59	J9U				SYS DET #7	47	I4U
4 8			SYS DET #4	61	J9L				SYS DET #8	49	I8U

DESCRIPTION	COL->	DELAY 1	CARRY OVER 3	337 CABINET LOCATION	Column 0 C1 PIN No.	Column 1 ATTRIBUTES 2 3 4 5 6 7 8	Column 2 PHASE(S) 2 3 4 5 6 7 8	Column 3 ASSIGNMENTS 1 2 3 4 5 6 7
	0	0.0	0.0	2I1U	D 39	4 5 7	2	1 2 3
	1	0.0	0.0	6I2U	1 40	4 5 7	6	1 2 3
	2	0.0	0.0	4I3U	2 41	4 5 7	4	1 2 3
	3	0.0	0.0	8J6U	3 42	4 5 7	8	1 2 3
	4	0.0	0.0	2I1L	4 43	4 5 7	2	1 2 3
	5	0.0	0.0	6I2I	5 44	4 5 7	6	1 2 3
	6	0.0	0.0	4I3L	6 45	4 5 7	4	1 2 3
	7	0.0	0.0	8J6L	7 46	4 5 7	8	1 2 3
	8	0.0	1.0	2I4U	8 47	6 7	2	1 2 3
	9	0.0	1.0	6I8L	9 48	6 7	6	1 2 3
	A	0.0	1.0	4I4L	A 49	6 7	4	1 2 3
	B	0.0	1.0	J-8U/L	B 50	6 7	8	1 2 3
	C	0.0	0.0	5J1U/L	C 55	4 5 7	5	1 2 3
	D	0.0	0.0	1I1U/L	D 56	4 5 7	1	1 2 3
	E	0.0	0.0	7J5U/L	E 57	4 5 7	7	1 2 3
	F	0.0	0.0	3I5U/L	F 58	4 5 7	3	1 2 3

< C + 0 + D = 0 > DETECTOR ASSIGNMENTS, < C + O + E = 126 >

DESCRIPTION	COL->	DELAY 2	CARRY OVER 4	337 CABINET LOCATION	Column 4 C1 PIN No.	Column 5 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 6 PHASE(S) 1 2 3 4 5 6 7 8	Column 7 ASSIGNMENTS 1 2 3 4 5 6 7 8
	0	0.0	0.0	5I9U	0 59	4 5 7	5	1 2 3
	1	0.0	0.0	1I10U	1 60	4 5 7	1	1 2 3
	2	0.0	0.0	7I9L	2 61	4 5 7	7	1 2 3
	3	0.0	0.0	3I10L	3 62	4 5 7	3	1 2 3
	4	0.0	0.0	2I3U	4 63	4 5 7	2	1 2 3
	5	0.0	0.0	6J3U	5 64	4 5 7	6	1 2 3
	6	0.0	0.0	4I7U	6 65	4 5 7	4	1 2 3
	7	0.0	0.0	8J7U	7 66	4 5 7	8	1 2 3
2 PED	8	0.0	0.0	2I7U	8 67	2	2	1 2 3
6 PED	9	0.0	0.0	6I8U	9 68	2		1 2 3
4 PED	A	0.0	0.0	4I7L	A 69	2	4	1 2 3
	B	0.0	0.0	8I13L	B 70	2		1 2 3
	C	0.0	0.0	2I3L	C 76	4 5 7	2	1 2 3
	D	0.0	0.0	6J3L	D 77	4 5 7	6	1 2 3
	E	0.0	0.0	4I7L	E 78	4 5 7	4	1 2 3
	F	0.0	0.0	8J7L	F 79	4 5 7	8	1 2 3

< C + 0 + D = 0 > DETECTOR ASSIGNMENTS, < C + O + E = 126 >

NOTE: PLEASE DO NOT CLEAR DEFAULT SETTINGS UNLESS SHOWN OTHERWISE!

Legend: "-" = Default Settings; "X" = New Settings; "O" = Cleared Default Settings

DETECTOR ATTRIBUTES
1= Full Time Delay
2 = Pedestrian Call
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

DETECTOR ASSIGNMENTS
1 = Det. Set # 1
2 = Det. Set # 2
3 = Det. Set # 3
6 = MIN Recall On Failure
7 = MAX Recall On Failure
8 = Report On Failure

Detector Monitor
MAX OFF: (D/0 + 0 + 1) = 0
MAX ON: (D/0 + 0 + 2) = 0

Power Cycle Correction Factors
LONG FAILURE: (F/1 + 0 + 6) = ___
SHORT FAILURE: (F/1 + 0 + 7) = ___
NOTE: Do Not Set To Zero
Default Value = 0.5 Sec

		1	2	3	4	5	6	7	8	
0	LOAD SW #	0	0	0	0	0	0	0	0	0
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
1	VEH SET 1									1
2	VEH SET 2									2
3	VEH SET 3									3
4	NEG. VEH.									4
5	NEG. PED.									5
6	GREEN OMIT									6
7	GRN CLR OMIT									7
8										8
D	GREEN CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	YELLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	RED CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

OVERLAP ASSIGNMENTS < C + 0 + E = 29 >

INTERSECTION NO: 806

INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET

PLAN NUMBER

		1	2	3	4	5	6	7	8	9
0	CYCLE	60	60	60	0	0	0	0	90	120
1	FORCE 1	0	0	0	0	0	0	0	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	0	0	0	0	0	0	0	0
4	FORCE 4	27	28	28	0	0	0	0	25	25
5	FORCE 5	0	0	0	0	0	0	0	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	0	0	0	0	0	0	0
8	FORCE 8	0	0	0	0	0	0	0	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	10	10	4	0	0	0	0	21	70
B	OFFSET 2	0	0	0	0	0	0	0	0	0
C	OFFSET 3	0	0	0	0	0	0	0	0	0
D	END PERM 1	10	10	10	0	0	0	0	10	10
E	HOLD RELEASE	255	255	255	255	255	255	255	255	255
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

COLUMN E

		1	2	3	4	5	6	7	8
0									
1	SYNC Plan 1		2						
2	SYNC Plan 2		2						
3	SYNC Plan 3		2						
4	SYNC Plan 4								
5	SYNC Plan 5								
6	SYNC Plan 6								
7	SYNC Plan 7								
8	SYNC Plan 8		2						
9	SYNC Plan 9		2						
A	NEMA SYNC								
B	NEMA HOLD								
C									
D									
E	COORD EXTRA								
F									

< C + 0 + C = 1 >

COLUMN F

		1	2	3	4	5	6	7	8
0	LAG FREE		2		4		6		8
1	LAG PLAN 1		2		4		6		8
2	LAG PLAN 2		2		4		6		8
3	LAG PLAN 3		2		4		6		8
4	LAG PLAN 4								
5	LAG PLAN 5								
6	LAG PLAN 6								
7	LAG PLAN 7								
8	LAG PLAN 8		2		4		6		8
9	LAG PLAN 9		2		4		6		8
A	EXT. LAG								
B									
C									
D									

COORDINATION EXTRA:
1- Programmed Walk Time for SYNC Phases

COLUMN 2
Coord Min.

1	0
2	22
3	0
4	21
5	0
6	0
7	0
8	0

< C + 0 + C = 5 >

DIAL UP"stand alone" MODEM INTERFACE.
NOTE: If "Non-Zero," parity will be DISABLED for "Smart Modem" Operation.
< C/5 +D+0 >= _____

TRANSITION TYPE:
< C/5 + 1 + 9 > = 0.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU X.4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = _____

7-WIRE SYNC TIME:
< C/5 + 1 + C > = _____

Low Priority Channel:
< E/125 + C + 8 > _____
1 - Channel A
2 - Channel B
3 - Channel C
4 - Channel D

Daylight Savings Time

Begin Month	<C/5+2+A>	3
Begin Week	<C/5+2+B>	2
End Month	<C/5+2+C>	11
End Week	<C/5+2+D>	1

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

Min Green Before PE Force Off

Min Time, sec.	<F/1+0+8>	0

Max Preemt Time Before Failure

Max Time, min.	<F/1+0+9>	0

Min Time Bet.Same Preempts
(Does Not Apply To Railroad Preempt)

Min Time, sec.	<F/1+0+A>	0

Plan # -->	1	2	3	4	5	6	7	8	9	
0 PED ADJUST	0	0	0	0	0	0	0	0	0	0
1 STRT PERM 2	0	0	0	0	0	0	0	0	0	1
2 END PERM 2	0	0	0	0	0	0	0	0	0	2
3 STRT PERM 3	0	0	0	0	0	0	0	0	0	3
4 END PERM 3	0	0	0	0	0	0	0	0	0	4
5 RSERVE TIME	0	0	0	0	0	0	0	0	0	5
	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6 RSERVE PH										6
7										7
8 PRETIMED										8
9 MAX RECALL										9
A PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C PERM 2 VEH										C
D PERM 2 PED										D
E PERM 3 VEH										E
F PERM 3 PED										F

COORDINATION PAGE 2 < C + 0 + C = 2 >

INTERSECTION NO: 806

INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET

COORD (9 Key)

	TIME HHMM	PLAN	OFF-SET	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	0000	F	A	1	2	3	4	5	6	7
1	0500	1	A	1	2	3	4	5	6	7
2	0600	2	A	_	2	3	4	5	6	_
3	0930	1	A	_	2	3	4	5	6	_
4	1530	3	A	_	2	3	4	5	6	_
5	1900	1	A	_	2	3	4	5	6	_
6	0000	0	0							
7	0000	0	0							
8	0000	0	0							
9	0000	0	0							
A	0000	0	0							
B	0000	0	0							
C	0000	0	0							
D	0000	0	0							
E	0000	0	0							
F	0000	0	0							

< C + 0 + 9 = 0.1 >

COORD (9 Key)

	TIME HHMM	PLAN	OFF-SET	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	0000	0	0							
1	0000	0	0							
2	0000	0	0							
3	0000	0	0							
4	0000	0	0							
5	0000	0	0							
6	0000	0	0							
7	0000	0	0							
8	0000	0	0							
9	0000	0	0							
A	0000	0	0							
B	0000	0	0							
C	0000	0	0							
D	0000	0	0							
E	0000	0	0							
F	0000	0	0							

< C + 0 + 9 = 0.2 >

TOD FUNCTION (7 KEY)

	TIME	Funct	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	0000	0							
1	0000	0							
2	0000	0							
3	0000	0							
4	0000	0							
5	0000	0							
6	0000	0							
7	0000	0							
8	0000	0							
9	0000	0							
A	0000	0							
B	0000	0							
C	0000	0							
D	0000	0							
E	0000	0							
F	0000	0							

< C + 0 + 7 = 0.1 >

Column 4

	PHASES / BITS 1	2	3	4	5	6	7	8
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D								
E								
F								

< C + 0 + E = 27 >

HOLIDAY TOD

FUNCTION (7 KEY)

	TIME	Funct	1	2	3	4	5	6	7
0	0000	0							
1	0000	0							
2	0000	0							
3	0000	0							
4	0000	0							
5	0000	0							
6	0000	0							
7	0000	0							
8	0000	0							
9	0000	0							
A	0000	0							
B	0000	0							
C	0000	0							
D	0000	0							
E	0000	0							
F	0000	0							

< C + 0 + 7 = 0.2 >

Column 4

	PHASES / BITS 1	2	3	4	5	6	7	8
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D								
E								
F								

<C+0+E=28 >

T.O.D. FUNCTIONS

- 0 = Permit Phases
- 1 – Red lock
- 2 = Yellow lock
- 3 – Veh recall
- 4 – Ped recall
- 5 –
- 6 – Rest in walk
- 7 = Red Rest
- 8 – Double Entry
- 9 – Veh. MAX Recall
- A = Veh. Soft Recall
- B = Maximum 2
- C = Conditional Service
- D – Lag Phases
- E – Bit 1 - Local Override
- = Bit 4 - Disable Det Monitor
- = Bit 7 - Det. Count Monitor
- – Bit 8 - Real Time Split Monitor
- F – Output Bits 1 through 8

HOLIDAY EVENTS

	TIME HHMM	PLAN	OFF-SET	1	2	3	4	5	6	7
0	0000	0	0							
1	0000	0	0							
2	0000	0	0							
3	0000	0	0							
4	0000	0	0							
5	0000	0	0							
6	0000	0	0							
7	0000	0	0							
8	0000	0	0							
9	0000	0	0							
A	0000	0	0							
B	0000	0	0							
C	0000	0	0							
D	0000	0	0							
E	0000	0	0							
F	0000	0	0							

< C + 0 + 9 = 1.1 >

HOLIDAY EVENTS

	TIME HHMM	PLAN	OFF-SET	1	2	3	4	5	6	7
0	0000	0	0							
1	0000	0	0							
2	0000	0	0							
3	0000	0	0							
4	0000	0	0							
5	0000	0	0							
6	0000	0	0							
7	0000	0	0							
8	0000	0	0							
9	0000	0	0							
A	0000	0	0							
B	0000	0	0							
C	0000	0	0							
D	0000	0	0							
E	0000	0	0							
F	0000	0	0							

< C + 0 + 9 = 1.2 >

HOLIDAY DATES (Bank 1)

	DAY	YEAR	MO.	1	2	3	4	5	6	7
0	00	00	0							
1	00	00	0							
2	00	00	0							
3	00	00	0							
4	00	00	0							
5	00	00	0							
6	00	00	0							
7	00	00	0							
8	00	00	0							
9	00	00	0							
A	00	00	0							
B	00	00	0							
C	00	00	0							
D	00	00	0							
E	00	00	0							
F	00	00	0							

< C + 0 + 8 = 1.1 >

HOLIDAY DATES (Bank 2)

	DAY	YEAR	MO.	1	2	3	4	5	6	7
0	00	00	0							
1	00	00	0							
2	00	00	0							
3	00	00	0							
4	00	00	0							
5	00	00	0							
6	00	00	0							
7	00	00	0							
8	00	00	0							
9	00	00	0							
A	00	00	0							
B	00	00	0							
C	00	00	0							
D	00	00	0							
E	00	00	0							
F	00	00	0							

< C + 0 + 8 = 1.2 >

PLAN SELECT

- 1 = Coordination Plan 1 THRU
- 9 = Coordination Plan 9
- E = Free
- F = Flash

OFFSET SELECT

- A = Offset A
- B = Offset B
- C = Offset C

MONTH SELECT

- 1 = January
- 2 = February
- 3 = March
- 4 = April
- 5 = May
- 6 = June
- 7 = July
- 8 = August
- 9 = September
- A = October
- B = November
- C = December

INTERSECTION NO: 806

INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET

PHASE

		1	2	3	4	5	6	7	8
0	WALK	0	0	0	0	0	0	0	0
1	FLSH DONT WALK	0	0	0	0	0	0	0	0
2	MINIMUM INITIAL	0	0	0	0	0	0	0	0
3	TYPE 3 LIMIT	0	0	0	0	0	0	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	MAX GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	MAX LIMIT	0	0	0	0	0	0	0	0
9	MAXIMUM 2	0	0	0	0	0	0	0	0
A	ADV/DLY WALK	0	0	0	0	0	0	0	0
B	MIN PED CLEAR	0	0	0	0	0	0	0	0
C	COND SRV MIN	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	YELLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	RED CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHASE BANK # 2 < C + 0 + F = 2 >

		9	A	B	C	D
0						
1	PHASE 1	0	0	0	0	0.0
2	PHASE 2	0	0	0	0	0.0
3	PHASE3	0	0	0	0	0.0
4	PHASE 4	0	0	0	0	0.0
5	PHASE 5	0	0	0	0	0.0
6	PHASE 6	0	0	0	0	0.0
7	PHASE 7	0	0	0	0	0.0
8	PHASE 8	0	0	0	0	0.0
		Max Init.	Alt. Wlk	Alt. FDW	Alt. Init.	Alt. Ext.

Time of Day Function (7 KEY)
CURRENT TOD "E FUNCTION"
CONTROL BITS = <C/0+E+E>
CURRENT TOD "F FUNCTION"
OUTPUT BITS = <C/0+E+F>

PHASE

		1	2	3	4	5	6	7	8
0	WALK	0	0	0	0	0	0	0	0
1	FLSH DONT WALK	0	0	0	0	0	0	0	0
2	MINIMUM INITIAL	0	0	0	0	0	0	0	0
3	TYPE 3 LIMIT	0	0	0	0	0	0	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	MAX GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	MAX LIMIT	0	0	0	0	0	0	0	0
9	MAXIMUM 2	0	0	0	0	0	0	0	0
A	ADV/DLY WALK	0	0	0	0	0	0	0	0
B	MIN PED CLEAR	0	0	0	0	0	0	0	0
C	CON SRV MIN	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	YELLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	RED CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PHASE BANK # 3 < C + 0 + F = 3 >

		9	A	B	C	D
0						
1	PHASE 1	0	0	0	0	0.0
2	PHASE 2	0	0	0	0	0.0
3	PHASE3	0	0	0	0	0.0
4	PHASE 4	0	0	0	0	0.0
5	PHASE 5	0	0	0	0	0.0
6	PHASE 6	0	0	0	0	0.0
7	PHASE 7	0	0	0	0	0.0
8	PHASE 8	0	0	0	0	0.0
		Max Init.	Alt. Wlk	Alt. FDW	Alt. Init.	Alt. Ext.

Other Misc. Displays

CURRENT PERMIT PHASES:
= <E/0 + 7 + 8>
CURRENT PHASE BANK:
= <F/0 + C + E>
POWER FAILURE COUNTS:
(Long Fails) = <F/1+0+C>
(Short Fails.) = <F/1+0+D>
"8" Key; <C+0+8=0>
LAST POWER FAILURE:
(HR-MIN-DOW) = <8/0+4>
(DOM-YR-MO) = <8/0+5>
LAST CABINET FLASH:
(HR-MIN-DOW) = <8/0+6>
(DOM-YR-MO) = <8/0+7>

SPECIAL EVENT SCHEDULES:
Special Event 1: C+0+E = 27
Special Event 2: C+0+E = 28
Current Interval = E + 5 +0
Current Timer = E + 5 + 8
Current Interval or Clearance Phases = E + 5 + C

CURRENT DATE/TIME:
(HR-MIN-DOW) = <8/0+0>
(Day-YR-MO) = <8/0+1>
(MIN-S-1/10SEC) = <8/0+F>

Column D

		1	2	3	4	5	6	7	8
0									
1	OUT PORT 1	-	-	-	-	-	-	-	-
2	OUT PORT 2	-	-	-	-	-	-	-	-
3	OUT PORT 3	-	-	-	-	-	-	-	-
4	OUT PORT 4	-	-	-	-	-	-	-	-
5	OUT PORT 5	-	-	-	-	-	-	-	-
6	OUT PORT 7	-	-	-	-	-	-	-	-
7	OUT PORT 7	-	-	-	-	-	-	-	-

Dimming<C + 0 + E = 125>

Enable "E" Page:
F/1+9+E= Not Zero

Display Locations

Manual Plan	= C/0+A+1
Master Plan	= C/0+A+2
Current Plan	= C/0+A+3
Next Plan	= C/0+A+4
TOD Plan	= C/0+A+5
Master Cycle	= C/0+A+0
Ring A Cycle	= C/0+B+0
Ring B Cycle	= C/0+D+0
MIN Cycle	= C/0+A+E
MAX Cycle	= C/0+B+E
CALCULATED CYCLE	= C/0+B+F
Phase HOLD	= C/0+F+D
Phase Next	= C/0+F+E
Force Off	= C/0+F+F
Interval Timer Display	
Ring A	= F/0 + A + Interval
Ring B	= F/0 + B + Interval

PED/PHASE/OVERLAP

		1	2	3	4	5	6	7	8
0	WALK	0	0	0	0	0	0	0	0
1	DON'T WALK	0	0	0	0	0	0	0	0
2	PHASE GREEN	0	0	0	0	0	0	0	0
3	PHAZE YELLOW	0	0	0	0	0	0	0	0
4	PHASE RED	0	0	0	0	0	0	0	0
5	OV'LAP GREEN	0	0	0	0	0	0	0	0
6	OV'LAP YELLOW	0	0	0	0	0	0	0	0
7	OV'LAP RED	0	0	0	0	0	0	0	0

REDIRECT PHASE OUTPUTS < C+0+E = 127>

ENABLE/DISABLE
PHASE REDIRECTION
CABINET TYPE:
(E/125+0+0)= 0
CABINET TYPE:
30 = TYPE 303/330 CABINET
(TO ENABLE REDIRECTION)
0 = ALL OTHER TYPES
(TO DISABLE REDIRECTION)

412C Memory Module Battery:
IF E/112 + 0 + A = 84, battery is bad
IF E/112 + 0 + A = 85, battery is OK.

CONTINUOUS MEMORY ERROR MONITORING

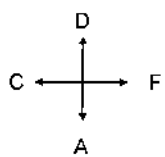
"bAdA" -ERROR WAS DETECTED IN THE CPU'S RAM OR A NEW PROGRAM HAS BEEN INSTALLED ON THE MEMORY MODULE OFTEN CAUSED BY A BAD CONTROL LER "GEL-CELL" BATTERY.

"bAdB" - ERROR WAS DETECTED IN THE MEMORY MODULE'S RAM. OFTEN CAUSED BY BAD "LITHIUM" BATTERY ON THE MEMORY MODULE.

"bAdE" - AN ERROR WAS DETECTED IN THE EPROM.

"bAdF" - AN ERROR WAS DETECTED IN THE Z-RAM (DALLAS CHIP) ON THE MEMORY MODULE.

DISPLAY MOVEMENT CODES
A = Advance ROW
D = Decrement ROW
C = COLUMN Back
F = Forward COLUMN.



LOGIC DELAY GATE
DELAY TIMER DISPLAY
DELAY A Timer=C/0+9+A
DELAY B Timer=C/0+9+B
"thru" "thru"
DELAY F Timer=C/0+9+F

INTERSECTION NO: 806

INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		ROW
0			NOT-3	0	MAX 2	0	Pretimed	0	Set Mon.	0	DIAL 2	0		0	0
1			NOT-4	0	SY DET 1	60	Plan 1	0	Ext.Perm1	0	DIAL 3	0	EV A	71	1
2	SPF 1	0	OR-4 (a)	0	SY DET 2	62	Plan 2	0	Ext.Perm2	0	OFF 1	0	EV B	72	2
3	SPF 2	0	OR-4 (b)	0	SY DET 3	59	Plan 3	0	Dimming	0	OFF 2	0	EV C	73	3
4	NAND-3	0	OR-5 (a)	0	SY DET 4	61	Plan 4	0	Set Clock	0	OFF 3	0	EV D	74	4
5	NAND-3	0	OR-5 (b)	0	SY DET 5	54	Plan 5	0	Stop Time	82	FREE	0	RR 1	51	5
6	NAND-4	0	OR-6 (a)	0	SY DET 6	75	Plan 6	0	Flash Sns	81	FLASH	0	RR 2	52	6
7	NAND-4	0	OR-6 (b)	0	SY DET 7	47	Plan 7	0	Enable	53	Xpd Omit	0	SP 1	0	7
8	OR 7 (a)	0	Fig 3 Dia.	0	SY DET 8	49	Plan 8	0	Advance	80	NOT 1	0	SP 2	0	8
9	OR 7 (b)	0	Fig 4 Dia.	0	MX INIBT	0	Plan 9	0	Ext Alarm	0	NOT 2	0	X LAG	0	9
A	OR 7 (c)	0	AND4 (a)	0	FORCE A	0	DELAY-A	0	FZBank 2	0	OR 1	0	AND 1	0	A
B	OR 7 (d)	0	AND4 (b)	0	FORCE B	0	DELAY-B	0	FZBank 3	0	OR 1	0	AND 1	0	B
C	OR 8 (a)	0	NAND1(a)	0	CNA	0	DELAY-C	0	O'lap set 2	0	OR 2	0	AND 2	0	C
D	OR 8 (b)	0	NAND1(b)	0	HOLD	0	DELAY-D	0	O'lap set 3	0	OR 2	0	AND 2	0	D
E	OR-8 (c)	0	NAND2(a)	0	VEH CALL	0	DELAY-E	0	Det. Set 2	0	OR 3	0	AND 3	0	E
F	OR-8 (d)	0	NAND2(b)	0	RECALL	0	DELAY-F	0	Det Set 3	0	OR 3	0	AND 3	0	F

ASSIGNABLE INPUTS < C + 0 + E = 126 >

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		ROW
0	Fz ON - 1	0	PrEmp FI	0	FLHR 0	0	FREE	0	NOT 1	0	TOD 1	0	DIAL 2	0	0
1	Fz ON - 2	0	SP EV 1	0	FLHR 1	0	PLAN 1	0	OR 1	0	TOD 2	0	DIAL 3	0	1
2	Fz ON - 3	0	SP EV 2	0	F FLHR	0	PLAN 2	0	OR 2	0	TOD 3	0	OFF 1	0	2
3	Fz ON - 4	0	SP EV 3	0		0	PLAN 3	0	OR 3	0	TOD 4	0	OFF 2	0	3
4	Fz ON - 5	0	SP EV 4	0		0	PLAN 4	0	AND 1	0	TOD 5	0	OFF 3	0	4
5	Fz ON - 6	0	SP EV 5	0		0	PLAN 5	0	AND 2	0	TOD 6	0	FREE	0	5
6	Fz ON - 7	0	SP EV 6	0		0	PLAN 6	0	AND 3	0	TOD 7	0	FLASH	0	6
7	Fz ON - 8	0	SP EV 7	0		0	PLAN 7	0	NOT 2	0	TOD 8	0	PREMPT	0	7
8	Fz Ck - 1	0	SP EV 8	0	NOT 3	0	PLAN 8	0	EV A	0	WARN 1	0		0	8
9	Fz Ck - 2	0		0	NOT 4	0	PLAN 9	0	EV B	0	WARN 2	0		0	9
A	Fz Ck - 3	0	DET FAIL	0	OR 4	0		0	EV C	0	DELAY A	0		0	A
B	Fz Ck - 4	0		0	OR 5	0		0	EV D	0	DELAY B	0		0	B
C	Fz Ck - 5	0		0	OR 6	0	NAND-3	0	RR 1	0	DELAY C	0		0	C
D	Fz Ck - 6	0	CNT CTL	0	AND 4	0	NAND-4	0	RR 2	0	DELAY D	0		0	D
E	Fz Ck - 7	0	XDWALK	0	NAND 1	0		0	SP 1	0	DELAY E	0		0	E
F	Fz Ck - 8	0	X WALK	0	NAND 2	0		0	SP 2	0	DELAY F	0		0	F

ASSIGNABLE OUTPUTS < C + 0 + E =127>

	6								7	8								9								A								B								C								D								E								F								
	CLEAR								TIME	PED CALL								HOLD								ADVANCE								FORCE OFF								CALL								PERMIT								PED OMIT								OUTPUT								
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
0	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
2	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
3	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
4	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
5	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
6	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
7	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
8	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
9	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
A	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A
B	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B
C	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C
D	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D
E	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E
F	-	-	-	-	-	-	-	-	0000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F

SPECIAL EVENT SCHEDULE < C + 0 + E = 27 >

COLUMN B

A	DELAY A	0
B	DELAY B	0
C	DELAY C	0
D	DELAY D	0
E	DELAY E	0
F	DELAY F	0

<C+ 0 + D = 0>

LOGIC DELAY TIMES

FOR SPECIAL EVENT Table 1:
LIMITED SERVICE INTERVAL:
< E/27+5+ F > = 0

INTERSECTION NO: 806

INTERSECTION: ORANGE GROVE BLVD @ COLUMBIA STREET

REMOTE ACCESS DOWNLOAD: C/0+0+4=1
CHECK COMMUNICATION ADDRESS BEFORE DOWNLOAD FROM CENTRAL

	C	Row
EV-A		0
EV-B		1
EV-C		2
EV-D		3
RR-1 *		4
RR-2 *		5
SE-1		6
SE-2		7
		8
<C+0+E=125>		9

(* RR-1 is always Highest, and RR-2 is always Second Highest)

	6 CLEAR	7 TIME	8 PED CALL	9 HOLD	A ADVANCE	B FORCE OFF	C CALL	D PERMIT	E PED OMIT	F OUTPUT
	1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
0	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
1	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
2	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
3	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
4	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
5	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
6	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
7	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
8	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
9	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
A	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F	- - - - - - - -	0000	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

SPECIAL EVENT SCHEDULE < C + 0 + E = 28 >

FOR SPECIAL EVENT TABLE #2:
<C+0+E=28> And use same key strokes as table 1 to access table.
LIMITED SERVICE
< E / 28 + 5 + F > = _____

City of Pasadena - Department of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

QuicNet System Parameters

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **35**
Commications Channel: **UDP:8001.10.95.8.7**
Drop Address: **14**
Area Number: **1**
Area Address: **35**

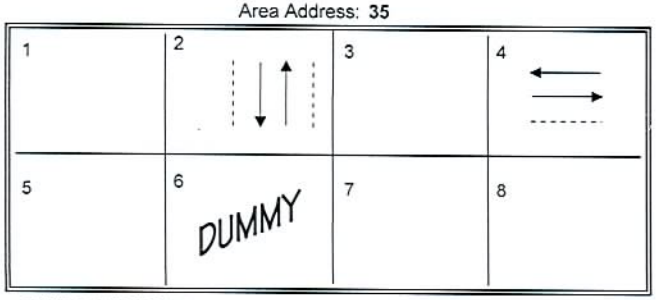
N/S Street Name: **Fair Oaks Avenue**
E/W Street Name: **Columbia Street**

Last *QuicNet* Database Change: **QuicNet Pro**

Notes:
Econolite Serial Number: 823

SUPERSEDED TIMING SHEET		DATE
		6/3/1999
TIMING BY:	DP	5/5/2004
REVIEWED BY:	VK	5/5/2004
IMPLEMENTED BY:	S. PAS	5/5/2004

CHANGE	BY	DATE
CHANGED FDW: PH2 WAS 4, PH4 WAS 14	AF	11/23/2009



- PHASE DIAGRAM-

		Phase 1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	4	0	4	0	4	0	0
	Extension	0.0	4.5	0.0	3.0	0.0	2.5	0.0	0.0
	Max	0	60	0	25	0	50	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	4.0	0.0	3.1	0.0	4.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	7	0	7	0	0	0	0
	Ped Clear - FDW	0	12	0	20	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	4	0	14	0	0	0	0
Volume Density	Type 3 Disconnect	0	18	0	18	0	0	0	0
	Added per Vehicle	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	3.0	0.0	3.0	0.0	2.5	0.0	0.0
	Max Gap	0.0	5.5	0.0	3.0	0.0	2.5	0.0	0.0
	Reduce Every	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 1

Excl Ped Assignment	_____
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock	_____
Yellow Lock	_2__6__
Simultaneous Gap	12345678
Rest In Walk	_____
Advance Walk	_____
Flashing Walk	_____
Max Extension	12345678

Red Rest	_____
Dual Entry	_____
Sequential Timing	_____
Inhibit Ped Reservice	_____
Semi-Actuated	_____
Guaranteed Passage	_____
Conditional Service	_____

Phase Functions - Page 1

Minimum Recall	_2__6__
Ped Recall	_____
Maximum Recall	_____
Green Flash	_____
Overlap Green Flash	_____

Soft Recall	_____
External Recall	_____
Manual Control Calls	12345678
Fast Green Flash	_____
Fast Overlap G. Flash	_____

Phase Functions - Page 2

ORIGINAL

City of Pasadena - Departr ɔnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

		Phase 1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2

		Phase 1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	0	0	0	0	0	0	0	0
	Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max	0	0	0	0	0	0	0	0
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Timing	Walk	0	0	0	0	0	0	0	0
	Ped Clear - FDW	0	0	0	0	0	0	0	0
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 2

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 3

City of Pasadena - Departr ɜnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Clear Phases	
Delay	0
Clear Time	0

Railroad - 1

Clear Phases	
Limited Service Phases	
Delay	0
Clear Time	0

Railroad - 2

Railroad Preempt Parameters

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 1

	Delay	Clear	Clear Phases
EV - A	0	0	
EV - B	0	0	
EV - C	0	0	
EV - D	0	0	

Emergency Vehicle Preempt

SE - 1	
SE - 2	
EV - A	
EV - B	
EV - C	
EV - D	

Preempt Priority

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	22									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 2

City of Pasadena - Departr ɔnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

Transition Type	0.3
Coord Extra Functions	
Phase 1 - Minimum	0
Phase 2 - Minimum	23
Phase 3 - Minimum	0
Phase 4 - Minimum	31
Phase 5 - Minimum	0
Phase 6 - Minimum	10
Phase 7 - Minimum	0
Phase 8 - Minimum	0

Coordination - General

Note: The *Ring-Barrier Sum* of these Minimums will be the Minimum Cycle Length During Transition

Coord Extra
1 = Programmed Walk Time for Sync Phases
2 = Always Terminate Sync Phase Peds
3 = Use "Floating Force Off"
4 =
5 = Use "Start of Green" for Sync Point

Transition Type
0.X = Shortway
1.X = Lengthen Only
2.X = Shorten Only
X.1 thru X.4 = Number of Cycles to get "In Step"

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Cycle	90	90	100	0	0	0	0	0	120
Offset - 1	33	35	24	0	0	0	0	0	24
Offset - 2	0	0	0	0	0	0	0	0	0
Offset - 3	0	0	0	0	0	0	0	0	0
Zone Offset	0	0	0	0	0	0	0	0	0
Ring Offset	0	0	0	0	0	0	0	0	0
Hold Release	255	255	255	255	255	255	255	255	255
Ped Adjust	0	0	0	0	0	0	0	0	0
Force Off - 1	0	0	0	0	0	0	0	0	0
Force Off - 2	0	0	0	0	0	0	0	0	0
Force Off - 3	0	0	0	0	0	0	0	0	0
Force Off - 4	32	32	32	0	0	0	0	0	32
Force Off - 5	0	0	0	0	0	0	0	0	0
Force Off - 6	0	0	0	0	0	0	0	0	0
Force Off - 7	0	0	0	0	0	0	0	0	0
Force Off - 8	0	0	0	0	0	0	0	0	0

Coordination - Cycle, Offsets, & Force Offs

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End	10	10	10	10	10	10	10	10	10
Perm 1 - Veh Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 1 - Ped Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 2 - Begin	0	0	0	0	0	0	0	0	0
Perm 2 - End	0	0	0	0	0	0	0	0	0
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin	0	0	0	0	0	0	0	0	0
Perm 3 - End	0	0	0	0	0	0	0	0	0
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Sync Phases	_2___6_	_2___6___	_2___6___	_2___6___	_2___6___	_2___6___	_2___6___	_2___6___	_2___6___
Lag Phases	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8
Pre-Timed Phases									

Coordination - Permissives & Phase Sequence

City of Pasadena - Departr ɔnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignmrnts	Detector Attributes	Detector Set Assignments	Input File Slots	
1	39	0.0	0.0	_2_____	___45_7_	123_____	2I2U	NB, ADV, ALL
2	40	0.0	0.0	_____6__	___45_7_	123_____	6J2U	NBLT, HOLDING
3	41	0.0	0.0	___4____	___45_7_	123_____	4I6U	WB, ADV, ALL
4	42	0.0	0.0	_____8	___45_7_	123_____	8J6U	
5	43	0.0	0.0	_2_____	___45_7_	123_____	2I2L	SB, ADV, ALL
6	44	0.0	0.0	_____6__	___45_7_	123_____	6J2L	SBLT, HOLDING
7	45	0.0	0.0	___4____	___45_7_	123_____	4I6L	EB, ADV, ALL
8	46	0.0	0.0	_____8	___45_7_	123_____	8J6L	
9	47	0.0	1.0	_2_____	_____67_	123_____	2I4U/L	
10	48	0.0	1.0	_____6__	_____67_	123_____	6J4U/L	
11	49	0.0	1.0	___4____	_____67_	123_____	4I8U/L	
12	50	0.0	1.0	_____8	_____67_	123_____	8J8U/L	
13	55	0.0	0.0	____5___	___45_7_	123_____	5J1U/L	
14	56	0.0	0.0	1_____	___45_7_	123_____	1I1U/L	
15	57	0.0	0.0	_____7_	___45_7_	123_____	7J5U/L	
16	58	0.0	0.0	__3____	___45_7_	123_____	3I5U/L	
17	59	0.0	0.0	_____	___45_7_	123_____	^{5}J9U	
18	60	0.0	0.0	_____	___45_7_	123_____	^{1}I9U	
19	61	0.0	0.0	_____	___45_7_	123_____	^{7}J9L	
20	62	0.0	0.0	_____	___45_7_	123_____	^{3}I9L	
21	63	0.0	1.0	_2_____	_____67_	123_____	2I3U	NB, TYPE 3, LN1, LN2
22	64	0.0	0.0	_____6__	___45_7_	123_____	6J3U	
23	65	0.0	0.0	___4____	___45_7_	123_____	4I7U	WB, 1st VEH, LN1
24	66	0.0	0.0	_____8	___45_7_	123_____	8J7U	
25	67	0.0	0.0	_2_____	_2_____	123_____	I-12U	2 PED
26	68	0.0	0.0	_____	_2_____	123_____	I-13U	6 PED
27	69	0.0	0.0	___4____	_2_____	123_____	I-12L	4 PED
28	70	0.0	0.0	_____	_2_____	123_____	I-13L	8 PED
29	76	0.0	1.0	_2_____	_____67_	123_____	2I3L	SB, TYPE 3, LN1, LN2
30	77	0.0	0.0	_____6__	___45_7_	123_____	6J3L	
31	78	0.0	1.0	___4____	_____67_	123_____	4I7L	EB, TYPE 3, LN1, LN2
32	79	0.0	0.0	_____8	___45_7_	123_____	8J7L	
	54	0.0	0.0	_____	___45_7_	123_____	J11U	
	75	0.0	0.0	_____	___45_7_	123_____	J11L	

Detector Assignments

	C-1 Pin #
Flash Sense	81
External Permit - 1	0
External Permit - 2	0
Exclusive Ped Omit	0
Max. Term Inhibit	0
Max. 2	0
External Lag Phases	0
External Max. Recall	0
Stop Time	82
Manual Control Enable	80
Manual Cont. Advance	53
External Min. Recall	0

General Inputs

	C-1 Pin #
Plan 1	0
Plan 2	0
Plan 3	0
Plan 4	0
Plan 5	0
Plan 6	0
Plan 7	0
Plan 8	0
Plan 9	0
Free	0
Flash	0

Coordination Plan Inputs

	C-1 Pin #
Railroad - 1	0
Railroad - 2	0
Special Event - 1	0
Special Event - 2	0
Gate Down	
EV - A	71
EV - B	72
EV - C	73
EV - D	74

Preempt Inputs

	C-1 Pin #
Phase Bank - 2	0
Phase Bank - 3	0
Detector Set - 2	0
Detector Set - 3	0
Overlap Vehicle Set - 2	0
Overlap Vehicle Set - 3	0

Bank & Set Inputs

	C-1 Pin #
Door Ajar	
UPS Battery	
UPS Power	
Cabinet Temperature	

	C-1 Pin #
Alarm - 1	
Alarm - 2	
Alarm - 3	
Alarm - 4	

Alarm Inputs

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension

Detector Assignments
1 = Detector Set 1
2 = Detector Set 2
3 = Detector Set 3
4 =
5 =

SYSTEM DETECTORS

DIR	LANE	DESCRIPTION	C1 PIN	SLOT	DIR	LANE	DESCRIPTION	C1 PIN	SLOT
		SYS DET # 1	60	I9U			SYS DET # 5	54	J11U
		SYS DET # 2	62	I9L			SYS DET # 6	75	J11L

City of Pasadena - Departr ɔnt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number	0	0	0	0	0	0	0	0
Vehicle Set 1								
Vehicle Set 2								
Vehicle Set 3								
Negative Vehicle								
Negative Ped								
Green Omit								
Green Clear Omit								
Green Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

AND Gates

22	NAND 1	NAND 2	NAND 3	NAND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A	0	0	0	0	0	0
Input - B	0	0	0	0	0	0
Output	0	0	0	0	0	0

2 Input - OR Gates

	OR 7	OR 8
Input - A	0	0
Input - B	0	0
Input - C	0	0
Input - D	0	0
Output	0	0

4 Input - OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input	0	0	0	0
Output	0	0	0	0

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0
Output	0	0	0	0	0	0

DELAY Gates

City of Pasadena - Departr ;nt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

	C-1 Pin #
Advance Warning - 1	0
Advance Warning - 2	0
Detector Failure	0
Flasher - Alternating 1	0
Flasher - Alternating 2	0
Fast Flasher	0
On Line	0
Exclusive - Walk	0
Exclusive - Don't Walk	0

General Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Time of Day Outputs

	C-1 Pin #
Plan - 1	0
Plan - 2	0
Plan - 3	0
Plan - 4	0
Plan - 5	0
Plan - 6	0
Plan - 7	0
Plan - 8	0
Plan - 9	0
Free	0
Flash	

Coordination Plan Out

	Ped Phase
Ped 2-P Loadswitch	2
Ped 4-P Loadswitch	4
Ped 6-P Loadswitch	
Ped 8-P Loadswitch	

Ped Loadswitch Assignment

	C-1 Pin #
Dial - 2	0
Dial - 3	0
Offset - 1	0
Offset - 2	0
Offset - 3	0
Free	0
Flash	0

Seven Wire Outputs

	C-1 Pin #	
	On	Flash
Railroad - 1	0	
Railroad - 2	0	
Special Event - 1	0	
Special Event - 2	0	
Preempt Failure	0	
EV - A	0	
EV - B	0	
EV - C	0	
EV - D	0	
Any Preempt	0	

Preemption Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0

Special Event Outputs

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	
Output - 6	
Output - 7	
Output - 8	

Special Function Output

	Phase Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0

Phase Output Redirection

	Overlap Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0

Overlap Output Redirection

City of Pasadena - Departr. ;nt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0	1234567		0	1	14	1
1	_23456_		7	0	2	1
2	1____7		9	0	1	1
3	_23456_		11	30	3	1
4	_23456_		13	30	1	1
5	_23456_		15	0	3	1
6	_23456_		19	0	1	1
7	_23456_		22	0	14	1
8	1____7		23	0	14	1
9	_____		0	0	0	0
10	_____		0	0	0	0
11	_____		0	0	0	0
12	_____		0	0	0	0
13	_____		0	0	0	0
14	_____		0	0	0	0
15	_____		0	0	0	0
16	_____		0	0	0	0
17	_____		0	0	0	0
18	_____		0	0	0	0
19	_____		0	0	0	0
20	_____		0	0	0	0
21	_____		0	0	0	0
22	_____		0	0	0	0
23	_____		0	0	0	0
24	_____		0	0	0	0
25	_____		0	0	0	0
26	_____		0	0	0	0
27	_____		0	0	0	0
28	_____		0	0	0	0
29	_____		0	0	0	0
30	_____		0	0	0	0
31	_____		0	0	0	0

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0	_____		0	0	0	_____
1	_____		0	0	0	_____
2	_____		0	0	0	_____
3	_____		0	0	0	_____
4	_____		0	0	0	_____
5	_____		0	0	0	_____
6	_____		0	0	0	_____
7	_____		0	0	0	_____
8	_____		0	0	0	_____
9	_____		0	0	0	_____
10	_____		0	0	0	_____
11	_____		0	0	0	_____
12	_____		0	0	0	_____
13	_____		0	0	0	_____
14	_____		0	0	0	_____
15	_____		0	0	0	_____

Time of Day Function Events

TOD Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Vehicle Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Vehicle Max Recall
10 = Soft Recall
11= Max Extension 2
12 = Conditional Service
13 = Lag Free Phases
14, Bit 1 = Local Ovemide
14, Bit 4 = Disable Det Off Monitoring
15 = TOD Outputs

City of Pasadena - Departr ent of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

#	Holiday Type	Day	Month	Year
0		0	0	0
1		0	0	0
2		0	0	0
3		0	0	0
4		0	0	0
5		0	0	0
6		0	0	0
7		0	0	0
8		0	0	0
9		0	0	0
10		0	0	0
11		0	0	0
12		0	0	0
13		0	0	0
14		0	0	0
15		0	0	0
16		0	0	0
17		0	0	0
18		0	0	0
19		0	0	0
20		0	0	0
21		0	0	0
22		0	0	0
23		0	0	0
24		0	0	0
25		0	0	0
26		0	0	0
27		0	0	0
28		0	0	0
29		0	0	0
30		0	0	0
31		0	0	0

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0		0	0	0	0
1		0	0	0	0
2		0	0	0	0
3		0	0	0	0
4		0	0	0	0
5		0	0	0	0
6		0	0	0	0
7		0	0	0	0
8		0	0	0	0
9		0	0	0	0
10		0	0	0	0
11		0	0	0	0
12		0	0	0	0
13		0	0	0	0
14		0	0	0	0
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		0	0	0	0
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0
29		0	0	0	0
30		0	0	0	0
31		0	0	0	0

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0		0	0	0	
1		0	0	0	
2		0	0	0	
3		0	0	0	
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	
9		0	0	0	
10		0	0	0	
11		0	0	0	
12		0	0	0	
13		0	0	0	
14		0	0	0	
15		0	0	0	

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1	1	1	12	31
2				
3				
4				
5				
6				
7				
8				

Season Definitions

City of Pasadena - Departr. ›nt of Transportation - TMC

INTERSECTION: FAIR OAKS AVENUE @ COLUMBIA STREET - NO. 807

Red Start Time	5.0
Yellow Start Phases	_____
First Green Phases	_2___6__
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Startup

Max ON Time	7
Max OFF Time	255
Chatter	45

Detector Check

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Advance Warning Signs

Flash Entry Phases	_____
Flash Phases Yellow	_____
Flash Overlaps Yellow	_____
Flash Type	

Flash Setup

Exclusive Phases	_____
Protect / Permissive	_____
Disable Yellow Range	_____
Extra One	1_3_5___
Lag Phases - Free	_2_4_6_8

Configuration

Permitted Phases	_2_4_6__
Restricted Phases	_____
Disable Overlap Range	_____
Extra Two	___4____

Configuration

Keyboard Beep	
Backlight Timeout	
Spec Evnt 1 - Ltd Serv Interval	0
Spec Evnt 2 - Ltd Serv Interval	0
Red Revert	2.0

Miscellaneous

Spring Month (Begin)	
Spring Week (Begin)	
Fall Month (End)	
Fall Week (End)	

Daylight Savings Time

Manual Plan	0
Manual Offset	0

Manual

Manual Plan
1 thru 9 = Coordination Plan 1 thru 9
14 = Free
15 = Flash

Extra One
1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =

Extra Two
1 =
2 =
3 = Disable Min Walk
4 = QuicNet Pro System
5 = Ignor P/P on EV
6 =
7 =
8 =

Flash Type
0 = All On-Off (12345678-0)
1 = Main-Side (1256-3478)
2 = Ping Pong (1234-5678
3 = Ring Pairs (1638-5247)

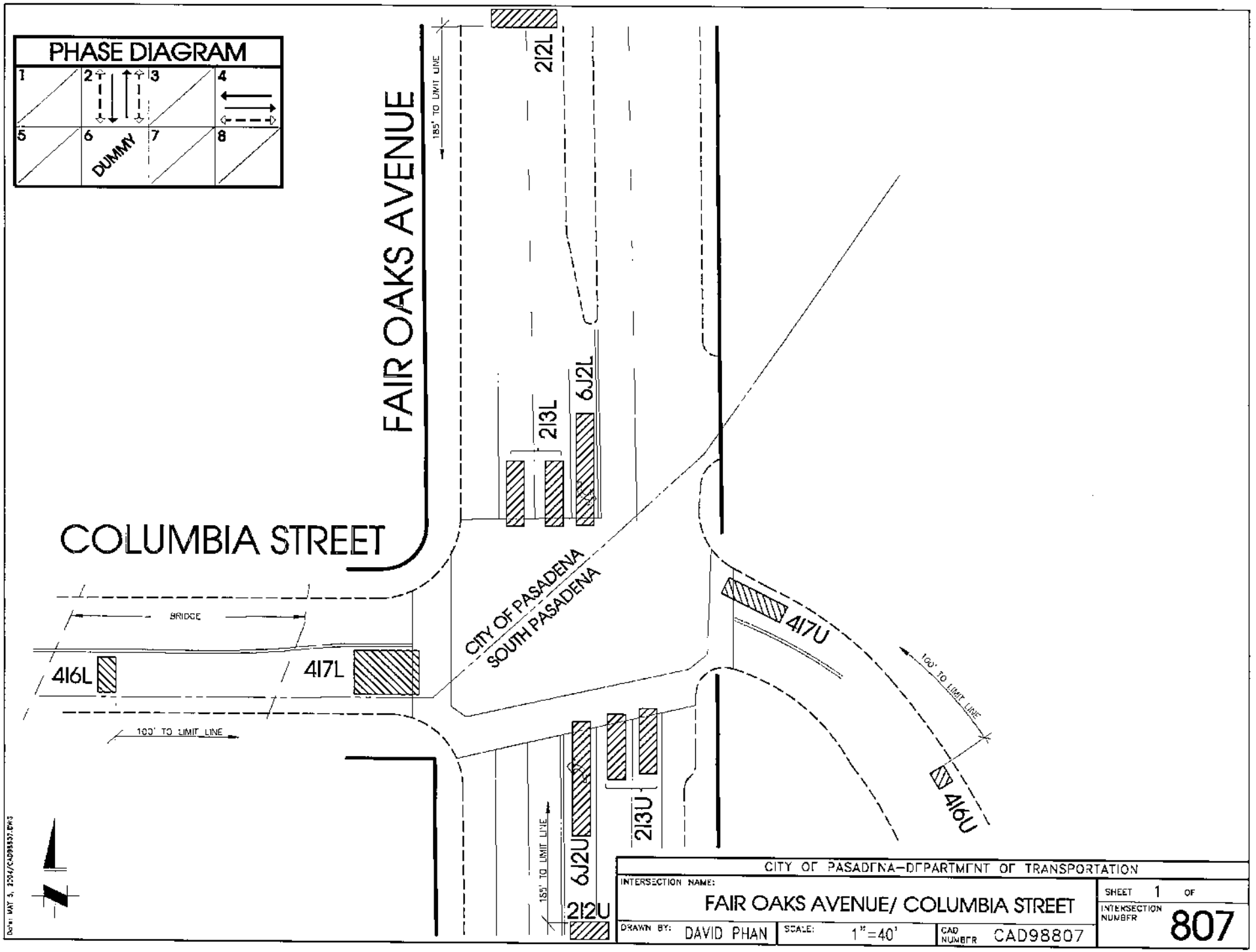
Address	14			
Area Number	1			
Area Address	35			
IP Port	8001			
IP Address	10	95	8	7
Subnet Mask	255	255	0	0
Gateway	0	0	0	0

Ethernet Port Address

Serial Port

	Port 1	Port 2	Port 3	Port 4
Address		14		
Area Number		1		
Area Address		35		
Comm Time Out		5		
CTS Delay		15		
RTS Hold		15		
Baud Rate		1200		
Data Format		8,1		

Communications Parameters


PHASE DIAGRAM
1
2
3
4
5
6
DUMMY
7
8
FAIR OAKS AVENUE
COLUMBIA STREET
185' TO LIMIT LINE
212L
213L
6J2L
CITY OF PASADENA
SOUTH PASADENA
BRIDGE
416L
417L
100' TO LIMIT LINE
417U
100' TO LIMIT LINE
416U
213U
6J2U
185' TO LIMIT LINE
212U
CITY OF PASADENA–DEPARTMENT OF TRANSPORTATION
INTERSECTION NAME:
FAIR OAKS AVENUE/ COLUMBIA STREET
SHEET 1 OF
INTERSECTION NUMBER
807
DRAWN BY: DAVID PHAN
SCALE: 1"=40'
CAD NUMBER CAD98807

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 287801
Site Code : 00287801
Start Date : 01/18/2001
Page No : 1

Groups Printed- Turning Movement

	ORANGE GROVE BLVD. Southbound				BELLEFONTAINE ST. Westbound				ORANGE GROVE BLVD. Northbound				BELLEFONTAINE ST. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	5	293	6	304	2	6	23	31	7	123	1	131	6	3	5	14	480
07:15 AM	21	256	2	279	4	13	20	37	15	188	14	217	10	8	4	22	555
07:30 AM	18	296	2	316	2	16	31	49	30	226	13	269	7	18	5	30	664
07:45 AM	32	319	6	357	2	27	42	71	50	286	7	343	17	27	14	58	829
Total	76	1164	16	1256	10	62	116	188	102	823	35	960	40	56	28	124	2528
08:00 AM	7	343	1	351	1	8	25	34	35	208	9	252	8	13	5	26	663
08:15 AM	3	263	4	270	7	2	19	28	17	191	3	211	3	4	7	14	523
08:30 AM	1	242	5	248	3	2	22	27	15	205	2	222	5	9	7	21	518
08:45 AM	7	234	6	247	1	3	15	19	11	203	4	218	5	6	5	16	500
Total	18	1082	16	1116	12	15	81	108	78	807	18	903	21	32	24	77	2204
*** BREAK ***																	
02:00 PM	3	158	1	162	3	5	9	17	6	158	5	169	2	4	5	11	359
02:15 PM	7	181	2	190	4	5	9	18	9	161	3	173	1	4	3	8	389
02:30 PM	6	149	1	156	4	6	17	27	14	173	7	194	4	2	3	9	386
02:45 PM	19	158	6	183	8	12	23	43	14	208	4	226	7	17	16	40	492
Total	35	646	10	691	19	28	58	105	43	700	19	762	14	27	27	68	1626
03:00 PM	21	159	5	185	5	12	17	34	11	209	9	229	8	27	22	57	505
03:15 PM	8	192	3	203	7	6	18	31	22	239	3	264	2	4	12	18	516
03:30 PM	11	192	7	210	5	10	12	27	28	237	5	270	8	9	7	24	531
03:45 PM	9	188	2	199	3	5	15	23	24	232	7	263	2	1	4	7	492
Total	49	731	17	797	20	33	62	115	85	917	24	1026	20	41	45	106	2044
04:00 PM	9	184	2	195	4	9	13	26	17	229	4	250	4	12	9	25	496
04:15 PM	7	201	4	212	6	12	8	26	12	219	3	234	3	4	7	14	486
Grand Total	194	4008	65	4267	71	159	338	568	337	3695	103	4135	102	172	140	414	9384
Apprch %	4.5	93.9	1.5		12.5	28.0	59.5		8.1	89.4	2.5		24.6	41.5	33.8		
Total %	2.1	42.7	0.7	45.5	0.8	1.7	3.6	6.1	3.6	39.4	1.1	44.1	1.1	1.8	1.5	4.4	

	ORANGE GROVE BLVD. Southbound				BELLEFONTAINE ST. Westbound				ORANGE GROVE BLVD. Northbound				BELLEFONTAINE ST. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	78	1214	11	1303	9	64	118	191	130	908	43	1081	42	66	28	136	2711
Percent	6.0	93.2	0.8		4.7	33.5	61.8		12.0	84.0	4.0		30.9	48.5	20.6		
07:45 Volume	32	319	6	357	2	27	42	71	50	286	7	343	17	27	14	58	829
Peak Factor																	0.818
High Int.	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
Volume	32	319	6	357	2	27	42	71	50	286	7	343	17	27	14	58	
Peak Factor				0.912				0.673				0.788				0.586	
Peak Hour From 02:00 PM to 04:15 PM - Peak 1 of 1																	
Intersection	02:45 PM																
Volume	59	701	21	781	25	40	70	135	75	893	21	989	25	57	57	139	2044
Percent	7.6	89.8	2.7		18.5	29.6	51.9		7.6	90.3	2.1		18.0	41.0	41.0		
03:30 Volume	11	192	7	210	5	10	12	27	28	237	5	270	8	9	7	24	531
Peak Factor																	0.962
High Int.	03:30 PM				02:45 PM				03:30 PM				03:00 PM				
Volume	11	192	7	210	8	12	23	43	28	237	5	270	8	27	22	57	
Peak Factor				0.930				0.785				0.916				0.610	

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 361701
Site Code : 00361701
Start Date : 02/20/2007
Page No : 1

Groups Printed- Turning Movement

	ORANGE GROVE BLVD. Southbound				BELLEFONTAINE ST. Westbound				ORANGE GROVE BLVD. Northbound				BELLEFONTAINE ST. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	9	231	4	244	0	15	30	45	13	131	1	145	1	9	1	11	445
07:15 AM	12	257	5	274	2	11	26	39	12	189	6	207	1	13	5	19	539
07:30 AM	2	271	6	279	7	3	21	31	36	220	4	260	4	24	4	32	602
07:45 AM	5	260	5	270	5	4	24	33	51	230	1	282	6	28	6	40	625
Total	28	1019	20	1067	14	33	101	148	112	770	12	894	12	74	16	102	2211
08:00 AM	6	281	9	296	6	5	21	32	28	198	7	233	4	11	5	20	581
08:15 AM	10	254	3	267	7	2	9	18	20	182	3	205	4	4	2	10	500
08:30 AM	8	215	6	229	8	7	14	29	13	155	2	170	4	6	5	15	443
08:45 AM	7	214	5	226	7	2	13	22	27	144	4	175	5	10	4	19	442
Total	31	964	23	1018	28	16	57	101	88	679	16	783	17	31	16	64	1966
*** BREAK ***																	
02:00 PM	7	131	2	140	8	5	12	25	8	118	3	129	1	3	5	9	303
02:15 PM	3	168	6	177	4	4	7	15	8	162	0	170	4	13	8	25	387
02:30 PM	7	178	5	190	12	7	13	32	9	161	4	174	2	3	3	8	404
02:45 PM	4	140	4	148	8	4	15	27	7	180	2	189	2	7	1	10	374
Total	21	617	17	655	32	20	47	99	32	621	9	662	9	26	17	52	1468
03:00 PM	8	158	3	169	8	7	16	31	10	172	4	186	6	12	8	26	412
03:15 PM	7	188	2	197	5	5	20	30	28	224	8	260	6	18	14	38	525
03:30 PM	5	205	2	212	8	7	24	39	23	216	7	246	2	13	13	28	525
03:45 PM	4	182	4	190	5	7	15	27	22	189	2	213	3	5	4	12	442
Total	24	733	11	768	26	26	75	127	83	801	21	905	17	48	39	104	1904
04:00 PM	4	175	3	182	2	10	8	20	17	165	3	185	2	9	10	21	408
04:15 PM	9	196	4	209	3	8	19	30	18	215	1	234	5	5	4	14	487
Grand Total	117	3704	78	3899	105	113	307	525	350	3251	62	3663	62	193	102	357	8444
Apprch %	3.0	95.0	2.0		20.0	21.5	58.5		9.6	88.8	1.7		17.4	54.1	28.6		
Total %	1.4	43.9	0.9	46.2	1.2	1.3	3.6	6.2	4.1	38.5	0.7	43.4	0.7	2.3	1.2	4.2	

	ORANGE GROVE BLVD. Southbound				BELLEFONTAINE ST. Westbound				ORANGE GROVE BLVD. Northbound				BELLEFONTAINE ST. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	25	1069	25	1119	20	23	92	135	127	837	18	982	15	76	20	111	2347
Percent	2.2	95.5	2.2		14.8	17.0	68.1		12.9	85.2	1.8		13.5	68.5	18.0		
07:45 Volume	5	260	5	270	5	4	24	33	51	230	1	282	6	28	6	40	625
Peak Factor																	0.939
High Int.	08:00 AM				07:15 AM				07:45 AM				07:45 AM				
Volume	6	281	9	296	2	11	26	39	51	230	1	282	6	28	6	40	
Peak Factor				0.945				0.865				0.871				0.694	
Peak Hour From 02:00 PM to 04:15 PM - Peak 1 of 1																	
Intersection	03:00 PM																
Volume	24	733	11	768	26	26	75	127	83	801	21	905	17	48	39	104	1904
Percent	3.1	95.4	1.4		20.5	20.5	59.1		9.2	88.5	2.3		16.3	46.2	37.5		
03:30 Volume	5	205	2	212	8	7	24	39	23	216	7	246	2	13	13	28	525
Peak Factor																	0.907
High Int.	03:30 PM				03:30 PM				03:15 PM				03:15 PM				
Volume	5	205	2	212	8	7	24	39	28	224	8	260	6	18	14	38	
Peak Factor				0.906				0.814				0.870				0.684	

Combined
Start Date: 3/4/10
Start Time: 12:00:00 AM
Location 1: St John Ave
Location 2: from California to Bellefontaine St

Date	Time	North	South
3/4/10	12:00 AM		61
3/4/10	12:15 AM		34
3/4/10	12:30 AM		27
3/4/10	12:45 AM		10
3/4/10	1:00 AM		21
3/4/10	1:15 AM		13
3/4/10	1:30 AM		12
3/4/10	1:45 AM		11
3/4/10	2:00 AM		11
3/4/10	2:15 AM		5
3/4/10	2:30 AM		12
3/4/10	2:45 AM		10
3/4/10	3:00 AM		12
3/4/10	3:15 AM		18
3/4/10	3:30 AM		14
3/4/10	3:45 AM		19
3/4/10	4:00 AM		19
3/4/10	4:15 AM		28
3/4/10	4:30 AM		46
3/4/10	4:45 AM		60
3/4/10	5:00 AM		49
3/4/10	5:15 AM		83
3/4/10	5:30 AM		115
3/4/10	5:45 AM		160
3/4/10	6:00 AM		200
3/4/10	6:15 AM		253
3/4/10	6:30 AM		350
3/4/10	6:45 AM		405
3/4/10	7:00 AM		372
3/4/10	7:15 AM		419
3/4/10	7:30 AM		454
3/4/10	7:45 AM		422
3/4/10	8:00 AM		379
3/4/10	8:15 AM		371
3/4/10	8:30 AM		377
3/4/10	8:45 AM		348
3/4/10	9:00 AM		308
3/4/10	9:15 AM		305
3/4/10	9:30 AM		299
3/4/10	9:45 AM		295
3/4/10	10:00 AM		278
3/4/10	10:15 AM		265
3/4/10	10:30 AM		266
3/4/10	10:45 AM		268
3/4/10	11:00 AM		240

3/4/10	11:15 AM	255
3/4/10	11:30 AM	235
3/4/10	11:45 AM	233
3/4/10	12:00 PM	234
3/4/10	12:15 PM	254
3/4/10	12:30 PM	230
3/4/10	12:45 PM	236
3/4/10	1:00 PM	209
3/4/10	1:15 PM	270
3/4/10	1:30 PM	253
3/4/10	1:45 PM	252
3/4/10	2:00 PM	238
3/4/10	2:15 PM	256
3/4/10	2:30 PM	272
3/4/10	2:45 PM	341
3/4/10	3:00 PM	287
3/4/10	3:15 PM	349
3/4/10	3:30 PM	325
3/4/10	3:45 PM	299
3/4/10	4:00 PM	325
3/4/10	4:15 PM	321
3/4/10	4:30 PM	312
3/4/10	4:45 PM	320
3/4/10	5:00 PM	289
3/4/10	5:15 PM	317
3/4/10	5:30 PM	343
3/4/10	5:45 PM	358
3/4/10	6:00 PM	345
3/4/10	6:15 PM	322
3/4/10	6:30 PM	286
3/4/10	6:45 PM	301
3/4/10	7:00 PM	246
3/4/10	7:15 PM	235
3/4/10	7:30 PM	201
3/4/10	7:45 PM	167
3/4/10	8:00 PM	147
3/4/10	8:15 PM	149
3/4/10	8:30 PM	157
3/4/10	8:45 PM	134
3/4/10	9:00 PM	121
3/4/10	9:15 PM	135
3/4/10	9:30 PM	139
3/4/10	9:45 PM	104
3/4/10	10:00 PM	109
3/4/10	10:15 PM	105
3/4/10	10:30 PM	75
3/4/10	10:45 PM	68
3/4/10	11:00 PM	45
3/4/10	11:15 PM	62
3/4/10	11:30 PM	48
3/4/10	11:45 PM	31
		19069

Volume
Start Date: 6/7/2011
Start Time: 12:00:00 AM
Location 1: Pasadena
Location 2: Bt Glenarm & Bellefontaine

Date	Time	NB	SB
6/7/2011	12:00 AM	34	33
6/7/2011	12:15 AM	21	25
6/7/2011	12:30 AM	25	16
6/7/2011	12:45 AM	22	7
6/7/2011	01:00 AM	30	14
6/7/2011	01:15 AM	14	12
6/7/2011	01:30 AM	21	24
6/7/2011	01:45 AM	10	12
6/7/2011	02:00 AM	11	14
6/7/2011	02:15 AM	12	21
6/7/2011	02:30 AM	11	5
6/7/2011	02:45 AM	12	12
6/7/2011	03:00 AM	15	10
6/7/2011	03:15 AM	13	17
6/7/2011	03:30 AM	11	12
6/7/2011	03:45 AM	11	24
6/7/2011	04:00 AM	8	8
6/7/2011	04:15 AM	18	31
6/7/2011	04:30 AM	33	41
6/7/2011	04:45 AM	37	33
6/7/2011	05:00 AM	27	45
6/7/2011	05:15 AM	39	70
6/7/2011	05:30 AM	66	105
6/7/2011	05:45 AM	81	120
6/7/2011	06:00 AM	87	179
6/7/2011	06:15 AM	118	220
6/7/2011	06:30 AM	161	223
6/7/2011	06:45 AM	211	283
6/7/2011	07:00 AM	202	286
6/7/2011	07:15 AM	260	302
6/7/2011	07:30 AM	287	334
6/7/2011	07:45 AM	312	276
6/7/2011	08:00 AM	295	277
6/7/2011	08:15 AM	296	259
6/7/2011	08:30 AM	270	247
6/7/2011	08:45 AM	273	266
6/7/2011	09:00 AM	253	239
6/7/2011	09:15 AM	200	257
6/7/2011	09:30 AM	207	244
6/7/2011	09:45 AM	208	220
6/7/2011	10:00 AM	202	203
6/7/2011	10:15 AM	188	183
6/7/2011	10:30 AM	203	201
6/7/2011	10:45 AM	209	183
6/7/2011	11:00 AM	185	159
6/7/2011	11:15 AM	202	182
6/7/2011	11:30 AM	214	197
6/7/2011	11:45 AM	230	202
6/7/2011	12:00 PM	227	164

6/7/2011	12:15 PM	223	200
6/7/2011	12:30 PM	219	189
6/7/2011	12:45 PM	240	194
6/7/2011	01:00 PM	233	181
6/7/2011	01:15 PM	236	177
6/7/2011	01:30 PM	219	181
6/7/2011	01:45 PM	233	192
6/7/2011	02:00 PM	223	159
6/7/2011	02:15 PM	229	207
6/7/2011	02:30 PM	247	198
6/7/2011	02:45 PM	273	200
6/7/2011	03:00 PM	278	194
6/7/2011	03:15 PM	297	218
6/7/2011	03:30 PM	285	249
6/7/2011	03:45 PM	235	251
6/7/2011	04:00 PM	330	229
6/7/2011	04:15 PM	292	219
6/7/2011	04:30 PM	308	241
6/7/2011	04:45 PM	289	231
6/7/2011	05:00 PM	305	238
6/7/2011	05:15 PM	340	280
6/7/2011	05:30 PM	347	248
6/7/2011	05:45 PM	320	235
6/7/2011	06:00 PM	296	233
6/7/2011	06:15 PM	291	249
6/7/2011	06:30 PM	253	218
6/7/2011	06:45 PM	241	188
6/7/2011	07:00 PM	212	184
6/7/2011	07:15 PM	216	177
6/7/2011	07:30 PM	174	144
6/7/2011	07:45 PM	209	134
6/7/2011	08:00 PM	169	122
6/7/2011	08:15 PM	124	151
6/7/2011	08:30 PM	155	98
6/7/2011	08:45 PM	137	105
6/7/2011	09:00 PM	117	103
6/7/2011	09:15 PM	118	105
6/7/2011	09:30 PM	89	102
6/7/2011	09:45 PM	62	101
6/7/2011	10:00 PM	88	89
6/7/2011	10:15 PM	80	69
6/7/2011	10:30 PM	67	80
6/7/2011	10:45 PM	59	49
6/7/2011	11:00 PM	44	49
6/7/2011	11:15 PM	45	36
6/7/2011	11:30 PM	44	44
6/7/2011	11:45 PM	36	28
		15609	14266

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Fair Oaks Ave and Bellefontaine St , City of Pasadena

Date: 5/3/2011

Day: Tuesday

Project #: CA11_5144_006

AM Peak Hour	745 AM
NOON Peak Hour	100 PM
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Fair Oaks Ave)

Lanes					
AM	126	654	1	974	AM
NOON	127	794	2	903	NOON
PM	84	853	1	917	PM

Eastbound Approach (Bellefontaine St)

	AM	NOON	PM
	252	192	146
	52	78	105
	2	0	0
	49	62	118
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	1	3	0	
	1	0	0	
	0	0	0	
	3	3	2	
	AM	NOON	PM	

Northbound Approach

AM	703	125	921	0	AM
NOON	856	65	822	1	NOON
PM	971	62	812	1	PM
					Lanes

CONTROL

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	2:00 PM
PM	4:30 PM	6:30 PM

Total Ins & Outs

	North Leg		
	781	974	AM
	923	903	NOON
	938	917	PM

West Leg			East Leg		
AM	NOON	PM			
252	192	146	2	3	0
103	140	223	3	3	2
			AM	NOON	PM

	South Leg	
AM	703	1046
NOON	856	888
PM	971	875

Total Volume Per Leg

	North Leg
	1755 AM
	1826 NOON
	1855 PM

West Leg			East Leg		
AM	NOON	PM			
355	332	369	5	6	2
			AM	NOON	PM

	South Leg
AM	1749
NOON	1744
PM	1846

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Fair Oaks Ave and Glenarm St , City of Pasadena

Date: 5/3/2011

Day: Tuesday

Project #: CA11_5144_007

AM Peak Hour	730 AM
NOON Peak Hour	100 PM
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Fair Oaks Ave)

Lanes					
AM	18	538	111	1037	AM
NOON	24	709	86	933	NOON
PM	19	839	166	840	PM

Eastbound Approach (Glenarm St)

Lanes	AM	NOON	PM
	263	170	247
	24	31	12
	175	109	147
	11	11	16

Westbound Approach

Lanes	AM	NOON	PM
	128	128	74
	193	120	198
	91	155	166
	498	393	487

Northbound Approach

Lanes				
AM	640	52	885	212	AM
NOON	875	26	774	198	NOON
PM	1021	30	754	174	PM

CONTROL

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	2:00 PM
PM	4:30 PM	6:30 PM

Total Ins & Outs

	North Leg		
AM	667	1037	AM
NOON	819	933	NOON
PM	1024	840	PM

West Leg			East Leg		
AM	NOON	PM			
263	170	247	412	403	438
210	151	175	498	393	487
			AM	NOON	PM

	South Leg	
AM	640	1149
NOON	875	998
PM	1021	958

Total Volume Per Leg

	North Leg	
AM	1704	AM
NOON	1752	NOON
PM	1864	PM

West Leg			East Leg		
AM	NOON	PM			
473	321	422	910	796	925
			AM	NOON	PM

	South Leg
AM	1789
NOON	1873
PM	1979

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Raymond Ave and Glenarm St , City of Pasadena

Date: 5/3/2011

Day: Tuesday

Project #: CA11_5144_024

AM Peak Hour	730 AM
NOON Peak Hour	1230 PM
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Raymond Ave)

Lanes					
AM	87	0	72	203	AM
NOON	89	0	67	191	NOON
PM	128	0	112	160	PM

Eastbound Approach (Glenarm St)

Lanes	AM	NOON	PM
	410	405	461
	113	113	100
	385	325	422
	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	90	78	60
	323	316	333
	0	0	0
	457	392	534

Northbound Approach

Lanes				
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

CONTROL

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	2:00 PM
PM	4:30 PM	6:30 PM

Total Ins & Outs

	North Leg		
AM	159	203	AM
NOON	156	191	NOON
PM	240	160	PM

West Leg	AM	NOON	PM
	410	405	461
	498	438	522

East Leg	AM	NOON	PM
	413	394	393
	457	392	534

South Leg		
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

North Leg			
AM	362		
NOON	347		
PM	400		

West Leg	AM	NOON	PM
	908	843	983

East Leg	AM	NOON	PM
	870	786	927

South Leg	
AM	0
NOON	0
PM	0

<< ACCUTEK >>
<< 21114 TRIGGER LANE >>
<< DIAMOND BAR, CA 91765 >>
<< (909) 595-6199 FAX: (909) 595-6022 >

File Name : 361704
Site Code : 00361704
Start Date : 02/20/2007
Page No : 1

Groups Printed- Turning Movement

	ORANGE GROVE BLVD. Southbound				COLUMBIA ST. Westbound				ORANGE GROVE BLVD. Northbound				COLUMBIA ST. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	2	214	8	224	10	3	108	121	53	120	0	173	2	11	4	17	535
07:15 AM	3	272	5	280	14	4	116	134	62	172	1	235	3	11	6	20	669
07:30 AM	4	241	15	260	12	5	90	107	70	161	1	232	4	12	4	20	619
07:45 AM	4	282	8	294	12	9	87	108	81	157	1	239	3	13	5	21	662
Total	13	1009	36	1058	48	21	401	470	266	610	3	879	12	47	19	78	2485
08:00 AM	6	293	15	314	12	9	109	130	72	153	0	225	5	16	7	28	697
08:15 AM	2	230	5	237	6	6	86	98	53	160	1	214	1	11	7	19	568
08:30 AM	5	208	12	225	11	6	88	105	48	149	1	198	2	18	7	27	555
08:45 AM	6	213	10	229	10	6	91	107	44	147	0	191	5	25	4	34	561
Total	19	944	42	1005	39	27	374	440	217	609	2	828	13	70	25	108	2381
*** BREAK ***																	
02:00 PM	8	121	12	141	12	6	41	59	38	100	0	138	1	5	3	9	347
02:15 PM	4	142	11	157	5	2	52	59	67	138	1	206	4	13	2	19	441
02:30 PM	11	137	16	164	12	7	48	67	72	137	3	212	3	4	0	7	450
02:45 PM	7	125	9	141	10	7	55	72	83	151	0	234	5	13	6	24	471
Total	30	525	48	603	39	22	196	257	260	526	4	790	13	35	11	59	1709
03:00 PM	7	139	10	156	17	3	55	75	74	146	5	225	5	7	8	20	476
03:15 PM	7	158	12	177	17	7	58	82	82	175	3	260	3	13	7	23	542
03:30 PM	8	156	14	178	9	9	63	81	86	161	3	250	3	14	7	24	533
03:45 PM	11	133	17	161	10	3	79	92	108	170	2	280	5	3	6	14	547
Total	33	586	53	672	53	22	255	330	350	652	13	1015	16	37	28	81	2098
04:00 PM	11	159	19	189	10	12	63	85	74	159	2	235	2	14	4	20	529
04:15 PM	5	190	17	212	15	6	78	99	92	180	0	272	2	11	4	17	600
Grand Total	111	3413	215	3739	204	110	1367	1681	1259	2736	24	4019	58	214	91	363	9802
Apprch %	3.0	91.3	5.8		12.1	6.5	81.3		31.3	68.1	0.6		16.0	59.0	25.1		
Total %	1.1	34.8	2.2	38.1	2.1	1.1	13.9	17.1	12.8	27.9	0.2	41.0	0.6	2.2	0.9	3.7	

	ORANGE GROVE BLVD. Southbound				COLUMBIA ST. Westbound				ORANGE GROVE BLVD. Northbound				COLUMBIA ST. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	17	1088	43	1148	50	27	402	479	285	643	3	931	15	52	22	89	2647
Percent	1.5	94.8	3.7		10.4	5.6	83.9		30.6	69.1	0.3		16.9	58.4	24.7		
08:00 Volume	6	293	15	314	12	9	109	130	72	153	0	225	5	16	7	28	697
Peak Factor																	0.949
High Int.	08:00 AM				07:15 AM				07:45 AM				08:00 AM				
Volume	6	293	15	314	14	4	116	134	81	157	1	239	5	16	7	28	
Peak Factor				0.914				0.894				0.974				0.795	
Peak Hour From 02:00 PM to 04:15 PM - Peak 1 of 1																	
Intersection	03:30 PM																
Volume	35	638	67	740	44	30	283	357	360	670	7	1037	12	42	21	75	2209
Percent	4.7	86.2	9.1		12.3	8.4	79.3		34.7	64.6	0.7		16.0	56.0	28.0		
04:15 Volume	5	190	17	212	15	6	78	99	92	180	0	272	2	11	4	17	600
Peak Factor																	0.920
High Int.	04:15 PM				04:15 PM				03:45 PM				03:30 PM				
Volume	5	190	17	212	15	6	78	99	108	170	2	280	3	14	7	24	
Peak Factor				0.873				0.902				0.926				0.781	

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-0401-04
4/7/11	NORTH & SOUTH:	MARENGO AVE	LOCATION #:	21
THURSDAY	EAST & WEST:	GLENARM ST	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND MARENGO AVE			SOUTHBOUND MARENGO AVE			EASTBOUND GLENARM ST			WESTBOUND GLENARM ST				RTOR				
	LANES:	NL 0	NT 1	NR 0	SL 0.5	ST 0.5	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1	WR 0	TOTAL	NR	SR	ER	WR	TTL
AM	5:00 AM													0					0
AM	5:15 AM													0					0
AM	5:30 AM													0					0
AM	5:45 AM													0					0
AM	6:00 AM	4	18	0	0	14	25	7	12	5	0	35	3	123	0	15	0	1	16
AM	6:15 AM	14	13	0	0	15	29	16	12	4	1	39	2	145	0	17	0	1	18
AM	6:30 AM	19	30	0	1	16	51	23	30	9	0	47	2	228	0	32	2	0	34
AM	6:45 AM	20	29	0	1	40	57	28	34	17	4	62	4	296	0	18	3	0	21
AM	7:00 AM	18	41	1	1	29	29	17	28	15	1	102	4	286	1	14	0	0	15
AM	7:15 AM	19	46	1	2	42	30	20	34	21	7	85	10	317	0	14	0	0	14
AM	7:30 AM	19	45	1	2	35	42	25	50	27	3	138	5	392	0	20	4	0	24
AM	7:45 AM	17	67	1	3	35	46	24	59	13	2	91	10	368	0	19	2	2	23
AM	8:00 AM	23	56	0	3	35	37	37	51	19	0	107	12	380	0	22	1	6	29
AM	8:15 AM	24	55	1	4	35	46	36	47	24	1	117	9	399	1	10	1	1	13
AM	8:30 AM	21	59	2	2	34	60	36	56	13	1	77	7	368	1	31	1	0	33
AM	8:45 AM	29	72	1	5	46	49	36	55	31	0	102	11	437	1	20	1	3	25
AM	9:00 AM													0					0
AM	9:15 AM													0					0
AM	9:30 AM													0					0
AM	9:45 AM													0					0
	VOLUMES	227	531	8	24	376	501	305	468	198	20	1,002	79	3,739	4	232	15	14	265
	APPROACH %	30%	69%	1%	3%	42%	56%	31%	48%	20%	2%	91%	7%						
	APP/DEPART	766	/	915	901	/	594	971	/	500	1,101	/	1,730	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	97	242	4	14	150	192	145	209	87	2	403	39	1,584					
	APPROACH %	28%	71%	1%	4%	42%	54%	33%	47%	20%	0%	91%	9%						
	PEAK HR FACTOR		0.841			0.890			0.904			0.874		0.906					
	APP/DEPART	343	/	426	356	/	239	441	/	227	444	/	692	0					
PM	3:00 PM													0					0
PM	3:15 PM													0					0
PM	3:30 PM													0					0
PM	3:45 PM													0					0
PM	4:00 PM	16	31	0	6	60	47	40	73	39	1	63	5	381	0	36	2	1	39
PM	4:15 PM	15	49	3	9	55	28	67	83	40	2	51	5	407	1	17	4	2	24
PM	4:30 PM	14	42	4	12	66	38	46	97	47	1	66	4	437	3	20	1	2	26
PM	4:45 PM	22	53	3	6	60	54	97	115	58	3	61	9	541	1	28	4	2	35
PM	5:00 PM	19	55	1	11	84	67	77	101	54	1	66	6	542	1	24	3	2	30
PM	5:15 PM	21	46	3	8	73	46	87	129	51	2	58	5	529	1	22	2	2	27
PM	5:30 PM	23	60	3	7	67	63	68	119	34	4	61	6	515	2	27	2	1	32
PM	5:45 PM	23	68	5	9	59	61	77	125	46	3	86	12	574	3	32	1	4	40
PM	6:00 PM	22	74	6	2	68	57	79	98	41	3	65	6	521	3	19	2	1	25
PM	6:15 PM	23	56	4	10	80	48	80	99	47	1	66	4	518	1	27	4	1	33
PM	6:30 PM	24	60	4	4	60	40	64	64	22	1	53	5	401	1	23	2	1	27
PM	6:45 PM	14	46	3	10	50	26	48	107	13	1	49	1	368	0	14	1	0	15
PM	7:00 PM													0					0
PM	7:15 PM													0					0
PM	7:30 PM													0					0
PM	7:45 PM													0					0
	VOLUMES	236	640	39	94	782	575	830	1,210	492	23	745	68	5,734	17	289	28	19	353
	APPROACH %	26%	70%	4%	6%	54%	40%	33%	48%	19%	3%	89%	8%						
	APP/DEPART	915	/	1,538	1,451	/	1,297	2,532	/	1,343	836	/	1,556	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	86	229	12	35	283	237	309	474	185	10	271	29	2,160					
	APPROACH %	26%	70%	4%	6%	51%	43%	32%	49%	19%	3%	87%	9%						
	PEAK HR FACTOR		0.852			0.856			0.906			0.767		0.941					
	APP/DEPART	327	/	567	555	/	478	968	/	521	310	/	594	0					

APPENDIX B

ANALYSIS WORKSHEETS – INTERSECTION LEVEL OF SERVICE

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 1
AM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	282	1	218	0	282	218	-10	272	1	215	1	273	1	217	0	273	1	217
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	3	157	0	157	3	160	0	160	0	160	0	160
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	691	2	380	0	691	380	101	792	2	436	36	828	2	455	0	828	2	455
	Left-Through		0							0				0				0	
	Through	722	0	**915**	0	722	**915**	23	745	0	**948**	11	756	0	**966**	0	756	0	**966**
	Through-Right		1							1				1				1	
	Right	193	0	0	0	193	0	10	203	0	0	7	210	0	0	0	210	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	81	0	81	0	81	81	2	83	0	83	3	86	0	86	0	86	0	86
	Left-Through		0							0				0				0	
	Through	33	0	**132**	0	33	**132**	3	36	0	**136**	2	38	0	**141**	0	38	0	**141**
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	-1	17	0	0	0	17	0	0	0	17	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	457	2	0	0	457	0	62	519	2	0	14	533	2	0	0	533	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		915	*North-South:*		915	*North-South:*			948	*North-South:*			966	*North-South:*			966
		East-West:		132	*East-West:*		132	*East-West:*			136	*East-West:*			141	*East-West:*			141
		SUM:		1047	*SUM:*		1047	*SUM:*			1084	*SUM:*			1107	*SUM:*			1107
VOLUME/CAPACITY *(V/C)* RATIO:				0.735			0.735				0.761				0.777				0.777
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.735			0.735				0.761				0.777				0.777
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	93	1	**93**	0	93	**93**	16	109	1	**109**	27	136	1	**136**	0	136	1	**136**
	Left-Through		0							0				0				0	
	Through	619	2	310	0	619	310	32	651	2	326	57	708	2	354	0	708	2	354
	Through-Right		0							0				0				0	
	Right	2	1	0	0	2	0	1	3	1	0	0	3	1	0	0	3	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	147	1	147	0	147	147	54	201	1	201	-20	181	1	181	0	181	1	181
	Left-Through		0							0				0				0	
	Through	811	1	**436**	0	811	**436**	68	879	1	**477**	15	894	1	**483**	0	894	1	**483**
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	14	75	0	75	-4	71	0	71	0	71	0	71
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	141	1	141	0	141	141	26	167	1	167	-15	152	1	152	0	152	1	152
	Left-Through		0							0				0				0	
	Through	608	1	**381**	0	608	**381**	291	899	1	**540**	-12	887	1	**544**	0	887	1	**544**
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	27	181	0	181	20	201	0	201	0	201	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	250	1	**250**	0	250	**250**	42	292	1	**292**	9	301	1	**301**	0	301	1	**301**
	Left-Through		0							0				0				0	
	Through	630	1	401	0	630	401	201	831	1	517	-30	801	1	486	0	801	1	486
	Through-Right		1							1				1				1	
	Right	171	0	171	0	171	171	31	202	0	202	-32	170	0	170	0	170	0	170
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		529	North-South:		529	North-South:			586	North-South:			619	North-South:			619
		East-West:		631	East-West:		631	East-West:			832	East-West:			845	East-West:			845
		SUM:		1160	SUM:		1160	SUM:			1418	SUM:			1464	SUM:			1464
VOLUME/CAPACITY (V/C) RATIO:				0.814			0.814				0.995				1.027				1.027
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.814			0.814				0.995				1.027				1.027
LEVEL OF SERVICE (LOS):				D			D				E				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.032	Δ*v/c* after mitigation:	0.032
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	11	205	1	**205**	-44	161	1	**161**	0	161	1	**161**
	Left-Through		0							0				0				0	
	Through	173	0	195	0	173	195	-22	151	0	181	-17	134	0	160	0	134	0	160
	Through-Right		1							1				1				1	
	Right	22	0	0	0	22	0	8	30	0	0	-4	26	0	0	0	26	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	146	1	146	0	146	146	65	211	1	211	18	229	1	229	0	229	1	229
	Left-Through		0							0				0				0	
	Through	284	0	**357**	0	284	**357**	-12	272	0	**354**	-2	270	0	**352**	0	270	0	**352**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	9	82	0	0	0	82	0	0	0	82	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	86	1	**86**	0	86	**86**	11	97	1	**97**	2	99	1	**99**	0	99	1	**99**
	Left-Through		0							0				0				0	
	Through	409	1	280	0	409	280	311	720	1	448	-15	705	1	431	0	705	1	431
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	25	175	0	175	-18	157	0	157	0	157	0	157
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	1	39	0	39	39	8	47	1	47	-1	46	1	46	0	46	1	46
	Left-Through		0							0				0				0	
	Through	612	1	**368**	0	612	**368**	255	867	1	**506**	-8	859	1	**511**	0	859	1	**511**
	Through-Right		1							1				1				1	
	Right	123	0	123	0	123	123	21	144	0	144	18	162	0	162	0	162	0	162
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		551	*North-South:*		551	*North-South:*			559	*North-South:*			513	*North-South:*			513
		East-West:		454	*East-West:*		454	*East-West:*			603	*East-West:*			610	*East-West:*			610
		SUM:		1005	*SUM:*		1005	*SUM:*			1162	*SUM:*			1123	*SUM:*			1123
VOLUME/CAPACITY *(V/C)* RATIO:				0.705			0.705				0.815				0.788				0.788
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.705			0.705				0.815				0.788				0.788
LEVEL OF SERVICE (LOS):				C			C				D				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.027	Δ*v/c* after mitigation:	-0.027
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	335	1	**209**	0	335	**209**	80	415	1	**260**	104	519	1	**313**	0	519	1	**313**
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	23	105	0	105	2	107	0	107	0	107	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	384	1	**384**	0	384	**384**	55	439	1	**439**	-27	412	1	**412**	0	412	1	**412**
	Left-Through		0							0				0				0	
	Through	678	1	341	0	678	341	-6	672	1	338	118	790	1	397	0	790	1	397
	Through-Right		1							1				1				1	
	Right	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		0							0				0				0	
	Through	1	0	**3**	0	1	**3**	0	1	0	**3**	0	1	0	**3**	0	1	0	**3**
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	127	0	**127**	0	127	**127**	0	127	0	**127**	3	130	0	**130**	0	130	0	**130**
	Left-Through		1							1				1				1	
	Through	2	0	129	0	2	129	0	2	0	129	0	2	0	132	0	2	0	132
	Through-Right		0							0				0				0	
	Right	277	1	85	0	277	85	30	307	1	88	1	308	1	102	0	308	1	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		593	North-South:		593	North-South:			699	North-South:			725	North-South:			725
		East-West:		130	East-West:		130	East-West:			130	East-West:			133	East-West:			133
		SUM:		723	SUM:		723	SUM:			829	SUM:			858	SUM:			858
VOLUME/CAPACITY (V/C) RATIO:				0.526			0.526				0.603				0.624				0.624
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.526			0.526				0.603				0.624				0.624
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	1	1	1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	319	1	**319**	0	319	**319**	23	342	1	**342**	9	351	1	**351**	0	351	1	**351**
	Left-Through		0							0				0				0	
	Through	148	1	148	0	148	148	-12	136	1	136	24	160	1	160	0	160	1	160
	Through-Right		0							0				0				0	
	Right	14	1	0	0	14	0	18	32	1	0	1	33	1	0	0	33	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	0	67	67	10	77	1	77	19	96	1	96	0	96	1	96
	Left-Through		0							0				0				0	
	Through	281	1	**281**	0	281	**281**	-62	219	1	**219**	57	276	1	**276**	0	276	1	**276**
	Through-Right		0							0				0				0	
	Right	69	1	61	0	69	61	-32	37	1	32	8	45	1	40	0	45	1	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	1	17	0	17	17	-7	10	1	10	1	11	1	11	0	11	1	11
	Left-Through		0							0				0				0	
	Through	168	0	**493**	0	168	**493**	75	243	0	**561**	-1	242	0	**563**	0	242	0	**563**
	Through-Right		1							1				1				1	
	Right	325	0	0	0	325	0	-7	318	0	0	3	321	0	0	0	321	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	40	1	**40**	0	40	**40**	26	66	1	**66**	2	68	1	**68**	0	68	1	**68**
	Left-Through		0							0				0				0	
	Through	281	0	311	0	281	311	41	322	0	352	-1	321	0	355	0	321	0	355
	Through-Right		1							1				1				1	
	Right	30	0	0	0	30	0	0	30	0	0	4	34	0	0	0	34	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		600	North-South:		600	North-South:			561	North-South:			627	North-South:			627
		East-West:		533	East-West:		533	East-West:			627	East-West:			631	East-West:			631
		SUM:		1133	SUM:		1133	SUM:			1188	SUM:			1258	SUM:			1258
VOLUME/CAPACITY (V/C) RATIO:				0.824			0.824				0.864				0.915				0.915
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.824			0.824				0.864				0.915				0.915
LEVEL OF SERVICE (LOS):				D			D				D				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	22	1	**22**	0	22	**22**	-8	14	1	14	-1	13	1	13	0	13	1	13
	Left-Through		0							0				0				0	
	Through	407	1	265	0	407	265	11	418	1	**302**	74	492	1	**333**	0	492	1	**333**
	Through-Right		1							1				1				1	
	Right	122	0	122	0	122	122	64	186	0	186	-13	173	0	173	0	173	0	173
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	60	1	60	0	60	60	63	123	1	**123**	8	131	1	**131**	0	131	1	**131**
	Left-Through		0							0				0				0	
	Through	744	1	**379**	0	744	**379**	2	746	1	379	95	841	1	427	0	841	1	427
	Through-Right		1							1				1				1	
	Right	14	0	14	0	14	14	-2	12	0	12	1	13	0	13	0	13	0	13
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	0	**17**	0	17	**17**	-4	13	0	**13**	3	16	0	**16**	0	16	0	**16**
	Left-Through		0							0				0				0	
	Through	67	0	98	0	67	98	10	77	0	98	-3	74	0	98	0	74	0	98
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	-6	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	199	0	199	0	199	199	38	237	0	237	5	242	0	242	0	242	0	242
	Left-Through		0							0				0				0	
	Through	97	0	**330**	0	97	**330**	3	100	0	**393**	0	100	0	**411**	0	100	0	**411**
	Through-Right		0							0				0				0	
	Right	34	0	0	0	34	0	22	56	0	0	13	69	0	0	0	69	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		401	*North-South:*		401	*North-South:*			425	*North-South:*			464	*North-South:*			464
		East-West:		347	*East-West:*		347	*East-West:*			406	*East-West:*			427	*East-West:*			427
		SUM:		748	*SUM:*		748	*SUM:*			831	*SUM:*			891	*SUM:*			891
VOLUME/CAPACITY *(V/C)* RATIO:				0.499			0.499				0.554				0.594				0.594
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.499			0.499				0.554				0.594				0.594
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.040	Δ*v/c* after mitigation:	0.040
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	223	1	**223**	0	223	**223**	13	236	1	**236**	6	242	1	**242**	0	242	1	**242**
	Left-Through		0							0				0				0	
	Through	312	1	312	0	312	312	20	332	1	332	13	345	1	345	0	345	1	345
	Through-Right		0							0				0				0	
	Right	35	1	10	0	35	10	-1	34	1	8	-11	23	1	5	0	23	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	68	1	68	0	68	68	-12	56	1	56	4	60	1	60	0	60	1	60
	Left-Through		0							0				0				0	
	Through	524	1	**524**	0	524	**524**	-26	498	1	**498**	31	529	1	**529**	0	529	1	**529**
	Through-Right		0							0				0				0	
	Right	50	1	39	0	50	39	-5	45	1	29	27	72	1	47	0	72	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	23	1	**23**	0	23	**23**	9	32	1	32	18	50	1	50	0	50	1	50
	Left-Through		0							0				0				0	
	Through	126	1	126	0	126	126	31	157	1	157	5	162	1	162	0	162	1	162
	Through-Right		1							1				1				1	
	Right	295	0	184	0	295	184	127	422	0	**304**	13	435	0	**314**	0	435	0	**314**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	51	1	51	0	51	51	2	53	1	**53**	-17	36	1	**36**	0	36	1	**36**
	Left-Through		0							0				0				0	
	Through	236	1	**236**	0	236	**236**	0	236	1	236	3	239	1	239	0	239	1	239
	Through-Right		0							0				0				0	
	Right	144	1	110	0	144	110	1	145	1	117	4	149	1	119	0	149	1	119
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		747	North-South:		747	North-South:			734	North-South:			771	North-South:			771
		East-West:		259	East-West:		259	East-West:			357	East-West:			350	East-West:			350
		SUM:		1006	SUM:		1006	SUM:			1091	SUM:			1121	SUM:			1121
VOLUME/CAPACITY (V/C) RATIO:				0.671			0.671				0.727				0.747				0.747
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.671			0.671				0.727				0.747				0.747
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.020
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	**34**	0	34	**34**	42	76	1	**76**	19	95	1	**95**	0	95	1	**95**
	Left-Through		0							0				0				0	
	Through	450	1	264	0	450	264	-70	380	1	228	32	412	1	239	0	412	1	239
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	-2	75	0	75	-10	65	0	65	0	65	0	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	169	0	169	169	-60	109	1	109	-34	75	1	75	0	75	1	75
	Left-Through		0							0				0				0	
	Through	996	1	**523**	0	996	**523**	-76	920	1	**497**	83	1003	1	**538**	0	1003	1	**538**
	Through-Right		1							1				1				1	
	Right	50	0	50	0	50	50	24	74	0	74	-1	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	41	0	41	0	41	41	10	51	0	51	1	52	0	52	0	52	0	52
	Left-Through		0							0				0				0	
	Through	239	0	**353**	0	239	**353**	106	345	0	**547**	-63	282	0	**528**	0	282	0	**528**
	Through-Right		0							0				0				0	
	Right	73	0	0	0	73	0	78	151	0	0	43	194	0	0	0	194	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	93	0	**93**	0	93	**93**	-16	77	0	**77**	1	78	0	**78**	0	78	0	**78**
	Left-Through		0							0				0				0	
	Through	148	0	358	0	148	358	50	198	0	334	-17	181	0	306	0	181	0	306
	Through-Right		0							0				0				0	
	Right	117	0	0	0	117	0	-58	59	0	0	-12	47	0	0	0	47	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		557	North-South:		557	North-South:			573	North-South:			633	North-South:			633
		East-West:		446	East-West:		446	East-West:			624	East-West:			606	East-West:			606
		SUM:		1003	SUM:		1003	SUM:			1197	SUM:			1239	SUM:			1239
VOLUME/CAPACITY (V/C) RATIO:				0.704			0.704				0.840				0.869				0.869
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.704			0.704				0.840				0.869				0.869
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.029	Δ*v/c* after mitigation:	0.029
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	10	1	**10**	0	10	**10**	0	10	1	**10**	2	12	1	**12**	0	12	1	**12**
	Left-Through		0							0				0				0	
	Through	424	1	282	0	424	282	13	437	1	309	52	489	1	320	0	489	1	320
	Through-Right		1							1				1				1	
	Right	140	0	140	0	140	140	41	181	0	181	-31	150	0	150	0	150	0	150
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	291	1	291	0	291	291	19	310	1	310	2	312	1	312	0	312	1	312
	Left-Through		0							0				0				0	
	Through	1236	1	**619**	0	1236	**619**	-11	1225	1	**613**	114	1339	1	**670**	0	1339	1	**670**
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	7	0	**7**	0	7	**7**	0	7	0	**7**	1	8	0	**8**	0	8	0	**8**
	Left-Through		0							0				0				0	
	Through	9	0	16	0	9	16	2	11	0	18	-1	10	0	18	0	10	0	18
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	125	0	125	0	125	125	38	163	0	163	-38	125	0	125	0	125	0	125
	Left-Through		0							0				0				0	
	Through	19	0	**306**	0	19	**306**	2	21	0	**365**	0	21	0	**320**	0	21	0	**320**
	Through-Right		0							0				0				0	
	Right	162	0	0	0	162	0	19	181	0	0	-7	174	0	0	0	174	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		629	North-South:		629	North-South:			623	North-South:			682	North-South:			682
		East-West:		313	East-West:		313	East-West:			372	East-West:			328	East-West:			328
		SUM:		942	SUM:		942	SUM:			995	SUM:			1010	SUM:			1010
VOLUME/CAPACITY (V/C) RATIO:				0.628			0.628				0.663				0.673				0.673
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.628			0.628				0.663				0.673				0.673
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	96	1	96	0	96	96	37	133	1	133	-6	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	364	1	**227**	0	364	**227**	29	393	1	**247**	5	398	1	**251**	0	398	1	**251**
	Through-Right		1							1				1				1	
	Right	90	0	90	0	90	90	10	100	0	100	3	103	0	103	0	103	0	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	371	1	**371**	0	371	**371**	24	395	1	**395**	24	419	1	**419**	0	419	1	**419**
	Left-Through		0							0				0				0	
	Through	742	1	381	0	742	381	31	773	1	400	51	824	1	426	0	824	1	426
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	7	27	0	27	0	27	0	27	0	27	0	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	8	61	1	61	1	62	1	62	0	62	1	62
	Left-Through		0							0				0				0	
	Through	246	1	246	0	246	246	44	290	1	290	8	298	1	298	0	298	1	298
	Through-Right		0							0				0				0	
	Right	323	1	**275**	0	323	**275**	49	372	1	**306**	13	385	1	**322**	0	385	1	**322**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	65	1	**65**	0	65	**65**	6	71	1	**71**	11	82	1	**82**	0	82	1	**82**
	Left-Through		0							0				0				0	
	Through	60	1	60	0	60	60	24	84	1	84	6	90	1	90	0	90	1	90
	Through-Right		0							0				0				0	
	Right	99	1	0	0	99	0	9	108	1	0	14	122	1	0	0	122	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		598	North-South:		598	North-South:			642	North-South:			670	North-South:			670
		East-West:		340	East-West:		340	East-West:			377	East-West:			404	East-West:			404
		SUM:		938	SUM:		938	SUM:			1019	SUM:			1074	SUM:			1074
VOLUME/CAPACITY (V/C) RATIO:				0.658			0.658				0.715				0.754				0.754
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.715				0.754				0.754
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.039	Δ*v/c* after mitigation:	0.039
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	171	1	**171**	0	171	**171**	-37	134	1	**134**	2	136	1	**136**	0	136	1	**136**
	Left-Through		0							0				0				0	
	Through	447	1	242	0	447	242	131	578	1	307	8	586	1	312	0	586	1	312
	Through-Right		1							1				1				1	
	Right	37	0	37	0	37	37	-1	36	0	36	2	38	0	38	0	38	0	38
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	18	1	18	0	18	18	8	26	1	26	0	26	1	26	0	26	1	26
	Left-Through		0							0				0				0	
	Through	1032	1	**618**	0	1032	**618**	86	1118	1	**681**	89	1207	1	**722**	0	1207	1	**722**
	Through-Right		1							1				1				1	
	Right	203	0	203	0	203	203	40	243	0	243	-7	236	0	236	0	236	0	236
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	54	0	54	54	15	69	1	69	0	69	1	69	0	69	1	69
	Left-Through		0							0				0				0	
	Through	43	0	**116**	0	43	**116**	-2	41	0	**92**	1	42	0	**99**	0	42	0	**99**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	-22	51	0	0	6	57	0	0	0	57	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	82	1	**82**	0	82	**82**	-4	78	1	**78**	6	84	1	**84**	0	84	1	**84**
	Left-Through		0							0				0				0	
	Through	87	2	36	0	87	36	4	91	2	43	-3	88	2	42	0	88	2	42
	Through-Right		1							1				1				1	
	Right	22	0	22	0	22	22	16	38	0	38	-1	37	0	37	0	37	0	37
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		789	North-South:		789	North-South:			815	North-South:			858	North-South:			858
		East-West:		198	East-West:		198	East-West:			170	East-West:			183	East-West:			183
		SUM:		987	SUM:		987	SUM:			985	SUM:			1041	SUM:			1041
VOLUME/CAPACITY (V/C) RATIO:				0.658			0.658				0.657				0.694				0.694
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.657				0.694				0.694
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	0.037
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			4			4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	175	1	**175**	0	175	**175**	94	269	1	**269**	2	271	1	**271**	0	271	1	**271**
	Left-Through		0							0				0				0	
	Through	348	2	174	0	348	174	-10	338	2	169	7	345	2	173	0	345	2	173
	Through-Right		0							0				0				0	
	Right	241	1	132	0	241	132	-29	212	1	107	9	221	1	115	0	221	1	115
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	415	1	415	0	415	415	-56	359	1	359	42	401	1	401	0	401	1	401
	Left-Through		0							0				0				0	
	Through	1132	2	**566**	0	1132	**566**	63	1195	2	**598**	62	1257	2	**629**	0	1257	2	**629**
	Through-Right		0							0				0				0	
	Right	35	1	31	0	35	31	18	53	1	46	4	57	1	50	0	57	1	50
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	9	1	9	0	9	9	5	14	1	14	0	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	699	1	**407**	0	699	**407**	265	964	1	**579**	18	982	1	**584**	0	982	1	**584**
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	78	193	0	193	-8	185	0	185	0	185	0	185
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	219	1	**219**	0	219	**219**	-8	211	1	**211**	1	212	1	**212**	0	212	1	**212**
	Left-Through		0							0				0				0	
	Through	488	1	339	0	488	339	185	673	1	419	21	694	1	433	0	694	1	433
	Through-Right		1							1				1				1	
	Right	189	0	189	0	189	189	-24	165	0	165	7	172	0	172	0	172	0	172
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		741	North-South:		741	North-South:			867	North-South:			900	North-South:			900
		East-West:		626	East-West:		626	East-West:			790	East-West:			796	East-West:			796
		SUM:		1367	SUM:		1367	SUM:			1657	SUM:			1696	SUM:			1696
VOLUME/CAPACITY (V/C) RATIO:				0.994			0.994				1.205				1.233				1.233
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.994			0.994				1.205				1.233				1.233
LEVEL OF SERVICE (LOS):				E			E				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.028
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	306	1	**183**	0	306	**183**	-5	301	1	**183**	30	331	1	**200**	0	331	1	**200**
	Left-Through		0							0				0				0	
	Through	29	0	183	0	29	183	3	32	0	183	2	34	0	200	0	34	0	200
	Through-Right		0							0				0				0	
	Right	30	0	0	0	30	0	3	33	0	0	2	35	0	0	0	35	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	24	0	24	24	7	31	1	31	0	31	1	31	0	31	1	31
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	89	1	**50**	0	89	**50**	14	103	1	**58**	3	106	1	**60**	0	106	1	**60**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	79	1	**79**	0	79	**79**	11	90	1	**90**	2	92	1	**92**	0	92	1	**92**
	Left-Through		0							0				0				0	
	Through	651	2	326	0	651	326	98	749	2	375	12	761	2	381	0	761	2	381
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	681	1	**351**	0	681	**351**	149	830	1	**430**	-7	823	1	**426**	0	823	1	**426**
	Through-Right		1							1				1				1	
	Right	21	0	21	0	21	21	8	29	0	29	-1	28	0	28	0	28	0	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		233	North-South:		233	North-South:			241	North-South:			260	North-South:			260
		East-West:		430	East-West:		430	East-West:			520	East-West:			518	East-West:			518
		SUM:		663	SUM:		663	SUM:			761	SUM:			778	SUM:			778
VOLUME/CAPACITY (V/C) RATIO:				0.465			0.465				0.534				0.546				0.546
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.465			0.465				0.534				0.546				0.546
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.012	Δ*v/c* after mitigation:	0.012
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	90	1	**90**	0	90	**90**	31	121	1	**121**	-7	114	1	**114**	0	114	1	**114**
	Left-Through		0							0				0				0	
	Through	250	1	159	0	250	159	44	294	1	176	4	298	1	179	0	298	1	179
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	-9	58	0	58	1	59	0	59	0	59	0	59
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	111	1	111	0	111	111	-35	76	1	76	4	80	1	80	0	80	1	80
	Left-Through		0							0				0				0	
	Through	335	1	**220**	0	335	**220**	122	457	1	**284**	6	463	1	**286**	0	463	1	**286**
	Through-Right		1							1				1				1	
	Right	104	0	104	0	104	104	7	111	0	111	-2	109	0	109	0	109	0	109
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	**54**	0	54	**54**	31	85	1	**85**	1	86	1	**86**	0	86	1	**86**
	Left-Through		0							0				0				0	
	Through	834	2	303	0	834	303	125	959	2	378	11	970	2	380	0	970	2	380
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	98	174	0	174	-5	169	0	169	0	169	0	169
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	68	1	68	0	68	68	17	85	1	85	5	90	1	90	0	90	1	90
	Left-Through		0							0				0				0	
	Through	1703	2	**604**	0	1703	**604**	-38	1665	2	**587**	43	1708	2	**604**	0	1708	2	**604**
	Through-Right		1							1				1				1	
	Right	110	0	110	0	110	110	-15	95	0	95	9	104	0	104	0	104	0	104
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		310	*North-South:*		310	*North-South:*			405	*North-South:*			400	*North-South:*			400
		East-West:		658	*East-West:*		658	*East-West:*			672	*East-West:*			690	*East-West:*			690
		SUM:		968	*SUM:*		968	*SUM:*			1077	*SUM:*			1090	*SUM:*			1090
VOLUME/CAPACITY *(V/C)* RATIO:				0.645			0.645				0.718				0.727				0.727
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.645				0.718				0.727				0.727
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	32	0	32	0	32	32	-2	30	0	30	0	30	0	30	0	30	0	30
	Left-Through		1							1				1				1	
	Through	377	0	**229**	0	377	**229**	-38	339	0	**204**	-5	334	0	**201**	0	334	0	**201**
	Through-Right		1							1				1				1	
	Right	49	0	229	0	49	229	-10	39	0	204	-2	37	0	201	0	37	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	59	1	**59**	0	59	**59**	-7	52	1	**52**	3	55	1	**55**	0	55	1	**55**
	Left-Through		0							0				0				0	
	Through	229	2	115	0	229	115	-50	179	2	90	1	180	2	90	0	180	2	90
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	743	1	**447**	0	743	**447**	19	762	1	**454**	36	798	1	**475**	0	798	1	**475**
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	-4	146	0	146	6	152	0	152	0	152	0	152
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		229	*North-South:*		229	*North-South:*			204	*North-South:*			201	*North-South:*			201
		East-West:		506	*East-West:*		506	*East-West:*			506	*East-West:*			530	*East-West:*			530
		SUM:		735	*SUM:*		735	*SUM:*			710	*SUM:*			731	*SUM:*			731
VOLUME/CAPACITY *(V/C)* RATIO:				0.490			0.490				0.473				0.487				0.487
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.473				0.487				0.487
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.014	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	49	0	49	0	49	49	-11	38	0	38	-11	27	0	27	0	27	0	27
	Left-Through		1							1				1				1	
	Through	143	0	**140**	0	143	**140**	-3	140	0	**162**	-50	90	0	117	0	90	0	117
	Through-Right		1							1				1				1	
	Right	227	1	140	0	227	140	81	308	1	162	-72	236	1	**130**	0	236	1	**130**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	218	1	**169**	0	218	**169**	-46	172	1	146	14	186	1	151	0	186	1	151
	Through-Right		1							1				1				1	
	Right	119	0	119	0	119	119	0	119	0	119	-3	116	0	116	0	116	0	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	**149**	0	149	**149**	-33	116	1	116	-11	105	1	105	0	105	1	105
	Left-Through		0							0				0				0	
	Through	633	2	317	0	633	317	50	683	2	**342**	47	730	2	**365**	0	730	2	**365**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		140	*North-South:*		140	*North-South:*			162	*North-South:*			130	*North-South:*			130
		East-West:		318	*East-West:*		318	*East-West:*			342	*East-West:*			365	*East-West:*			365
		SUM:		458	*SUM:*		458	*SUM:*			504	*SUM:*			495	*SUM:*			495
VOLUME/CAPACITY *(V/C)* RATIO:				0.305			0.305				0.336				0.330				0.330
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.305			0.305				0.336				0.330				0.330
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.006	Δ*v/c* after mitigation:	-0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	31	1	31	0	31	31	44	75	1	75	-8	67	1	67	0	67	1	67
	Left-Through		0							0				0				0	
	Through	230	1	**230**	0	230	**230**	-24	206	1	206	-3	203	1	203	0	203	1	203
	Through-Right		1							1				1				1	
	Right	257	0	203	0	257	203	159	416	0	**327**	-9	407	0	**320**	0	407	0	**320**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	381	1	**381**	0	381	**381**	35	416	1	**416**	14	430	1	**430**	0	430	1	**430**
	Left-Through		0							0				0				0	
	Through	392	1	392	0	392	392	-18	374	1	374	0	374	1	374	0	374	1	374
	Through-Right		0							0				0				0	
	Right	12	1	0	0	12	0	8	20	1	0	-1	19	1	0	0	19	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	12	113	1	113	4	117	1	117	0	117	1	117
	Left-Through		0							0				0				0	
	Through	241	1	**157**	0	241	**157**	244	485	1	**307**	11	496	1	**312**	0	496	1	**312**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	55	128	0	128	-1	127	0	127	0	127	0	127
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	109	1	**109**	0	109	**109**	70	179	1	**179**	-5	174	1	**174**	0	174	1	**174**
	Left-Through		0							0				0				0	
	Through	109	1	109	0	109	109	196	305	1	230	-25	280	1	218	0	280	1	218
	Through-Right		1							1				1				1	
	Right	148	0	0	0	148	0	6	154	0	154	2	156	0	156	0	156	0	156
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		611	North-South:		611	North-South:			743	North-South:			750	North-South:			750
		East-West:		266	East-West:		266	East-West:			486	East-West:			486	East-West:			486
		SUM:		877	SUM:		877	SUM:			1229	SUM:			1236	SUM:			1236
VOLUME/CAPACITY (V/C) RATIO:				0.615			0.615				0.862				0.867				0.867
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.615			0.615				0.862				0.867				0.867
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	5	10	1	**10**	-2	8	1	**8**	0	8	1	**8**
	Left-Through		0							0				0				0	
	Through	331	0	**383**	0	331	**383**	262	593	0	655	-23	570	0	632	0	570	0	632
	Through-Right		1							1				1				1	
	Right	52	0	0	0	52	0	10	62	0	0	0	62	0	0	0	62	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	158	1	**158**	0	158	**158**	-40	118	1	118	18	136	1	136	0	136	1	136
	Left-Through		0							0				0				0	
	Through	286	1	286	0	286	286	504	790	1	**790**	-5	785	1	**785**	0	785	1	**785**
	Through-Right		0							0				0				0	
	Right	395	1	343	0	395	343	109	504	1	435	-13	491	1	428	0	491	1	428
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	1	**105**	0	105	**105**	33	138	1	**138**	-11	127	1	**127**	0	127	1	**127**
	Left-Through		0							0				0				0	
	Through	141	1	73	0	141	73	-17	124	1	70	-6	118	1	66	0	118	1	66
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	11	16	0	16	-3	13	0	13	0	13	0	13
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	44	0	44	0	44	44	61	105	0	105	-2	103	0	103	0	103	0	103
	Left-Through		1							1				1				1	
	Through	746	0	**427**	0	746	**427**	73	819	0	**493**	-30	789	0	**480**	0	789	0	**480**
	Through-Right		1							1				1				1	
	Right	64	0	427	0	64	427	-2	62	0	493	6	68	0	480	0	68	0	480
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		541	*North-South:*		541	*North-South:*			800	*North-South:*			793	*North-South:*			793
		East-West:		532	*East-West:*		532	*East-West:*			631	*East-West:*			607	*East-West:*			607
		SUM:		1073	*SUM:*		1073	*SUM:*			1431	*SUM:*			1400	*SUM:*			1400
VOLUME/CAPACITY *(V/C)* RATIO:				0.715			0.715				0.954				0.933				0.933
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.715			0.715				0.954				0.933				0.933
LEVEL OF SERVICE (LOS):				C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.021	Δ*v/c* after mitigation:	-0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	**116**	0	116	**116**	74	190	1	**190**	-3	187	1	**187**	0	187	1	**187**
	Left-Through		0							0				0				0	
	Through	259	1	142	0	259	142	88	347	1	190	5	352	1	193	0	352	1	193
	Through-Right		1							1				1				1	
	Right	25	0	25	0	25	25	7	32	0	32	1	33	0	33	0	33	0	33
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	213	1	213	0	213	213	-39	174	1	174	8	182	1	182	0	182	1	182
	Left-Through		0							0				0				0	
	Through	497	1	**443**	0	497	**443**	94	591	1	**497**	6	597	1	**503**	0	597	1	**503**
	Through-Right		1							1				1				1	
	Right	388	0	388	0	388	388	15	403	0	403	6	409	0	409	0	409	0	409
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	0	**26**	0	26	**26**	8	34	0	**34**	-1	33	0	**33**	0	33	0	**33**
	Left-Through		1							1				1				1	
	Through	419	0	377	0	419	377	110	529	0	530	-6	523	0	516	0	523	0	516
	Through-Right		1							1				1				1	
	Right	178	0	377	0	178	377	149	327	0	530	-16	311	0	516	0	311	0	516
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	66	0	66	0	66	66	15	81	0	81	1	82	0	82	0	82	0	82
	Left-Through		1							1				1				1	
	Through	1080	0	**657**	0	1080	**657**	72	1152	0	**782**	22	1174	0	**797**	0	1174	0	**797**
	Through-Right		1							1				1				1	
	Right	101	0	657	0	101	657	-13	88	0	782	4	92	0	797	0	92	0	797
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			687	North-South:			690	North-South:			690
		East-West:		683	East-West:		683	East-West:			816	East-West:			830	East-West:			830
		SUM:		1242	SUM:		1242	SUM:			1503	SUM:			1520	SUM:			1520
VOLUME/CAPACITY (V/C) RATIO:				0.828			0.828				1.002				1.013				1.013
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.828			0.828				1.002				1.013				1.013
LEVEL OF SERVICE (LOS):				D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.011
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	1676	2	**721**	0	1676	**721**	175	1851	2	**769**	-13	1838	2	**754**	0	1838	2	**754**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	241	1	**201**	0	241	**201**	47	288	1	**249**	4	292	1	**257**	0	292	1	**257**
	Left-Through		1							1				1				1	
	Through	362	1	201	0	362	201	96	458	1	249	21	479	1	257	0	479	1	257
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	851	2	**426**	0	851	**426**	0	851	2	**426**	31	882	2	**441**	0	882	2	**441**
	Through-Right		0							0				0				0	
	Right	3	1	3	0	3	3	6	9	1	9	-3	6	1	6	0	6	1	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		721	*North-South:*		721	*North-South:*			769	*North-South:*			754	*North-South:*			754
		East-West:		627	*East-West:*		627	*East-West:*			675	*East-West:*			698	*East-West:*			698
		SUM:		1348	*SUM:*		1348	*SUM:*			1444	*SUM:*			1452	*SUM:*			1452
VOLUME/CAPACITY *(V/C)* RATIO:				0.899			0.899				0.963				0.968				0.968
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.899			0.899				0.963				0.968				0.968
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	11	1	**11**	0	11	**11**	4	15	1	**15**	0	15	1	**15**	0	15	1	**15**
	Left-Through		0							0				0				0	
	Through	204	1	105	0	204	105	49	253	1	130	-1	252	1	130	0	252	1	130
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	2	7	0	7	0	7	0	7	0	7	0	7
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	83	0	83	83	11	94	1	94	-1	93	1	93	0	93	1	93
	Left-Through		0							0				0				0	
	Through	1395	1	**727**	0	1395	**727**	137	1532	1	**799**	-19	1513	1	**789**	0	1513	1	**789**
	Through-Right		1							1				1				1	
	Right	59	0	59	0	59	59	7	66	0	66	-1	65	0	65	0	65	0	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	0	**54**	0	54	**54**	5	59	0	59	0	59	0	59	0	59	0	59
	Left-Through		1							1				1				1	
	Through	172	0	153	0	172	153	34	206	0	**208**	-3	203	0	**206**	0	203	0	**206**
	Through-Right		1							1				1				1	
	Right	79	0	153	0	79	153	13	92	0	208	-1	91	0	206	0	91	0	206
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	98	0	98	0	98	98	16	114	0	**114**	-2	112	0	**112**	0	112	0	**112**
	Left-Through		1							1				1				1	
	Through	260	0	**198**	0	260	**198**	48	308	0	232	-4	304	0	229	0	304	0	229
	Through-Right		1							1				1				1	
	Right	38	0	198	0	38	198	3	41	0	232	0	41	0	229	0	41	0	229
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		738	*North-South:*		738	*North-South:*			814	*North-South:*			804	*North-South:*			804
		East-West:		252	*East-West:*		252	*East-West:*			322	*East-West:*			318	*East-West:*			318
		SUM:		990	*SUM:*		990	*SUM:*			1136	*SUM:*			1122	*SUM:*			1122
VOLUME/CAPACITY *(V/C)* RATIO:				0.660			0.660				0.757				0.748				0.748
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.660			0.660				0.757				0.748				0.748
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.009	Δ*v/c* after mitigation:	-0.009
Significant impacted?	NO	Fully mitigated?	N/A

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 1
PM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	2	0	**0**	0	2	**0**	0	2	0	0	0	2	0	0	0	2	0	0
	Left-Through		0							0				0				0	
	Through	619	1	332	0	619	332	-30	589	1	**322**	1	590	1	**326**	0	590	1	**326**
	Through-Right		1							1				1				1	
	Right	45	0	45	0	45	45	10	55	0	55	7	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	357	2	196	0	357	196	86	443	2	**244**	29	472	2	**260**	0	472	2	**260**
	Left-Through		0							0				0				0	
	Through	380	0	**538**	0	380	**538**	-80	300	0	444	-4	296	0	442	0	296	0	442
	Through-Right		1							1				1				1	
	Right	158	0	0	0	158	0	-14	144	0	0	2	146	0	0	0	146	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	0	106	0	106	106	-3	103	0	103	1	104	0	104	0	104	0	104
	Left-Through		0							0				0				0	
	Through	17	0	**139**	0	17	**139**	4	21	0	**137**	3	24	0	**142**	0	24	0	**142**
	Through-Right		0							0				0				0	
	Right	16	0	0	0	16	0	-3	13	0	0	1	14	0	0	0	14	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	394	2	**21**	0	394	**21**	100	494	2	**28**	34	528	2	**30**	0	528	2	**30**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		538	*North-South:*		538	*North-South:*			566	*North-South:*			586	*North-South:*			586
		East-West:		160	*East-West:*		160	*East-West:*			165	*East-West:*			172	*East-West:*			172
		SUM:		698	*SUM:*		698	*SUM:*			731	*SUM:*			758	*SUM:*			758
VOLUME/CAPACITY *(V/C)* RATIO:				0.490			0.490				0.513				0.532				0.532
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.513				0.532				0.532
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.019	Δ*v/c* after mitigation:	0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	**151**	0	151	**151**	81	232	1	**232**	20	252	1	**252**	0	252	1	**252**
	Left-Through		0							0				0				0	
	Through	584	2	292	0	584	292	87	671	2	336	11	682	2	341	0	682	2	341
	Through-Right		0							0				0				0	
	Right	3	1	0	0	3	0	0	3	1	0	0	3	1	0	0	3	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	139	1	139	0	139	139	11	150	1	150	-29	121	1	121	0	121	1	121
	Left-Through		0							0				0				0	
	Through	577	1	**316**	0	577	**316**	17	594	1	**336**	22	616	1	**342**	0	616	1	**342**
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	24	78	0	78	-10	68	0	68	0	68	0	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	40	141	1	141	-2	139	1	139	0	139	1	139
	Left-Through		0							0				0				0	
	Through	699	1	**396**	0	699	**396**	277	976	1	**549**	-24	952	1	**553**	0	952	1	**553**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	30	122	0	122	31	153	0	153	0	153	0	153
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	232	1	**232**	0	232	**232**	31	263	1	**263**	47	310	1	**310**	0	310	1	**310**
	Left-Through		0							0				0				0	
	Through	600	1	409	0	600	409	357	957	1	608	-7	950	1	596	0	950	1	596
	Through-Right		1							1				1				1	
	Right	217	0	217	0	217	217	42	259	0	259	-18	241	0	241	0	241	0	241
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		467	North-South:		467	North-South:			568	North-South:			594	North-South:			594
		East-West:		628	East-West:		628	East-West:			812	East-West:			863	East-West:			863
		SUM:		1095	SUM:		1095	SUM:			1380	SUM:			1457	SUM:			1457
VOLUME/CAPACITY (V/C) RATIO:				0.768			0.768				0.968				1.022				1.022
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.768			0.768				0.968				1.022				1.022
LEVEL OF SERVICE (LOS):				C			C				E				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.054	Δ*v/c* after mitigation:	0.054
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	333	1	333	0	333	333	13	346	1	346	-6	340	1	340	0	340	1	340
	Left-Through		0							0				0				0	
	Through	352	0	**408**	0	352	**408**	-5	347	0	**422**	1	348	0	**421**	0	348	0	**421**
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	19	75	0	0	-2	73	0	0	0	73	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	261	1	**261**	0	261	**261**	33	294	1	**294**	27	321	1	**321**	0	321	1	**321**
	Left-Through		0							0				0				0	
	Through	253	0	328	0	253	328	-28	225	0	290	-28	197	0	268	0	197	0	268
	Through-Right		1							1				1				1	
	Right	75	0	0	0	75	0	-10	65	0	0	6	71	0	0	0	71	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	1	**106**	0	106	**106**	3	109	1	**109**	2	111	1	**111**	0	111	1	**111**
	Left-Through		0							0				0				0	
	Through	652	1	422	0	652	422	265	917	1	565	-10	907	1	538	0	907	1	538
	Through-Right		1							1				1				1	
	Right	192	0	192	0	192	192	21	213	0	213	-44	169	0	169	0	169	0	169
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	1	31	0	31	31	18	49	1	49	-9	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	769	1	**453**	0	769	**453**	426	1195	1	**698**	21	1216	1	**713**	0	1216	1	**713**
	Through-Right		1							1				1				1	
	Right	136	0	136	0	136	136	65	201	0	201	8	209	0	209	0	209	0	209
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		669	*North-South:*		669	*North-South:*			716	*North-South:*			742	*North-South:*			742
		East-West:		559	*East-West:*		559	*East-West:*			807	*East-West:*			824	*East-West:*			824
		SUM:		1228	*SUM:*		1228	*SUM:*			1523	*SUM:*			1566	*SUM:*			1566
VOLUME/CAPACITY *(V/C)* RATIO:				0.862			0.862				1.069				1.099				1.099
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.862			0.862				1.069				1.099				1.099
LEVEL OF SERVICE (LOS):				D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.030	Δ*v/c* after mitigation:	0.030
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	1	6	1	6	0	6	1	6	0	6	1	6
	Left-Through		0							0				0				0	
	Through	604	1	**375**	0	604	**375**	112	716	1	**439**	26	742	1	**450**	0	742	1	**450**
	Through-Right		1							1				1				1	
	Right	146	0	146	0	146	146	15	161	0	161	-3	158	0	158	0	158	0	158
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	285	1	**285**	0	285	**285**	12	297	1	**297**	18	315	1	**315**	0	315	1	**315**
	Left-Through		0							0				0				0	
	Through	528	1	267	0	528	267	140	668	1	337	65	733	1	370	0	733	1	370
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	1	6	0	6	1	7	0	7	0	7	0	7
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through		0							0				0				0	
	Through	4	0	**13**	0	4	**13**	0	4	0	**15**	0	4	0	**15**	0	4	0	**15**
	Through-Right		0							0				0				0	
	Right	6	0	0	0	6	0	2	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	150	0	**150**	0	150	**150**	47	197	0	**197**	-7	190	0	**190**	0	190	0	**190**
	Left-Through		1							1				1				1	
	Through	3	0	153	0	3	153	1	4	0	201	0	4	0	194	0	4	0	194
	Through-Right		0							0				0				0	
	Right	263	1	121	0	263	121	43	306	1	158	-5	301	1	144	0	301	1	144
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		660	North-South:		660	North-South:			736	North-South:			765	North-South:			765
		East-West:		163	East-West:		163	East-West:			212	East-West:			205	East-West:			205
		SUM:		823	SUM:		823	SUM:			948	SUM:			970	SUM:			970
VOLUME/CAPACITY (V/C) RATIO:				0.599			0.599				0.689				0.705				0.705
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.599			0.599				0.689				0.705				0.705
LEVEL OF SERVICE (LOS):				A			A				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	292	1	**292**	0	292	**292**	17	309	1	**309**	12	321	1	**321**	0	321	1	**321**
	Left-Through		0							0				0				0	
	Through	233	1	233	0	233	233	-62	171	1	171	90	261	1	261	0	261	1	261
	Through-Right		0							0				0				0	
	Right	59	1	51	0	59	51	17	76	1	60	12	88	1	68	0	88	1	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	89	1	89	0	89	89	14	103	1	103	45	148	1	148	0	148	1	148
	Left-Through		0							0				0				0	
	Through	150	1	**150**	0	150	**150**	29	179	1	**179**	116	295	1	**295**	0	295	1	**295**
	Through-Right		0							0				0				0	
	Right	46	1	6	0	46	6	-2	44	1	17	13	57	1	28	0	57	1	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	80	1	80	0	80	80	-26	54	1	54	5	59	1	59	0	59	1	59
	Left-Through		0							0				0				0	
	Through	205	0	**424**	0	205	**424**	39	244	0	**512**	-42	202	0	**456**	0	202	0	**456**
	Through-Right		1							1				1				1	
	Right	219	0	0	0	219	0	49	268	0	0	-14	254	0	0	0	254	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	16	1	**16**	0	16	**16**	17	33	1	**33**	7	40	1	**40**	0	40	1	**40**
	Left-Through		0							0				0				0	
	Through	187	0	226	0	187	226	118	305	0	349	-14	291	0	353	0	291	0	353
	Through-Right		1							1				1				1	
	Right	39	0	0	0	39	0	5	44	0	0	18	62	0	0	0	62	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		442	North-South:		442	North-South:			488	North-South:			616	North-South:			616
		East-West:		440	East-West:		440	East-West:			545	East-West:			496	East-West:			496
		SUM:		882	SUM:		882	SUM:			1033	SUM:			1112	SUM:			1112
VOLUME/CAPACITY (V/C) RATIO:				0.641			0.641				0.751				0.809				0.809
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.641			0.641				0.751				0.809				0.809
LEVEL OF SERVICE (LOS):				B			B				C				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.058	Δ*v/c* after mitigation:	0.058
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	1	58	0	58	58	-16	42	1	42	10	52	1	52	0	52	1	52
	Left-Through		0							0				0				0	
	Through	701	1	**433**	0	701	**433**	71	772	1	**491**	67	839	1	**532**	0	839	1	**532**
	Through-Right		1							1				1				1	
	Right	164	0	164	0	164	164	45	209	0	209	15	224	0	224	0	224	0	224
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	1	**92**	0	92	**92**	65	157	1	**157**	-16	141	1	**141**	0	141	1	**141**
	Left-Through		0							0				0				0	
	Through	649	1	340	0	649	340	60	709	1	370	69	778	1	405	0	778	1	405
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	-1	30	0	30	1	31	0	31	0	31	0	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	34	0	**34**	0	34	**34**	-1	33	0	**33**	-1	32	0	**32**	0	32	0	**32**
	Left-Through		0							0				0				0	
	Through	64	0	119	0	64	119	7	71	0	119	-2	69	0	119	0	69	0	119
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0	-6	15	0	0	3	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	172	0	172	0	172	172	85	257	0	257	-25	232	0	232	0	232	0	232
	Left-Through		0							0				0				0	
	Through	62	0	**328**	0	62	**328**	20	82	0	**529**	-12	70	0	**445**	0	70	0	**445**
	Through-Right		0							0				0				0	
	Right	94	0	0	0	94	0	96	190	0	0	-47	143	0	0	0	143	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		525	North-South:		525	North-South:			648	North-South:			673	North-South:			673
		East-West:		362	East-West:		362	East-West:			562	East-West:			477	East-West:			477
		SUM:		887	SUM:		887	SUM:			1210	SUM:			1150	SUM:			1150
VOLUME/CAPACITY (V/C) RATIO:				0.591			0.591				0.807				0.767				0.767
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.591			0.591				0.807				0.767				0.767
LEVEL OF SERVICE (LOS):				A			A				D				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.040	Δ*v/c* after mitigation:	-0.040
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	189	1	189	0	189	189	125	314	1	**314**	9	323	1	**323**	0	323	1	**323**
	Left-Through		0							0				0				0	
	Through	400	1	**400**	0	400	**400**	1	401	1	401	32	433	1	433	0	433	1	433
	Through-Right		0							0				0				0	
	Right	42	1	29	0	42	29	8	50	1	35	-19	31	1	22	0	31	1	22
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	74	1	**74**	0	74	**74**	5	79	1	79	9	88	1	88	0	88	1	88
	Left-Through		0							0				0				0	
	Through	257	1	257	0	257	257	64	321	1	**321**	33	354	1	**354**	0	354	1	**354**
	Through-Right		0							0				0				0	
	Right	54	1	0	0	54	0	26	80	1	28	66	146	1	55	0	146	1	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	121	1	121	0	121	121	-16	105	1	105	78	183	1	**183**	0	183	1	**183**
	Left-Through		0							0				0				0	
	Through	259	1	**241**	0	259	**241**	10	269	1	**269**	5	274	1	273	0	274	1	273
	Through-Right		1							1				1				1	
	Right	223	0	223	0	223	223	48	271	0	114	1	272	0	272	0	272	0	272
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	26	1	**26**	0	26	**26**	4	30	1	**30**	-11	19	1	19	0	19	1	19
	Left-Through		0							0				0				0	
	Through	108	1	108	0	108	108	38	146	1	146	4	150	1	**150**	0	150	1	**150**
	Through-Right		0							0				0				0	
	Right	70	1	33	0	70	33	-13	57	1	18	5	62	1	18	0	62	1	18
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		474	*North-South:*		474	*North-South:*			635	*North-South:*			677	*North-South:*			677
		East-West:		267	*East-West:*		267	*East-West:*			299	*East-West:*			333	*East-West:*			333
		SUM:		741	*SUM:*		741	*SUM:*			934	*SUM:*			1010	*SUM:*			1010
VOLUME/CAPACITY *(V/C)* RATIO:				0.494			0.494				0.623				0.673				0.673
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.494			0.494				0.623				0.673				0.673
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.050	Δ*v/c* after mitigation:	0.050
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	60	1	60	0	60	60	53	113	1	113	27	140	1	140	0	140	1	140
	Left-Through		0							0				0				0	
	Through	681	1	**387**	0	681	**387**	-51	630	1	**355**	99	729	1	**407**	0	729	1	**407**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	-12	80	0	80	4	84	0	84	0	84	0	84
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	159	1	**159**	0	159	**159**	-28	131	1	**131**	-28	103	1	**103**	0	103	1	**103**
	Left-Through		0							0				0				0	
	Through	618	1	327	0	618	327	-47	571	1	318	47	618	1	339	0	618	1	339
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	28	64	0	64	-4	60	0	60	0	60	0	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	39	0	**39**	0	39	**39**	29	68	0	**68**	-3	65	0	**65**	0	65	0	**65**
	Left-Through		0							0				0				0	
	Through	154	0	234	0	154	234	100	254	0	398	-32	222	0	378	0	222	0	378
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	35	76	0	0	15	91	0	0	0	91	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	0	115	0	115	115	-23	92	0	92	3	95	0	95	0	95	0	95
	Left-Through		0							0				0				0	
	Through	237	0	**525**	0	237	**525**	127	364	0	**587**	-42	322	0	**525**	0	322	0	**525**
	Through-Right		0							0				0				0	
	Right	173	0	0	0	173	0	-42	131	0	0	-23	108	0	0	0	108	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		546	*North-South:*		546	*North-South:*			486	*North-South:*			510	*North-South:*			510
		East-West:		564	*East-West:*		564	*East-West:*			655	*East-West:*			590	*East-West:*			590
		SUM:		1110	*SUM:*		1110	*SUM:*			1141	*SUM:*			1100	*SUM:*			1100
VOLUME/CAPACITY *(V/C)* RATIO:				0.779			0.779				0.801				0.772				0.772
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.779			0.779				0.801				0.772				0.772
LEVEL OF SERVICE (LOS):				C			C				D				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.029	Δ*v/c* after mitigation:	-0.029
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	0	9	9	0	9	1	9	1	10	1	10	0	10	1	10
	Left-Through		0							0				0				0	
	Through	667	1	**379**	0	667	**379**	-2	665	1	**406**	123	788	1	**434**	0	788	1	**434**
	Through-Right		1							1				1				1	
	Right	91	0	91	0	91	91	55	146	0	146	-66	80	0	80	0	80	0	80
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	**169**	0	169	**169**	48	217	1	**217**	-18	199	1	**199**	0	199	1	**199**
	Left-Through		0							0				0				0	
	Through	483	1	242	0	483	242	37	520	1	261	77	597	1	300	0	597	1	300
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	1	2	0	2	0	2	0	2
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	8	0	**8**	0	8	**8**	-1	7	0	**7**	3	10	0	**10**	0	10	0	**10**
	Left-Through		0							0				0				0	
	Through	5	0	13	0	5	13	2	7	0	14	-3	4	0	14	0	4	0	14
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	86	0	86	0	86	86	57	143	0	143	-59	84	0	84	0	84	0	84
	Left-Through		0							0				0				0	
	Through	34	0	**373**	0	34	**373**	8	42	0	**495**	-2	40	0	**440**	0	40	0	**440**
	Through-Right		0							0				0				0	
	Right	253	0	0	0	253	0	57	310	0	0	6	316	0	0	0	316	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		548	North-South:		548	North-South:			623	North-South:			633	North-South:			633
		East-West:		381	East-West:		381	East-West:			502	East-West:			450	East-West:			450
		SUM:		929	SUM:		929	SUM:			1125	SUM:			1083	SUM:			1083
VOLUME/CAPACITY (V/C) RATIO:				0.619			0.619				0.750				0.722				0.722
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.619			0.619				0.750				0.722				0.722
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.028	Δ*v/c* after mitigation:	-0.028
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	145	0	145	145	53	198	1	198	22	220	1	220	0	220	1	220
	Left-Through		0							0				0				0	
	Through	513	1	**292**	0	513	**292**	55	568	1	**333**	32	600	1	**349**	0	600	1	**349**
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	27	97	0	97	0	97	0	97	0	97	0	97
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	166	1	**166**	0	166	**166**	20	186	1	**186**	0	186	1	**186**	0	186	1	**186**
	Left-Through		0							0				0				0	
	Through	466	1	251	0	466	251	60	526	1	283	17	543	1	293	0	543	1	293
	Through-Right		1							1				1				1	
	Right	35	0	35	0	35	35	4	39	0	39	4	43	0	43	0	43	0	43
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	**35**	0	35	**35**	5	40	1	40	4	44	1	**44**	0	44	1	**44**
	Left-Through		0							0				0				0	
	Through	73	1	73	0	73	73	30	103	1	**103**	5	108	1	108	0	108	1	108
	Through-Right		0							0				0				0	
	Right	137	1	65	0	137	65	58	195	1	96	16	211	1	101	0	211	1	101
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	72	1	72	0	72	72	24	96	1	**96**	7	103	1	103	0	103	1	103
	Left-Through		0							0				0				0	
	Through	118	1	118	0	118	118	37	155	1	155	24	179	1	**179**	0	179	1	**179**
	Through-Right		0							0				0				0	
	Right	213	1	**130**	0	213	**130**	13	226	1	133	23	249	1	156	0	249	1	156
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		458	*North-South:*		458	*North-South:*			519	*North-South:*			535	*North-South:*			535
		East-West:		165	*East-West:*		165	*East-West:*			199	*East-West:*			223	*East-West:*			223
		SUM:		623	*SUM:*		623	*SUM:*			718	*SUM:*			758	*SUM:*			758
VOLUME/CAPACITY *(V/C)* RATIO:				0.437			0.437				0.504				0.532				0.532
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.437			0.437				0.504				0.532				0.532
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.028
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	33	227	1	**227**	11	238	1	**238**	0	238	1	**238**
	Left-Through		0							0				0				0	
	Through	648	1	340	0	648	340	213	861	1	448	70	931	1	486	0	931	1	486
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	4	35	0	35	5	40	0	40	0	40	0	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	16	1	16	0	16	16	12	28	1	28	2	30	1	30	0	30	1	30
	Left-Through		0							0				0				0	
	Through	467	1	**333**	0	467	**333**	133	600	1	**480**	42	642	1	**502**	0	642	1	**502**
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	161	360	0	360	1	361	0	361	0	361	0	361
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	1	61	0	61	61	-17	44	1	44	-12	32	1	32	0	32	1	32
	Left-Through		0							0				0				0	
	Through	20	0	**84**	0	20	**84**	-8	12	0	**41**	-3	9	0	**31**	0	9	0	**31**
	Through-Right		1							1				1				1	
	Right	64	0	0	0	64	0	-35	29	0	0	-7	22	0	0	0	22	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	46	1	**46**	0	46	**46**	-5	41	1	**41**	-1	40	1	**40**	0	40	1	**40**
	Left-Through		0							0				0				0	
	Through	34	2	17	0	34	17	9	43	2	22	-4	39	2	20	0	39	2	20
	Through-Right		1							1				1				1	
	Right	18	0	10	0	18	10	8	26	0	12	-1	25	0	10	0	25	0	10
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		527	*North-South:*		527	*North-South:*			707	*North-South:*			740	*North-South:*			740
		East-West:		130	*East-West:*		130	*East-West:*			82	*East-West:*			71	*East-West:*			71
		SUM:		657	*SUM:*		657	*SUM:*			789	*SUM:*			811	*SUM:*			811
VOLUME/CAPACITY *(V/C)* RATIO:				0.438			0.438				0.526				0.541				0.541
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.438			0.438				0.526				0.541				0.541
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.015	Δ*v/c* after mitigation:	0.015
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			4			4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0				0				0				0
Override Capacity			0			0				0				0				0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	226	1	226	0	226	226	174	400	1	**400**	-20	380	1	**380**	0	380	1	**380**
	Left-Through		0							0				0				0	
	Through	561	2	**281**	0	561	**281**	36	597	2	299	63	660	2	330	0	660	2	330
	Through-Right		0							0				0				0	
	Right	234	1	99	0	234	99	3	237	1	98	7	244	1	96	0	244	1	96
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	278	1	**278**	0	278	**278**	-44	234	1	234	19	253	1	253	0	253	1	253
	Left-Through		0							0				0				0	
	Through	529	2	265	0	529	265	57	586	2	**293**	43	629	2	**315**	0	629	2	**315**
	Through-Right		0							0				0				0	
	Right	61	1	35	0	61	35	29	90	1	45	0	90	1	42	0	90	1	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	37	90	1	90	6	96	1	96	0	96	1	96
	Left-Through		0							0				0				0	
	Through	445	1	**264**	0	445	**264**	272	717	1	**447**	-8	709	1	**441**	0	709	1	**441**
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	93	176	0	176	-3	173	0	173	0	173	0	173
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	270	1	**270**	0	270	**270**	9	279	1	**279**	18	297	1	**297**	0	297	1	**297**
	Left-Through		0							0				0				0	
	Through	715	1	456	0	715	456	267	982	1	572	-8	974	1	581	0	974	1	581
	Through-Right		1							1				1				1	
	Right	196	0	196	0	196	196	-34	162	0	162	25	187	0	187	0	187	0	187
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			693	North-South:			695	North-South:			695
		East-West:		534	East-West:		534	East-West:			726	East-West:			738	East-West:			738
		SUM:		1093	SUM:		1093	SUM:			1419	SUM:			1433	SUM:			1433
VOLUME/CAPACITY (V/C) RATIO:				0.795			0.795				1.032				1.042				1.042
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.795			0.795				1.032				1.042				1.042
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	254	1	**140**	0	254	**140**	34	288	1	**161**	10	298	1	**166**	0	298	1	**166**
	Left-Through		0							0				0				0	
	Through	13	0	140	0	13	140	3	16	0	161	0	16	0	166	0	16	0	166
	Through-Right		0							0				0				0	
	Right	13	0	0	0	13	0	5	18	0	0	0	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	19	1	19	0	19	19	7	26	1	26	0	26	1	26	0	26	1	26
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	131	1	**104**	0	131	**104**	19	150	1	**118**	0	150	1	**118**	0	150	1	**118**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	55	1	**55**	0	55	**55**	9	64	1	**64**	0	64	1	**64**	0	64	1	**64**
	Left-Through		0							0				0				0	
	Through	641	2	321	0	641	321	187	828	2	414	-6	822	2	411	0	822	2	411
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	856	1	**438**	0	856	**438**	200	1056	1	**541**	-14	1042	1	**534**	0	1042	1	**534**
	Through-Right		1							1				1				1	
	Right	19	0	19	0	19	19	7	26	0	26	-1	25	0	25	0	25	0	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		244	North-South:		244	North-South:			279	North-South:			284	North-South:			284
		East-West:		493	East-West:		493	East-West:			605	East-West:			598	East-West:			598
		SUM:		737	SUM:		737	SUM:			884	SUM:			882	SUM:			882
VOLUME/CAPACITY (V/C) RATIO:				0.517			0.517				0.620				0.619				0.619
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.517			0.517				0.620				0.619				0.619
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.001	Δ*v/c* after mitigation:	-0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	129	1	129	0	129	129	124	253	1	**253**	-12	241	1	**241**	0	241	1	**241**
	Left-Through		0							0				0				0	
	Through	383	1	**243**	0	383	**243**	136	519	1	312	9	528	1	317	0	528	1	317
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	1	104	0	104	1	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	**127**	0	127	**127**	-19	108	1	108	5	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	196	1	132	0	196	132	85	281	1	**197**	4	285	1	**198**	0	285	1	**198**
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	44	112	0	112	-2	110	0	110	0	110	0	110
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	85	1	85	0	85	85	39	124	1	124	4	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	1276	2	**460**	0	1276	**460**	112	1388	2	**527**	42	1430	2	**542**	0	1430	2	**542**
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	89	194	0	194	1	195	0	195	0	195	0	195
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	50	1	**50**	0	50	**50**	0	50	1	**50**	3	53	1	**53**	0	53	1	**53**
	Left-Through		0							0				0				0	
	Through	749	2	290	0	749	290	118	867	2	321	24	891	2	332	0	891	2	332
	Through-Right		1							1				1				1	
	Right	121	0	121	0	121	121	-24	97	0	97	9	106	0	106	0	106	0	106
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		370	North-South:		370	North-South:			450	North-South:			439	North-South:			439
		East-West:		510	East-West:		510	East-West:			577	East-West:			595	East-West:			595
		SUM:		880	SUM:		880	SUM:			1027	SUM:			1034	SUM:			1034
VOLUME/CAPACITY (V/C) RATIO:				0.587			0.587				0.685				0.689				0.689
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.587			0.587				0.685				0.689				0.689
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	26	0	26	0	26	26	-8	18	0	18	-4	14	0	14	0	14	0	14
	Left-Through		1							1				1				1	
	Through	499	0	**309**	0	499	**309**	-14	485	0	**299**	-42	443	0	**285**	0	443	0	**285**
	Through-Right		1							1				1				1	
	Right	93	0	309	0	93	309	1	94	0	299	18	112	0	285	0	112	0	285
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	235	1	**235**	0	235	**235**	11	246	1	**246**	-46	200	1	**200**	0	200	1	**200**
	Left-Through		0							0				0				0	
	Through	582	2	291	0	582	291	49	631	2	316	36	667	2	334	0	667	2	334
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	262	1	**167**	0	262	**167**	-43	219	1	**152**	-1	218	1	**159**	0	218	1	**159**
	Through-Right		1							1				1				1	
	Right	72	0	72	0	72	72	12	84	0	84	16	100	0	100	0	100	0	100
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		309	*North-South:*		309	*North-South:*			299	*North-South:*			285	*North-South:*			285
		East-West:		402	*East-West:*		402	*East-West:*			398	*East-West:*			359	*East-West:*			359
		SUM:		711	*SUM:*		711	*SUM:*			697	*SUM:*			644	*SUM:*			644
VOLUME/CAPACITY *(V/C)* RATIO:				0.474			0.474				0.465				0.429				0.429
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.474			0.474				0.465				0.429				0.429
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.036	Δ*v/c* after mitigation:	-0.036
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	180	0	**180**	0	180	**180**	13	193	0	**193**	11	204	0	**204**	0	204	0	**204**
	Left-Through		1							1				1				1	
	Through	241	0	173	0	241	173	-40	201	0	177	-15	186	0	171	0	186	0	171
	Through-Right		1							1				1				1	
	Right	104	1	0	0	104	0	48	152	1	0	4	156	1	0	0	156	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	627	1	**348**	0	627	**348**	47	674	1	**366**	-21	653	1	**351**	0	653	1	**351**
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	-11	58	0	58	-9	49	0	49	0	49	0	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	52	1	**52**	0	52	**52**	-25	27	1	**27**	-3	24	1	**24**	0	24	1	**24**
	Left-Through		0							0				0				0	
	Through	243	2	122	0	243	122	-25	218	2	109	-2	216	2	108	0	216	2	108
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		180	North-South:		180	North-South:			193	North-South:			204	North-South:			204
		East-West:		400	East-West:		400	East-West:			393	East-West:			375	East-West:			375
		SUM:		580	SUM:		580	SUM:			586	SUM:			579	SUM:			579
VOLUME/CAPACITY (V/C) RATIO:				0.387			0.387				0.391				0.386				0.386
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.387			0.387				0.391				0.386				0.386
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.005	Δ*v/c* after mitigation:	-0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	47	1	47	0	47	47	18	65	1	65	0	65	1	65	0	65	1	65
	Left-Through		0							0				0				0	
	Through	433	1	**314**	0	433	**314**	-62	371	1	**371**	-5	366	1	**366**	0	366	1	**366**
	Through-Right		1							1				1				1	
	Right	195	0	195	0	195	195	184	379	0	104	-4	375	0	119	0	375	0	119
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	141	1	**141**	0	141	**141**	5	146	1	**146**	11	157	1	**157**	0	157	1	**157**
	Left-Through		0							0				0				0	
	Through	346	1	346	0	346	346	-79	267	1	267	-11	256	1	256	0	256	1	256
	Through-Right		0							0				0				0	
	Right	21	1	14	0	21	14	-6	15	1	5	1	16	1	6	0	16	1	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	15	1	15	0	15	15	6	21	1	21	0	21	1	21	0	21	1	21
	Left-Through		0							0				0				0	
	Through	88	1	**59**	0	88	**59**	195	283	1	**178**	7	290	1	**178**	0	290	1	**178**
	Through-Right		1							1				1				1	
	Right	30	0	30	0	30	30	42	72	0	72	-6	66	0	66	0	66	0	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	282	1	**282**	0	282	**282**	269	551	1	**551**	-38	513	1	**513**	0	513	1	**513**
	Left-Through		0							0				0				0	
	Through	309	1	274	0	309	274	264	573	1	424	35	608	1	448	0	608	1	448
	Through-Right		1							1				1				1	
	Right	239	0	239	0	239	239	36	275	0	275	12	287	0	287	0	287	0	287
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		455	North-South:		455	North-South:			517	North-South:			523	North-South:			523
		East-West:		341	East-West:		341	East-West:			729	East-West:			691	East-West:			691
		SUM:		796	SUM:		796	SUM:			1246	SUM:			1214	SUM:			1214
VOLUME/CAPACITY (V/C) RATIO:				0.559			0.559				0.874				0.852				0.852
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.559			0.559				0.874				0.852				0.852
LEVEL OF SERVICE (LOS):				A			A				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.022	Δ*v/c* after mitigation:	-0.022
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	15	1	15	0	15	15	5	20	1	20	-10	10	1	10	0	10	1	10
	Left-Through		0							0				0				0	
	Through	499	0	**585**	0	499	**585**	735	1234	0	**1387**	42	1276	0	**1427**	0	1276	0	**1427**
	Through-Right		1							1				1				1	
	Right	86	0	0	0	86	0	67	153	0	0	-2	151	0	0	0	151	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	**83**	0	83	**83**	36	119	1	**119**	18	137	1	**137**	0	137	1	**137**
	Left-Through		0							0				0				0	
	Through	188	1	188	0	188	188	405	593	1	593	23	616	1	616	0	616	1	616
	Through-Right		0							0				0				0	
	Right	89	1	0	0	89	0	9	98	1	0	-42	56	1	0	0	56	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	300	1	**300**	0	300	**300**	64	364	1	**364**	-18	346	1	**346**	0	346	1	**346**
	Left-Through		0							0				0				0	
	Through	539	1	276	0	539	276	-68	471	1	247	-45	426	1	223	0	426	1	223
	Through-Right		1							1				1				1	
	Right	12	0	12	0	12	12	11	23	0	23	-4	19	0	19	0	19	0	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	0	39	0	39	39	44	83	0	83	13	96	0	96	0	96	0	96
	Left-Through		1							1				1				1	
	Through	215	0	**196**	0	215	**196**	-55	160	0	**229**	-58	102	0	**236**	0	102	0	**236**
	Through-Right		1							1				1				1	
	Right	98	0	196	0	98	196	34	132	0	229	46	178	0	236	0	178	0	236
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		668	North-South:		668	North-South:			1506	North-South:			1564	North-South:			1564
		East-West:		496	East-West:		496	East-West:			593	East-West:			582	East-West:			582
		SUM:		1164	SUM:		1164	SUM:			2099	SUM:			2146	SUM:			2146
VOLUME/CAPACITY (V/C) RATIO:				0.776			0.776				1.399				1.431				1.431
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.776			0.776				1.399				1.431				1.431
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.032	Δ*v/c* after mitigation:	0.032
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	112	1	112	0	112	112	224	336	1	**336**	-17	319	1	**319**	0	319	1	**319**
	Left-Through		0							0				0				0	
	Through	544	1	**291**	0	544	**291**	51	595	1	326	48	643	1	350	0	643	1	350
	Through-Right		1							1				1				1	
	Right	38	0	38	0	38	38	19	57	0	57	-1	56	0	56	0	56	0	56
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	170	1	**170**	0	170	**170**	-48	122	1	122	4	126	1	126	0	126	1	126
	Left-Through		0							0				0				0	
	Through	384	1	264	0	384	264	58	442	1	**324**	8	450	1	**328**	0	450	1	**328**
	Through-Right		1							1				1				1	
	Right	143	0	143	0	143	143	62	205	0	205	1	206	0	206	0	206	0	206
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	-6	40	0	40	5	45	0	45	0	45	0	45
	Left-Through		1							1				1				1	
	Through	941	0	**593**	0	941	**593**	176	1117	0	**784**	11	1128	0	**799**	0	1128	0	**799**
	Through-Right		1							1				1				1	
	Right	153	0	593	0	153	593	138	291	0	784	-2	289	0	799	0	289	0	799
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	0	**69**	0	69	**69**	38	107	0	**107**	3	110	0	**110**	0	110	0	**110**
	Left-Through		1							1				1				1	
	Through	346	0	457	0	346	457	321	667	0	709	7	674	0	729	0	674	0	729
	Through-Right		1							1				1				1	
	Right	154	0	457	0	154	457	-46	108	0	709	16	124	0	729	0	124	0	729
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		461	North-South:		461	North-South:			660	North-South:			647	North-South:			647
		East-West:		662	East-West:		662	East-West:			891	East-West:			909	East-West:			909
		SUM:		1123	SUM:		1123	SUM:			1551	SUM:			1556	SUM:			1556
VOLUME/CAPACITY (V/C) RATIO:				0.749			0.749				1.034				1.037				1.037
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.749			0.749				1.034				1.037				1.037
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	368	2	0	0	368	0	134	502	2	0	7	509	2	0	0	509	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	870	1	**480**	0	870	**480**	22	892	1	**541**	50	942	1	**564**	0	942	1	**564**
	Left-Through		1							1				1				1	
	Through	570	1	480	0	570	480	162	732	1	541	17	749	1	564	0	749	1	564
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	311	2	**156**	0	311	**156**	44	355	2	**178**	36	391	2	**196**	0	391	2	**196**
	Through-Right		0							0				0				0	
	Right	2	1	2	0	2	2	102	104	1	104	-32	72	1	72	0	72	1	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		0	North-South:		0	North-South:			0	North-South:			0	North-South:			0
		East-West:		636	East-West:		636	East-West:			719	East-West:			760	East-West:			760
		SUM:		636	SUM:		636	SUM:			719	SUM:			760	SUM:			760
VOLUME/CAPACITY (V/C) RATIO:				0.424			0.424				0.479				0.507				0.507
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.424			0.424				0.479				0.507				0.507
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.028
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 1

No. of Phases				2				2				2				2				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB-- 0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0			0
Override Capacity				0				0				0				0				0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	34	0	34	34	4	38	1	38	0	38	1	38	0	38	1	38
	Left-Through		0							0				0				0	
	Through	1354	1	**716**	0	1354	**716**	64	1418	1	**754**	-1	1417	1	**754**	0	1417	1	**754**
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	11	89	0	89	1	90	0	90	0	90	0	90
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	**112**	0	112	**112**	6	118	1	**118**	1	119	1	**119**	0	119	1	**119**
	Left-Through		0							0				0				0	
	Through	1223	1	645	0	1223	645	79	1302	1	685	10	1312	1	690	0	1312	1	690
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66	2	68	0	68	0	68	0	68	0	68	0	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	112	0	**112**	0	112	**112**	6	118	0	**118**	0	118	0	**118**	0	118	0	**118**
	Left-Through		1							1				1				1	
	Through	257	0	258	0	257	258	37	294	0	285	3	297	0	287	0	297	0	287
	Through-Right		1							1				1				1	
	Right	34	0	258	0	34	258	5	39	0	285	1	40	0	287	0	40	0	287
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	0	31	0	31	31	6	37	0	37	1	38	0	38	0	38	0	38
	Left-Through		1							1				1				1	
	Through	171	0	**188**	0	171	**188**	26	197	0	**229**	2	199	0	**232**	0	199	0	**232**
	Through-Right		1							1				1				1	
	Right	174	0	188	0	174	188	13	187	0	229	1	188	0	232	0	188	0	232
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		828	*North-South:*		828	*North-South:*			872	*North-South:*			873	*North-South:*			873
		East-West:		300	*East-West:*		300	*East-West:*			347	*East-West:*			350	*East-West:*			350
		SUM:		1128	*SUM:*		1128	*SUM:*			1219	*SUM:*			1223	*SUM:*			1223
VOLUME/CAPACITY *(V/C)* RATIO:				0.752			0.752				0.813				0.815				0.815
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.752			0.752				0.813				0.815				0.815
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)
AM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	3
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	282	1	218	0	282	218	-8	274	1	215	6	280	1	221	0	280	1	221
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	2	156	0	156	5	161	0	161	0	161	0	161
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	691	2	380	0	691	380	100	791	2	435	32	823	2	453	0	823	2	453
	Left-Through		0							0				0				0	
	Through	722	0	**915**	0	722	**915**	2	724	0	**921**	16	740	0	**949**	0	740	0	**949**
	Through-Right		1							1				1				1	
	Right	193	0	0	0	193	0	4	197	0	0	12	209	0	0	0	209	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	81	0	81	0	81	81	2	83	0	83	5	88	0	88	0	88	0	88
	Left-Through		0							0				0				0	
	Through	33	0	**132**	0	33	**132**	2	35	0	**135**	3	38	0	**144**	0	38	0	**144**
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	-1	17	0	0	1	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	457	2	0	0	457	0	67	524	2	0	24	548	2	0	0	548	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		915	*North-South:*		915	*North-South:*			921	*North-South:*			949	*North-South:*			949
		East-West:		132	*East-West:*		132	*East-West:*			135	*East-West:*			144	*East-West:*			144
		SUM:		1047	*SUM:*		1047	*SUM:*			1056	*SUM:*			1093	*SUM:*			1093
VOLUME/CAPACITY *(V/C)* RATIO:				0.735			0.735				0.741				0.767				0.767
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.735			0.735				0.741				0.767				0.767
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.026
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	93	1	**93**	0	93	**93**	20	113	1	**113**	22	135	1	**135**	0	135	1	**135**
	Left-Through		0							0				0				0	
	Through	619	2	310	0	619	310	-12	607	2	304	52	659	2	330	0	659	2	330
	Through-Right		0							0				0				0	
	Right	2	1	0	0	2	0	1	3	1	0	1	4	1	0	0	4	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	147	1	147	0	147	147	14	161	1	161	-2	159	1	159	0	159	1	159
	Left-Through		0							0				0				0	
	Through	811	1	**436**	0	811	**436**	-62	749	1	**406**	-8	741	1	**399**	0	741	1	**399**
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	2	63	0	63	-7	56	0	56	0	56	0	56
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	141	1	141	0	141	141	15	156	1	156	-25	131	1	131	0	131	1	131
	Left-Through		0							0				0				0	
	Through	608	1	**381**	0	608	**381**	276	884	1	**536**	14	898	1	**545**	0	898	1	**545**
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	34	188	0	188	3	191	0	191	0	191	0	191
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	250	1	**250**	0	250	**250**	36	286	1	**286**	21	307	1	**307**	0	307	1	**307**
	Left-Through		0							0				0				0	
	Through	630	1	401	0	630	401	180	810	1	494	-24	786	1	471	0	786	1	471
	Through-Right		1							1				1				1	
	Right	171	0	171	0	171	171	6	177	0	177	-21	156	0	156	0	156	0	156
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		529	*North-South:*		529	*North-South:*			519	*North-South:*			534	*North-South:*			534
		East-West:		631	*East-West:*		631	*East-West:*			822	*East-West:*			852	*East-West:*			852
		SUM:		1160	*SUM:*		1160	*SUM:*			1341	*SUM:*			1386	*SUM:*			1386
VOLUME/CAPACITY *(V/C)* RATIO:				0.814			0.814				0.941				0.973				0.973
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.814			0.814				0.941				0.973				0.973
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.032	Δ*v/c* after mitigation:	0.032
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	-1	193	1	**193**	-36	157	1	**157**	0	157	1	**157**
	Left-Through		0							0				0				0	
	Through	173	0	195	0	173	195	-29	144	0	171	-19	125	0	147	0	125	0	147
	Through-Right		1							1				1				1	
	Right	22	0	0	0	22	0	5	27	0	0	-5	22	0	0	0	22	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	146	1	146	0	146	146	47	193	1	193	5	198	1	198	0	198	1	198
	Left-Through		0							0				0				0	
	Through	284	0	**357**	0	284	**357**	-35	249	0	**328**	-6	243	0	**324**	0	243	0	**324**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	6	79	0	0	2	81	0	0	0	81	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	86	1	**86**	0	86	**86**	12	98	1	**98**	9	107	1	**107**	0	107	1	**107**
	Left-Through		0							0				0				0	
	Through	409	1	280	0	409	280	265	674	1	419	10	684	1	422	0	684	1	422
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	14	164	0	164	-5	159	0	159	0	159	0	159
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	1	39	0	39	39	4	43	1	43	-2	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	612	1	**368**	0	612	**368**	216	828	1	**484**	11	839	1	**495**	0	839	1	**495**
	Through-Right		1							1				1				1	
	Right	123	0	123	0	123	123	16	139	0	139	11	150	0	150	0	150	0	150
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		551	*North-South:*		551	*North-South:*			521	*North-South:*			481	*North-South:*			481
		East-West:		454	*East-West:*		454	*East-West:*			582	*East-West:*			602	*East-West:*			602
		SUM:		1005	*SUM:*		1005	*SUM:*			1103	*SUM:*			1083	*SUM:*			1083
VOLUME/CAPACITY *(V/C)* RATIO:				0.705			0.705				0.774				0.760				0.760
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.705			0.705				0.774				0.760				0.760
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.014	Δ*v/c* after mitigation:	-0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	335	1	**209**	0	335	**209**	56	391	1	**253**	112	503	1	**311**	0	503	1	**311**
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	32	114	0	114	5	119	0	119	0	119	0	119
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	384	1	**384**	0	384	**384**	15	399	1	**399**	-19	380	1	**380**	0	380	1	**380**
	Left-Through		0							0				0				0	
	Through	678	1	341	0	678	341	-57	621	1	312	112	733	1	368	0	733	1	368
	Through-Right		1							1				1				1	
	Right	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		0							0				0				0	
	Through	1	0	**3**	0	1	**3**	0	1	0	**3**	0	1	0	**3**	0	1	0	**3**
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	127	0	**127**	0	127	**127**	13	140	0	**140**	3	143	0	**143**	0	143	0	**143**
	Left-Through		1							1				1				1	
	Through	2	0	129	0	2	129	0	2	0	142	0	2	0	145	0	2	0	145
	Through-Right		0							0				0				0	
	Right	277	1	85	0	277	85	13	290	1	91	4	294	1	104	0	294	1	104
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		593	North-South:		593	North-South:			652	North-South:			691	North-South:			691
		East-West:		130	East-West:		130	East-West:			143	East-West:			146	East-West:			146
		SUM:		723	SUM:		723	SUM:			795	SUM:			837	SUM:			837
VOLUME/CAPACITY (V/C) RATIO:				0.526			0.526				0.578				0.609				0.609
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.526			0.526				0.578				0.609				0.609
LEVEL OF SERVICE (LOS):				A			A				A				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.031	Δ*v/c* after mitigation:	0.031
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	319	1	**319**	0	319	**319**	2	321	1	**321**	7	328	1	**328**	0	328	1	**328**
	Left-Through		0							0				0				0	
	Through	148	1	148	0	148	148	-23	125	1	125	16	141	1	141	0	141	1	141
	Through-Right		0							0				0				0	
	Right	14	1	0	0	14	0	13	27	1	0	2	29	1	0	0	29	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	0	67	67	-8	59	1	59	11	70	1	70	0	70	1	70
	Left-Through		0							0				0				0	
	Through	281	1	**281**	0	281	**281**	-93	188	1	**188**	46	234	1	**234**	0	234	1	**234**
	Through-Right		0							0				0				0	
	Right	69	1	61	0	69	61	-37	32	1	28	4	36	1	31	0	36	1	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	1	17	0	17	17	-8	9	1	9	1	10	1	10	0	10	1	10
	Left-Through		0							0				0				0	
	Through	168	0	**493**	0	168	**493**	27	195	0	**482**	2	197	0	**501**	0	197	0	**501**
	Through-Right		1							1				1				1	
	Right	325	0	0	0	325	0	-38	287	0	0	17	304	0	0	0	304	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	40	1	**40**	0	40	**40**	18	58	1	**58**	5	63	1	**63**	0	63	1	**63**
	Left-Through		0							0				0				0	
	Through	281	0	311	0	281	311	-2	279	0	304	-1	278	0	305	0	278	0	305
	Through-Right		1							1				1				1	
	Right	30	0	0	0	30	0	-5	25	0	0	2	27	0	0	0	27	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		600	North-South:		600	North-South:			509	North-South:			562	North-South:			562
		East-West:		533	East-West:		533	East-West:			540	East-West:			564	East-West:			564
		SUM:		1133	SUM:		1133	SUM:			1049	SUM:			1126	SUM:			1126
VOLUME/CAPACITY (V/C) RATIO:				0.824			0.824				0.763				0.819				0.819
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.824			0.824				0.763				0.819				0.819
LEVEL OF SERVICE (LOS):				D			D				C				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.056	Δ*v/c* after mitigation:	0.056
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	22	1	**22**	0	22	**22**	-6	16	1	**16**	-1	15	1	**15**	0	15	1	**15**
	Left-Through		0							0				0				0	
	Through	407	1	265	0	407	265	-4	403	1	281	83	486	1	310	0	486	1	310
	Through-Right		1							1				1				1	
	Right	122	0	122	0	122	122	36	158	0	158	-24	134	0	134	0	134	0	134
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	60	1	60	0	60	60	33	93	1	93	1	94	1	94	0	94	1	94
	Left-Through		0							0				0				0	
	Through	744	1	**379**	0	744	**379**	-16	728	1	**370**	100	828	1	**421**	0	828	1	**421**
	Through-Right		1							1				1				1	
	Right	14	0	14	0	14	14	-2	12	0	12	2	14	0	14	0	14	0	14
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	0	**17**	0	17	**17**	-3	14	0	**14**	5	19	0	**19**	0	19	0	**19**
	Left-Through		0							0				0				0	
	Through	67	0	98	0	67	98	7	74	0	98	-5	69	0	98	0	69	0	98
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	-4	10	0	0	0	10	0	0	0	10	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	199	0	199	0	199	199	22	221	0	221	1	222	0	222	0	222	0	222
	Left-Through		0							0				0				0	
	Through	97	0	**330**	0	97	**330**	1	98	0	**365**	0	98	0	**379**	0	98	0	**379**
	Through-Right		0							0				0				0	
	Right	34	0	0	0	34	0	12	46	0	0	13	59	0	0	0	59	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		401	North-South:		401	North-South:			386	North-South:			436	North-South:			436
		East-West:		347	East-West:		347	East-West:			379	East-West:			398	East-West:			398
		SUM:		748	SUM:		748	SUM:			765	SUM:			834	SUM:			834
VOLUME/CAPACITY (V/C) RATIO:				0.499			0.499				0.510				0.556				0.556
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.499			0.499				0.510				0.556				0.556
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.046	Δ*v/c* after mitigation:	0.046
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	223	1	**223**	0	223	**223**	-19	204	1	**204**	11	215	1	**215**	0	215	1	**215**
	Left-Through		0							0				0				0	
	Through	312	1	312	0	312	312	-15	297	1	297	7	304	1	304	0	304	1	304
	Through-Right		0							0				0				0	
	Right	35	1	10	0	35	10	-1	34	1	8	-11	23	1	6	0	23	1	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	68	1	68	0	68	68	-11	57	1	57	4	61	1	61	0	61	1	61
	Left-Through		0							0				0				0	
	Through	524	1	**524**	0	524	**524**	-93	431	1	**431**	39	470	1	**470**	0	470	1	**470**
	Through-Right		0							0				0				0	
	Right	50	1	39	0	50	39	-10	40	1	26	26	66	1	45	0	66	1	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	23	1	**23**	0	23	**23**	5	28	1	28	15	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	126	1	126	0	126	126	29	155	1	155	4	159	1	159	0	159	1	159
	Through-Right		1							1				1				1	
	Right	295	0	184	0	295	184	58	353	0	**251**	15	368	0	**261**	0	368	0	**261**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	51	1	51	0	51	51	1	52	1	**52**	-17	35	1	**35**	0	35	1	**35**
	Left-Through		0							0				0				0	
	Through	236	1	**236**	0	236	**236**	-3	233	1	233	9	242	1	242	0	242	1	242
	Through-Right		0							0				0				0	
	Right	144	1	110	0	144	110	4	148	1	120	2	150	1	120	0	150	1	120
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		747	North-South:		747	North-South:			635	North-South:			685	North-South:			685
		East-West:		259	East-West:		259	East-West:			303	East-West:			296	East-West:			296
		SUM:		1006	SUM:		1006	SUM:			938	SUM:			981	SUM:			981
VOLUME/CAPACITY (V/C) RATIO:				0.671			0.671				0.625				0.654				0.654
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.671			0.671				0.625				0.654				0.654
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.029	Δ*v/c* after mitigation:	0.029
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	**34**	0	34	**34**	39	73	1	**73**	15	88	1	**88**	0	88	1	**88**
	Left-Through		0							0				0				0	
	Through	450	1	264	0	450	264	-74	376	1	228	29	405	1	238	0	405	1	238
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	3	80	0	80	-10	70	0	70	0	70	0	70
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	169	0	169	169	-54	115	1	115	-30	85	1	85	0	85	1	85
	Left-Through		0							0				0				0	
	Through	996	1	**523**	0	996	**523**	-85	911	1	**491**	68	979	1	**525**	0	979	1	**525**
	Through-Right		1							1				1				1	
	Right	50	0	50	0	50	50	20	70	0	70	1	71	0	71	0	71	0	71
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	41	0	41	0	41	41	6	47	0	47	3	50	0	50	0	50	0	50
	Left-Through		0							0				0				0	
	Through	239	0	**353**	0	239	**353**	99	338	0	**523**	-47	291	0	**515**	0	291	0	**515**
	Through-Right		0							0				0				0	
	Right	73	0	0	0	73	0	65	138	0	0	36	174	0	0	0	174	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	93	0	**93**	0	93	**93**	-13	80	0	**80**	-2	78	0	**78**	0	78	0	**78**
	Left-Through		0							0				0				0	
	Through	148	0	358	0	148	358	47	195	0	335	-15	180	0	307	0	180	0	307
	Through-Right		0							0				0				0	
	Right	117	0	0	0	117	0	-57	60	0	0	-11	49	0	0	0	49	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		557	North-South:		557	North-South:			564	North-South:			613	North-South:			613
		East-West:		446	East-West:		446	East-West:			603	East-West:			593	East-West:			593
		SUM:		1003	SUM:		1003	SUM:			1167	SUM:			1206	SUM:			1206
VOLUME/CAPACITY (V/C) RATIO:				0.704			0.704				0.819				0.846				0.846
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.704			0.704				0.819				0.846				0.846
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	0.027
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	10	1	**10**	0	10	**10**	-1	9	1	**9**	2	11	1	**11**	0	11	1	**11**
	Left-Through		0							0				0				0	
	Through	424	1	282	0	424	282	-8	416	1	300	53	469	1	310	0	469	1	310
	Through-Right		1							1				1				1	
	Right	140	0	140	0	140	140	44	184	0	184	-33	151	0	151	0	151	0	151
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	291	1	291	0	291	291	2	293	1	293	-8	285	1	285	0	285	1	285
	Left-Through		0							0				0				0	
	Through	1236	1	**619**	0	1236	**619**	-43	1193	1	**597**	97	1290	1	**646**	0	1290	1	**646**
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	7	0	**7**	0	7	**7**	0	7	0	**7**	1	8	0	**8**	0	8	0	**8**
	Left-Through		0							0				0				0	
	Through	9	0	16	0	9	16	2	11	0	18	-1	10	0	18	0	10	0	18
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	125	0	125	0	125	125	62	187	0	187	-45	142	0	142	0	142	0	142
	Left-Through		0							0				0				0	
	Through	19	0	**306**	0	19	**306**	2	21	0	**397**	-1	20	0	**339**	0	20	0	**339**
	Through-Right		0							0				0				0	
	Right	162	0	0	0	162	0	27	189	0	0	-12	177	0	0	0	177	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		629	North-South:		629	North-South:			606	North-South:			657	North-South:			657
		East-West:		313	East-West:		313	East-West:			404	East-West:			347	East-West:			347
		SUM:		942	SUM:		942	SUM:			1010	SUM:			1004	SUM:			1004
VOLUME/CAPACITY (V/C) RATIO:				0.628			0.628				0.673				0.669				0.669
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.628			0.628				0.673				0.669				0.669
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.004	Δ*v/c* after mitigation:	-0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3			3			3			3			3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	96	1	96	0	96	96	43	139	1	139	-4	135	1	135	0	135	1	135
	Left-Through		0							0				0				0	
	Through	364	1	**227**	0	364	**227**	32	396	1	**248**	8	404	1	**254**	0	404	1	**254**
	Through-Right		1							1				1				1	
	Right	90	0	90	0	90	90	10	100	0	100	3	103	0	103	0	103	0	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	371	1	**371**	0	371	**371**	3	374	1	**374**	18	392	1	**392**	0	392	1	**392**
	Left-Through		0							0				0				0	
	Through	742	1	381	0	742	381	46	788	1	407	42	830	1	428	0	830	1	428
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	6	26	0	26	0	26	0	26	0	26	0	26
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	4	57	1	57	1	58	1	58	0	58	1	58
	Left-Through		0							0				0				0	
	Through	246	1	246	0	246	246	24	270	1	270	7	277	1	277	0	277	1	277
	Through-Right		0							0				0				0	
	Right	323	1	**275**	0	323	**275**	50	373	1	**304**	11	384	1	**317**	0	384	1	**317**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	65	1	**65**	0	65	**65**	-1	64	1	**64**	14	78	1	**78**	0	78	1	**78**
	Left-Through		0							0				0				0	
	Through	60	1	60	0	60	60	14	74	1	74	11	85	1	85	0	85	1	85
	Through-Right		0							0				0				0	
	Right	99	1	0	0	99	0	-8	91	1	0	19	110	1	0	0	110	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		598	North-South:		598	North-South:			622	North-South:			646	North-South:			646
		East-West:		340	East-West:		340	East-West:			368	East-West:			395	East-West:			395
		SUM:		938	SUM:		938	SUM:			990	SUM:			1041	SUM:			1041
VOLUME/CAPACITY (V/C) RATIO:				0.658			0.658				0.695				0.731				0.731
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.695				0.731				0.731
LEVEL OF SERVICE (LOS):				B			B				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.036	Δ*v/c* after mitigation:	0.036
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	171	1	**171**	0	171	**171**	-94	77	1	**77**	8	85	1	**85**	0	85	1	**85**
	Left-Through		0							0				0				0	
	Through	447	1	242	0	447	242	136	583	1	307	17	600	1	318	0	600	1	318
	Through-Right		1							1				1				1	
	Right	37	0	37	0	37	37	-6	31	0	31	4	35	0	35	0	35	0	35
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	18	1	18	0	18	18	26	44	1	44	0	44	1	44	0	44	1	44
	Left-Through		0							0				0				0	
	Through	1032	1	**618**	0	1032	**618**	51	1083	1	**678**	78	1161	1	**712**	0	1161	1	**712**
	Through-Right		1							1				1				1	
	Right	203	0	203	0	203	203	69	272	0	272	-10	262	0	262	0	262	0	262
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	54	0	54	54	0	54	1	54	-3	51	1	51	0	51	1	51
	Left-Through		0							0				0				0	
	Through	43	0	**116**	0	43	**116**	-16	27	0	**47**	2	29	0	**52**	0	29	0	**52**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	-53	20	0	0	3	23	0	0	0	23	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	82	1	**82**	0	82	**82**	-26	56	1	**56**	6	62	1	**62**	0	62	1	**62**
	Left-Through		0							0				0				0	
	Through	87	2	36	0	87	36	-11	76	2	38	-1	75	2	38	0	75	2	38
	Through-Right		1							1				1				1	
	Right	22	0	22	0	22	22	34	56	0	34	-4	52	0	30	0	52	0	30
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		789	*North-South:*		789	*North-South:*			755	*North-South:*			797	*North-South:*			797
		East-West:		198	*East-West:*		198	*East-West:*			103	*East-West:*			114	*East-West:*			114
		SUM:		987	*SUM:*		987	*SUM:*			858	*SUM:*			911	*SUM:*			911
VOLUME/CAPACITY *(V/C)* RATIO:				0.658			0.658				0.572				0.607				0.607
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.572				0.607				0.607
LEVEL OF SERVICE (LOS):				B			B				A				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.035	Δ*v/c* after mitigation:	0.035
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			4			4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0				0				0				0
Override Capacity			0			0				0				0				0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	175	1	**175**	0	175	**175**	127	302	1	**302**	10	312	1	**312**	0	312	1	**312**
	Left-Through		0							0				0				0	
	Through	348	2	174	0	348	174	-32	316	2	158	17	333	2	167	0	333	2	167
	Through-Right		0							0				0				0	
	Right	241	1	132	0	241	132	-35	206	1	106	8	214	1	114	0	214	1	114
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	415	1	415	0	415	415	-133	282	1	282	23	305	1	305	0	305	1	305
	Left-Through		0							0				0				0	
	Through	1132	2	**566**	0	1132	**566**	17	1149	2	**575**	58	1207	2	**604**	0	1207	2	**604**
	Through-Right		0							0				0				0	
	Right	35	1	31	0	35	31	13	48	1	42	3	51	1	45	0	51	1	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	9	1	9	0	9	9	3	12	1	12	1	13	1	13	0	13	1	13
	Left-Through		0							0				0				0	
	Through	699	1	**407**	0	699	**407**	207	906	1	**565**	30	936	1	**580**	0	936	1	**580**
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	108	223	0	223	1	224	0	224	0	224	0	224
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	219	1	**219**	0	219	**219**	-18	201	1	**201**	0	201	1	**201**	0	201	1	**201**
	Left-Through		0							0				0				0	
	Through	488	1	339	0	488	339	117	605	1	364	14	619	1	374	0	619	1	374
	Through-Right		1							1				1				1	
	Right	189	0	189	0	189	189	-66	123	0	123	6	129	0	129	0	129	0	129
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		741	North-South:		741	North-South:			877	North-South:			916	North-South:			916
		East-West:		626	East-West:		626	East-West:			766	East-West:			781	East-West:			781
		SUM:		1367	SUM:		1367	SUM:			1643	SUM:			1697	SUM:			1697
VOLUME/CAPACITY (V/C) RATIO:				0.994			0.994				1.195				1.234				1.234
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.994			0.994				1.195				1.234				1.234
LEVEL OF SERVICE (LOS):				E			E				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.039	Δ*v/c* after mitigation:	0.039
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	306	1	**183**	0	306	**183**	6	312	1	**186**	15	327	1	**194**	0	327	1	**194**
	Left-Through		0							0				0				0	
	Through	29	0	183	0	29	183	1	30	0	186	1	31	0	194	0	31	0	194
	Through-Right		0							0				0				0	
	Right	30	0	0	0	30	0	0	30	0	0	0	30	0	0	0	30	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	24	0	24	24	0	24	1	24	-1	23	1	23	0	23	1	23
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	89	1	**50**	0	89	**50**	2	91	1	**52**	1	92	1	**53**	0	92	1	**53**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	79	1	**79**	0	79	**79**	-1	78	1	**78**	0	78	1	**78**	0	78	1	**78**
	Left-Through		0							0				0				0	
	Through	651	2	326	0	651	326	-30	621	2	311	-12	609	2	305	0	609	2	305
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	681	1	**351**	0	681	**351**	32	713	1	**368**	-3	710	1	**366**	0	710	1	**366**
	Through-Right		1							1				1				1	
	Right	21	0	21	0	21	21	1	22	0	22	0	22	0	22	0	22	0	22
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		233	North-South:		233	North-South:			238	North-South:			247	North-South:			247
		East-West:		430	East-West:		430	East-West:			446	East-West:			444	East-West:			444
		SUM:		663	SUM:		663	SUM:			684	SUM:			691	SUM:			691
VOLUME/CAPACITY (V/C) RATIO:				0.465			0.465				0.480				0.485				0.485
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.465			0.465				0.480				0.485				0.485
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	90	1	**90**	0	90	**90**	6	96	1	**96**	-7	89	1	**89**	0	89	1	**89**
	Left-Through		0							0				0				0	
	Through	250	1	159	0	250	159	11	261	1	156	-3	258	1	154	0	258	1	154
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	-17	50	0	50	-1	49	0	49	0	49	0	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	111	1	111	0	111	111	-30	81	1	81	1	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	335	1	**220**	0	335	**220**	58	393	1	**251**	4	397	1	**251**	0	397	1	**251**
	Through-Right		1							1				1				1	
	Right	104	0	104	0	104	104	5	109	0	109	-4	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	**54**	0	54	**54**	28	82	1	**82**	4	86	1	**86**	0	86	1	**86**
	Left-Through		0							0				0				0	
	Through	834	2	303	0	834	303	71	905	2	346	34	939	2	359	0	939	2	359
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	57	133	0	133	5	138	0	138	0	138	0	138
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	68	1	68	0	68	68	6	74	1	74	7	81	1	81	0	81	1	81
	Left-Through		0							0				0				0	
	Through	1703	2	**604**	0	1703	**604**	-47	1656	2	**587**	56	1712	2	**609**	0	1712	2	**609**
	Through-Right		1							1				1				1	
	Right	110	0	110	0	110	110	-5	105	0	105	11	116	0	116	0	116	0	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		310	North-South:		310	North-South:			347	North-South:			340	North-South:			340
		East-West:		658	East-West:		658	East-West:			669	East-West:			695	East-West:			695
		SUM:		968	SUM:		968	SUM:			1016	SUM:			1035	SUM:			1035
VOLUME/CAPACITY (V/C) RATIO:				0.645			0.645				0.677				0.690				0.690
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.645				0.677				0.690				0.690
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.013	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			2			2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0				0				0				0
Override Capacity			0			0				0				0				0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	32	0	32	0	32	32	-8	24	0	24	3	27	0	27	0	27	0	27
	Left-Through		1							1				1				1	
	Through	377	0	**229**	0	377	**229**	-22	355	0	**204**	-6	349	0	**203**	0	349	0	**203**
	Through-Right		1							1				1				1	
	Right	49	0	229	0	49	229	-20	29	0	204	1	30	0	203	0	30	0	203
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	59	1	**59**	0	59	**59**	10	69	1	**69**	3	72	1	**72**	0	72	1	**72**
	Left-Through		0							0				0				0	
	Through	229	2	115	0	229	115	-59	170	2	85	15	185	2	93	0	185	2	93
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	743	1	**447**	0	743	**447**	-6	737	1	**464**	47	784	1	**482**	0	784	1	**482**
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	40	190	0	190	-11	179	0	179	0	179	0	179
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		229	*North-South:*		229	*North-South:*			204	*North-South:*			203	*North-South:*			203
		East-West:		506	*East-West:*		506	*East-West:*			533	*East-West:*			554	*East-West:*			554
		SUM:		735	*SUM:*		735	*SUM:*			737	*SUM:*			757	*SUM:*			757
VOLUME/CAPACITY *(V/C)* RATIO:				0.490			0.490				0.491				0.505				0.505
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.491				0.505				0.505
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.014	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	49	0	49	0	49	49	-7	42	0	42	-7	35	0	35	0	35	0	35
	Left-Through		1							1				1				1	
	Through	143	0	**140**	0	143	**140**	10	153	0	**162**	-44	109	0	**123**	0	109	0	**123**
	Through-Right		1							1				1				1	
	Right	227	1	140	0	227	140	64	291	1	162	-65	226	1	123	0	226	1	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	218	1	**169**	0	218	**169**	-41	177	1	149	25	202	1	160	0	202	1	160
	Through-Right		1							1				1				1	
	Right	119	0	119	0	119	119	2	121	0	121	-3	118	0	118	0	118	0	118
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	**149**	0	149	**149**	-23	126	1	126	-1	125	1	125	0	125	1	125
	Left-Through		0							0				0				0	
	Through	633	2	317	0	633	317	9	642	2	**321**	51	693	2	**347**	0	693	2	**347**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		140	*North-South:*		140	*North-South:*			162	*North-South:*			123	*North-South:*			123
		East-West:		318	*East-West:*		318	*East-West:*			321	*East-West:*			347	*East-West:*			347
		SUM:		458	*SUM:*		458	*SUM:*			483	*SUM:*			470	*SUM:*			470
VOLUME/CAPACITY *(V/C)* RATIO:				0.305			0.305				0.322				0.313				0.313
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.305			0.305				0.322				0.313				0.313
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.009	Δ*v/c* after mitigation:	-0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	31	1	31	0	31	31	15	46	1	46	-1	45	1	45	0	45	1	45
	Left-Through		0							0				0				0	
	Through	230	1	**230**	0	230	**230**	-15	215	1	215	4	219	1	219	0	219	1	219
	Through-Right		1							1				1				1	
	Right	257	0	203	0	257	203	113	370	0	**292**	-24	346	0	**275**	0	346	0	**275**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	381	1	**381**	0	381	**381**	26	407	1	**407**	10	417	1	**417**	0	417	1	**417**
	Left-Through		0							0				0				0	
	Through	392	1	392	0	392	392	-26	366	1	366	7	373	1	373	0	373	1	373
	Through-Right		0							0				0				0	
	Right	12	1	0	0	12	0	1	13	1	0	1	14	1	0	0	14	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	-1	100	1	100	7	107	1	107	0	107	1	107
	Left-Through		0							0				0				0	
	Through	241	1	**157**	0	241	**157**	125	366	1	**232**	-9	357	1	**226**	0	357	1	**226**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	24	97	0	97	-3	94	0	94	0	94	0	94
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	109	1	**109**	0	109	**109**	47	156	1	**156**	-14	142	1	**142**	0	142	1	**142**
	Left-Through		0							0				0				0	
	Through	109	1	109	0	109	109	76	185	1	172	-6	179	1	169	0	179	1	169
	Through-Right		1							1				1				1	
	Right	148	0	0	0	148	0	10	158	0	158	0	158	0	158	0	158	0	158
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		611	North-South:		611	North-South:			699	North-South:			692	North-South:			692
		East-West:		266	East-West:		266	East-West:			388	East-West:			368	East-West:			368
		SUM:		877	SUM:		877	SUM:			1087	SUM:			1060	SUM:			1060
VOLUME/CAPACITY (V/C) RATIO:				0.615			0.615				0.763				0.744				0.744
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.615			0.615				0.763				0.744				0.744
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.019	Δ*v/c* after mitigation:	-0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	1	6	1	6	0	6	1	6	0	6	1	6
	Left-Through		0							0				0				0	
	Through	331	0	**383**	0	331	**383**	153	484	0	**525**	-15	469	0	**515**	0	469	0	**515**
	Through-Right		1							1				1				1	
	Right	52	0	0	0	52	0	-11	41	0	0	5	46	0	0	0	46	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	158	1	**158**	0	158	**158**	0	158	1	**158**	5	163	1	**163**	0	163	1	**163**
	Left-Through		0							0				0				0	
	Through	286	1	286	0	286	286	342	628	1	628	-25	603	1	603	0	603	1	603
	Through-Right		0							0				0				0	
	Right	395	1	343	0	395	343	153	548	1	471	-9	539	1	465	0	539	1	465
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	1	**105**	0	105	**105**	50	155	1	**155**	-6	149	1	**149**	0	149	1	**149**
	Left-Through		0							0				0				0	
	Through	141	1	73	0	141	73	-28	113	1	61	12	125	1	67	0	125	1	67
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	4	9	0	9	0	9	0	9	0	9	0	9
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	44	0	44	0	44	44	28	72	0	72	-2	70	0	70	0	70	0	70
	Left-Through		1							1				1				1	
	Through	746	0	**427**	0	746	**427**	22	768	0	**464**	-5	763	0	**456**	0	763	0	**456**
	Through-Right		1							1				1				1	
	Right	64	0	427	0	64	427	23	87	0	464	-8	79	0	456	0	79	0	456
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		541	*North-South:*		541	*North-South:*			683	*North-South:*			678	*North-South:*			678
		East-West:		532	*East-West:*		532	*East-West:*			619	*East-West:*			605	*East-West:*			605
		SUM:		1073	*SUM:*		1073	*SUM:*			1302	*SUM:*			1283	*SUM:*			1283
VOLUME/CAPACITY *(V/C)* RATIO:				0.715			0.715				0.868				0.855				0.855
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.715			0.715				0.868				0.855				0.855
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.013	Δ*v/c* after mitigation:	-0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	**116**	0	116	**116**	41	157	1	**157**	-11	146	1	**146**	0	146	1	**146**
	Left-Through		0							0				0				0	
	Through	259	1	142	0	259	142	34	293	1	160	-8	285	1	157	0	285	1	157
	Through-Right		1							1				1				1	
	Right	25	0	25	0	25	25	2	27	0	27	1	28	0	28	0	28	0	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	213	1	213	0	213	213	-38	175	1	175	20	195	1	195	0	195	1	195
	Left-Through		0							0				0				0	
	Through	497	1	**443**	0	497	**443**	-33	464	1	**429**	-13	451	1	**422**	0	451	1	**422**
	Through-Right		1							1				1				1	
	Right	388	0	388	0	388	388	5	393	0	393	-1	392	0	392	0	392	0	392
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	0	**26**	0	26	**26**	4	30	0	**30**	-2	28	0	**28**	0	28	0	**28**
	Left-Through		1							1				1				1	
	Through	419	0	377	0	419	377	47	466	0	435	6	472	0	419	0	472	0	419
	Through-Right		1							1				1				1	
	Right	178	0	377	0	178	377	46	224	0	435	-26	198	0	419	0	198	0	419
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	66	0	66	0	66	66	-2	64	0	64	0	64	0	64	0	64	0	64
	Left-Through		1							1				1				1	
	Through	1080	0	**657**	0	1080	**657**	57	1137	0	**741**	28	1165	0	**758**	0	1165	0	**758**
	Through-Right		1							1				1				1	
	Right	101	0	657	0	101	657	-12	89	0	741	6	95	0	758	0	95	0	758
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			586	North-South:			568	North-South:			568
		East-West:		683	East-West:		683	East-West:			771	East-West:			786	East-West:			786
		SUM:		1242	SUM:		1242	SUM:			1357	SUM:			1354	SUM:			1354
VOLUME/CAPACITY (V/C) RATIO:				0.828			0.828				0.905				0.903				0.903
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.828			0.828				0.905				0.903				0.903
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.002	Δ*v/c* after mitigation:	-0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2				2				2				2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	1676	2	**721**	0	1676	**721**	173	1849	2	**783**	-15	1834	2	**763**	0	1834	2	**763**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	241	1	**201**	0	241	**201**	52	293	1	**234**	-4	289	1	**246**	0	289	1	**246**
	Left-Through		1							1				1				1	
	Through	362	1	201	0	362	201	48	410	1	234	40	450	1	246	0	450	1	246
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	851	2	**426**	0	851	**426**	7	858	2	**429**	32	890	2	**445**	0	890	2	**445**
	Through-Right		0							0				0				0	
	Right	3	1	3	0	3	3	7	10	1	10	-3	7	1	7	0	7	1	7
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		721	North-South:		721	North-South:			783	North-South:			763	North-South:			763
		East-West:		627	East-West:		627	East-West:			663	East-West:			691	East-West:			691
		SUM:		1348	SUM:		1348	SUM:			1446	SUM:			1454	SUM:			1454
VOLUME/CAPACITY (V/C) RATIO:				0.899			0.899				0.964				0.969				0.969
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.899			0.899				0.964				0.969				0.969
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	11	1	**11**	0	11	**11**	3	14	1	**14**	-1	13	1	**13**	0	13	1	**13**
	Left-Through		0							0				0				0	
	Through	204	1	105	0	204	105	33	237	1	122	-15	222	1	114	0	222	1	114
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	1	6	0	6	0	6	0	6	0	6	0	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	83	0	83	83	8	91	1	91	-2	89	1	89	0	89	1	89
	Left-Through		0							0				0				0	
	Through	1395	1	**727**	0	1395	**727**	116	1511	1	**788**	-10	1501	1	**783**	0	1501	1	**783**
	Through-Right		1							1				1				1	
	Right	59	0	59	0	59	59	6	65	0	65	-1	64	0	64	0	64	0	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	0	**54**	0	54	**54**	3	57	0	57	-1	56	0	56	0	56	0	56
	Left-Through		1							1				1				1	
	Through	172	0	153	0	172	153	26	198	0	**201**	-6	192	0	**196**	0	192	0	**196**
	Through-Right		1							1				1				1	
	Right	79	0	153	0	79	153	10	89	0	201	-2	87	0	196	0	87	0	196
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	98	0	98	0	98	98	13	111	0	**111**	-3	108	0	**108**	0	108	0	**108**
	Left-Through		1							1				1				1	
	Through	260	0	**198**	0	260	**198**	37	297	0	224	-9	288	0	218	0	288	0	218
	Through-Right		1							1				1				1	
	Right	38	0	198	0	38	198	2	40	0	224	-1	39	0	218	0	39	0	218
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		738	North-South:		738	North-South:			802	North-South:			796	North-South:			796
		East-West:		252	East-West:		252	East-West:			312	East-West:			304	East-West:			304
		SUM:		990	SUM:		990	SUM:			1114	SUM:			1100	SUM:			1100
VOLUME/CAPACITY (V/C) RATIO:				0.660			0.660				0.743				0.733				0.733
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.660			0.660				0.743				0.733				0.733
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.010	Δ*v/c* after mitigation:	-0.010
Significant impacted?	NO	Fully mitigated?	N/A

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)
PM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	2	0	**0**	0	2	**0**	1	3	0	0	0	3	0	0	0	3	0	0
	Left-Through		0							0				0				0	
	Through	619	1	332	0	619	332	-37	582	1	**326**	68	650	1	**363**	0	650	1	**363**
	Through-Right		1							1				1				1	
	Right	45	0	45	0	45	45	25	70	0	70	6	76	0	76	0	76	0	76
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	357	2	196	0	357	196	57	414	2	**228**	35	449	2	**247**	0	449	2	**247**
	Left-Through		0							0				0				0	
	Through	380	0	**538**	0	380	**538**	-20	360	0	516	42	402	0	578	0	402	0	578
	Through-Right		1							1				1				1	
	Right	158	0	0	0	158	0	-2	156	0	0	20	176	0	0	0	176	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	0	106	0	106	106	-8	98	0	98	11	109	0	109	0	109	0	109
	Left-Through		0							0				0				0	
	Through	17	0	**139**	0	17	**139**	9	26	0	**144**	2	28	0	**159**	0	28	0	**159**
	Through-Right		0							0				0				0	
	Right	16	0	0	0	16	0	4	20	0	0	2	22	0	0	0	22	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	394	2	**21**	0	394	**21**	94	488	2	**40**	32	520	2	**39**	0	520	2	**39**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		538	*North-South:*		538	*North-South:*			554	*North-South:*			610	*North-South:*			610
		East-West:		160	*East-West:*		160	*East-West:*			184	*East-West:*			198	*East-West:*			198
		SUM:		698	*SUM:*		698	*SUM:*			738	*SUM:*			808	*SUM:*			808
VOLUME/CAPACITY *(V/C)* RATIO:				0.490			0.490				0.518				0.567				0.567
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.518				0.567				0.567
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.049	Δ*v/c* after mitigation:	0.049
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	**151**	0	151	**151**	67	218	1	**218**	29	247	1	**247**	0	247	1	**247**
	Left-Through		0							0				0				0	
	Through	584	2	292	0	584	292	-27	557	2	279	4	561	2	281	0	561	2	281
	Through-Right		0							0				0				0	
	Right	3	1	0	0	3	0	0	3	1	0	0	3	1	0	0	3	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	139	1	139	0	139	139	-25	114	1	114	-24	90	1	90	0	90	1	90
	Left-Through		0							0				0				0	
	Through	577	1	**316**	0	577	**316**	-77	500	1	**285**	24	524	1	**293**	0	524	1	**293**
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	15	69	0	69	-8	61	0	61	0	61	0	61
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	39	140	1	140	-5	135	1	135	0	135	1	135
	Left-Through		0							0				0				0	
	Through	699	1	**396**	0	699	**396**	251	950	1	**541**	-29	921	1	**546**	0	921	1	**546**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	40	132	0	132	38	170	0	170	0	170	0	170
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	232	1	**232**	0	232	**232**	24	256	1	**256**	41	297	1	**297**	0	297	1	**297**
	Left-Through		0							0				0				0	
	Through	600	1	409	0	600	409	372	972	1	602	-24	948	1	575	0	948	1	575
	Through-Right		1							1				1				1	
	Right	217	0	217	0	217	217	15	232	0	232	-31	201	0	201	0	201	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		467	North-South:		467	North-South:			503	North-South:			540	North-South:			540
		East-West:		628	East-West:		628	East-West:			797	East-West:			843	East-West:			843
		SUM:		1095	SUM:		1095	SUM:			1300	SUM:			1383	SUM:			1383
VOLUME/CAPACITY (V/C) RATIO:				0.768			0.768				0.912				0.971				0.971
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.768			0.768				0.912				0.971				0.971
LEVEL OF SERVICE (LOS):				C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.059	Δ*v/c* after mitigation:	0.059
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	333	1	333	0	333	333	12	345	1	345	-21	324	1	324	0	324	1	324
	Left-Through		0							0				0				0	
	Through	352	0	**408**	0	352	**408**	-27	325	0	**404**	0	325	0	**400**	0	325	0	**400**
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	23	79	0	0	-4	75	0	0	0	75	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	261	1	**261**	0	261	**261**	27	288	1	**288**	28	316	1	**316**	0	316	1	**316**
	Left-Through		0							0				0				0	
	Through	253	0	328	0	253	328	-55	198	0	259	-27	171	0	237	0	171	0	237
	Through-Right		1							1				1				1	
	Right	75	0	0	0	75	0	-14	61	0	0	5	66	0	0	0	66	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	1	**106**	0	106	**106**	-10	96	1	**96**	4	100	1	**100**	0	100	1	**100**
	Left-Through		0							0				0				0	
	Through	652	1	422	0	652	422	242	894	1	541	-15	879	1	512	0	879	1	512
	Through-Right		1							1				1				1	
	Right	192	0	192	0	192	192	-5	187	0	187	-42	145	0	145	0	145	0	145
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	1	31	0	31	31	15	46	1	46	-9	37	1	37	0	37	1	37
	Left-Through		0							0				0				0	
	Through	769	1	**453**	0	769	**453**	413	1182	1	**684**	3	1185	1	**692**	0	1185	1	**692**
	Through-Right		1							1				1				1	
	Right	136	0	136	0	136	136	50	186	0	186	13	199	0	199	0	199	0	199
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		669	*North-South:*		669	*North-South:*			692	*North-South:*			716	*North-South:*			716
		East-West:		559	*East-West:*		559	*East-West:*			780	*East-West:*			792	*East-West:*			792
		SUM:		1228	*SUM:*		1228	*SUM:*			1472	*SUM:*			1508	*SUM:*			1508
VOLUME/CAPACITY *(V/C)* RATIO:				0.862			0.862				1.033				1.058				1.058
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.862			0.862				1.033				1.058				1.058
LEVEL OF SERVICE (LOS):				D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.025	Δ*v/c* after mitigation:	0.025
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	1	6	1	6	0	6	1	6	0	6	1	6
	Left-Through		0							0				0				0	
	Through	604	1	**375**	0	604	**375**	87	691	1	**429**	24	715	1	**441**	0	715	1	**441**
	Through-Right		1							1				1				1	
	Right	146	0	146	0	146	146	21	167	0	167	0	167	0	167	0	167	0	167
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	285	1	**285**	0	285	**285**	-47	238	1	**238**	23	261	1	**261**	0	261	1	**261**
	Left-Through		0							0				0				0	
	Through	528	1	267	0	528	267	123	651	1	328	75	726	1	366	0	726	1	366
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	0	5	0	5	1	6	0	6	0	6	0	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through		0							0				0				0	
	Through	4	0	**13**	0	4	**13**	0	4	0	**15**	0	4	0	**15**	0	4	0	**15**
	Through-Right		0							0				0				0	
	Right	6	0	0	0	6	0	2	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	150	0	**150**	0	150	**150**	66	216	0	**216**	-6	210	0	**210**	0	210	0	**210**
	Left-Through		1							1				1				1	
	Through	3	0	153	0	3	153	0	3	0	219	0	3	0	213	0	3	0	213
	Through-Right		0							0				0				0	
	Right	263	1	121	0	263	121	-5	258	1	139	-3	255	1	125	0	255	1	125
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		660	North-South:		660	North-South:			667	North-South:			702	North-South:			702
		East-West:		163	East-West:		163	East-West:			231	East-West:			225	East-West:			225
		SUM:		823	SUM:		823	SUM:			898	SUM:			927	SUM:			927
VOLUME/CAPACITY (V/C) RATIO:				0.599			0.599				0.653				0.674				0.674
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.599			0.599				0.653				0.674				0.674
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	292	1	**292**	0	292	**292**	-5	287	1	**287**	0	287	1	**287**	0	287	1	**287**
	Left-Through		0							0				0				0	
	Through	233	1	233	0	233	233	-97	136	1	136	87	223	1	223	0	223	1	223
	Through-Right		0							0				0				0	
	Right	59	1	51	0	59	51	14	73	1	58	3	76	1	58	0	76	1	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	89	1	89	0	89	89	-1	88	1	88	33	121	1	121	0	121	1	121
	Left-Through		0							0				0				0	
	Through	150	1	**150**	0	150	**150**	21	171	1	**171**	113	284	1	**284**	0	284	1	**284**
	Through-Right		0							0				0				0	
	Right	46	1	6	0	46	6	-10	36	1	19	12	48	1	27	0	48	1	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	80	1	80	0	80	80	-46	34	1	34	9	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	205	0	**424**	0	205	**424**	-18	187	0	**418**	-39	148	0	**369**	0	148	0	**369**
	Through-Right		1							1				1				1	
	Right	219	0	0	0	219	0	12	231	0	0	-10	221	0	0	0	221	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	16	1	**16**	0	16	**16**	14	30	1	**30**	6	36	1	**36**	0	36	1	**36**
	Left-Through		0							0				0				0	
	Through	187	0	226	0	187	226	55	242	0	272	-8	234	0	282	0	234	0	282
	Through-Right		1							1				1				1	
	Right	39	0	0	0	39	0	-9	30	0	0	18	48	0	0	0	48	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		442	North-South:		442	North-South:			458	North-South:			571	North-South:			571
		East-West:		440	East-West:		440	East-West:			448	East-West:			405	East-West:			405
		SUM:		882	SUM:		882	SUM:			906	SUM:			976	SUM:			976
VOLUME/CAPACITY (V/C) RATIO:				0.641			0.641				0.659				0.710				0.710
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.641			0.641				0.659				0.710				0.710
LEVEL OF SERVICE (LOS):				B			B				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	1	58	0	58	58	-14	44	1	44	13	57	1	57	0	57	1	57
	Left-Through		0							0				0				0	
	Through	701	1	**433**	0	701	**433**	53	754	1	**478**	54	808	1	**508**	0	808	1	**508**
	Through-Right		1							1				1				1	
	Right	164	0	164	0	164	164	38	202	0	202	5	207	0	207	0	207	0	207
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	1	**92**	0	92	**92**	56	148	1	**148**	-28	120	1	**120**	0	120	1	**120**
	Left-Through		0							0				0				0	
	Through	649	1	340	0	649	340	55	704	1	367	74	778	1	405	0	778	1	405
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	-1	30	0	30	1	31	0	31	0	31	0	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	34	0	**34**	0	34	**34**	-1	33	0	**33**	0	33	0	**33**	0	33	0	**33**
	Left-Through		0							0				0				0	
	Through	64	0	119	0	64	119	7	71	0	120	-4	67	0	121	0	67	0	121
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0	-5	16	0	0	5	21	0	0	0	21	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	172	0	172	0	172	172	76	248	0	248	-24	224	0	224	0	224	0	224
	Left-Through		0							0				0				0	
	Through	62	0	**328**	0	62	**328**	18	80	0	**503**	-13	67	0	**412**	0	67	0	**412**
	Through-Right		0							0				0				0	
	Right	94	0	0	0	94	0	81	175	0	0	-54	121	0	0	0	121	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		525	North-South:		525	North-South:			626	North-South:			628	North-South:			628
		East-West:		362	East-West:		362	East-West:			536	East-West:			445	East-West:			445
		SUM:		887	SUM:		887	SUM:			1162	SUM:			1073	SUM:			1073
VOLUME/CAPACITY (V/C) RATIO:				0.591			0.591				0.775				0.715				0.715
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.591			0.591				0.775				0.715				0.715
LEVEL OF SERVICE (LOS):				A			A				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.060	Δ*v/c* after mitigation:	-0.060
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	189	1	189	0	189	189	79	268	1	**268**	17	285	1	**285**	0	285	1	**285**
	Left-Through		0							0				0				0	
	Through	400	1	**400**	0	400	**400**	-57	343	1	343	20	363	1	363	0	363	1	363
	Through-Right		0							0				0				0	
	Right	42	1	29	0	42	29	2	44	1	33	-16	28	1	21	0	28	1	21
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	74	1	**74**	0	74	**74**	11	85	1	85	11	96	1	96	0	96	1	96
	Left-Through		0							0				0				0	
	Through	257	1	257	0	257	257	5	262	1	**262**	26	288	1	**288**	0	288	1	**288**
	Through-Right		0							0				0				0	
	Right	54	1	0	0	54	0	30	84	1	33	73	157	1	73	0	157	1	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	121	1	121	0	121	121	-19	102	1	102	67	169	1	**169**	0	169	1	**169**
	Left-Through		0							0				0				0	
	Through	259	1	**241**	0	259	**241**	9	268	1	**236**	1	269	1	235	0	269	1	235
	Through-Right		1							1				1				1	
	Right	223	0	223	0	223	223	-19	204	0	204	-4	200	0	200	0	200	0	200
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	26	1	**26**	0	26	**26**	-3	23	1	**23**	-9	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	108	1	108	0	108	108	41	149	1	149	6	155	1	**155**	0	155	1	**155**
	Through-Right		0							0				0				0	
	Right	70	1	33	0	70	33	-12	58	1	16	2	60	1	12	0	60	1	12
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		474	North-South:		474	North-South:			530	North-South:			573	North-South:			573
		East-West:		267	East-West:		267	East-West:			259	East-West:			324	East-West:			324
		SUM:		741	SUM:		741	SUM:			789	SUM:			897	SUM:			897
VOLUME/CAPACITY (V/C) RATIO:				0.494			0.494				0.526				0.598				0.598
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.494			0.494				0.526				0.598				0.598
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.072	Δ*v/c* after mitigation:	0.072
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	60	1	60	0	60	60	44	104	1	104	21	125	1	125	0	125	1	125
	Left-Through		0							0				0				0	
	Through	681	1	**387**	0	681	**387**	-61	620	1	**348**	91	711	1	**400**	0	711	1	**400**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	-16	76	0	76	13	89	0	89	0	89	0	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	159	1	**159**	0	159	**159**	-30	129	1	**129**	-18	111	1	**111**	0	111	1	**111**
	Left-Through		0							0				0				0	
	Through	618	1	327	0	618	327	-42	576	1	319	42	618	1	336	0	618	1	336
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	25	61	0	61	-7	54	0	54	0	54	0	54
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	39	0	**39**	0	39	**39**	27	66	0	**66**	-5	61	0	**61**	0	61	0	**61**
	Left-Through		0							0				0				0	
	Through	154	0	234	0	154	234	81	235	0	373	-12	223	0	369	0	223	0	369
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	31	72	0	0	13	85	0	0	0	85	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	0	115	0	115	115	-24	91	0	91	8	99	0	99	0	99	0	99
	Left-Through		0							0				0				0	
	Through	237	0	**525**	0	237	**525**	107	344	0	**567**	-35	309	0	**521**	0	309	0	**521**
	Through-Right		0							0				0				0	
	Right	173	0	0	0	173	0	-41	132	0	0	-19	113	0	0	0	113	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		546	*North-South:*		546	*North-South:*			477	*North-South:*			511	*North-South:*			511
		East-West:		564	*East-West:*		564	*East-West:*			633	*East-West:*			582	*East-West:*			582
		SUM:		1110	*SUM:*		1110	*SUM:*			1110	*SUM:*			1093	*SUM:*			1093
VOLUME/CAPACITY *(V/C)* RATIO:				0.779			0.779				0.779				0.767				0.767
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.779			0.779				0.779				0.767				0.767
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.012	Δ*v/c* after mitigation:	-0.012
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	0	9	9	1	10	1	10	1	11	1	11	0	11	1	11
	Left-Through		0							0				0				0	
	Through	667	1	**379**	0	667	**379**	-16	651	1	**411**	114	765	1	**435**	0	765	1	**435**
	Through-Right		1							1				1				1	
	Right	91	0	91	0	91	91	80	171	0	171	-66	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	**169**	0	169	**169**	33	202	1	**202**	-26	176	1	**176**	0	176	1	**176**
	Left-Through		0							0				0				0	
	Through	483	1	242	0	483	242	30	513	1	257	71	584	1	293	0	584	1	293
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	8	0	**8**	0	8	**8**	-1	7	0	**7**	3	10	0	**10**	0	10	0	**10**
	Left-Through		0							0				0				0	
	Through	5	0	13	0	5	13	3	8	0	15	-2	6	0	16	0	6	0	16
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	86	0	86	0	86	86	74	160	0	160	-49	111	0	111	0	111	0	111
	Left-Through		0							0				0				0	
	Through	34	0	**373**	0	34	**373**	7	41	0	**477**	-2	39	0	**433**	0	39	0	**433**
	Through-Right		0							0				0				0	
	Right	253	0	0	0	253	0	23	276	0	0	7	283	0	0	0	283	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		548	*North-South:*		548	*North-South:*			613	*North-South:*			611	*North-South:*			611
		East-West:		381	*East-West:*		381	*East-West:*			484	*East-West:*			443	*East-West:*			443
		SUM:		929	*SUM:*		929	*SUM:*			1097	*SUM:*			1054	*SUM:*			1054
VOLUME/CAPACITY *(V/C)* RATIO:				0.619			0.619				0.731				0.703				0.703
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.619			0.619				0.731				0.703				0.703
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.028	Δ*v/c* after mitigation:	-0.028
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	145	0	145	145	44	189	1	189	5	194	1	194	0	194	1	194
	Left-Through		0							0				0				0	
	Through	513	1	**292**	0	513	**292**	74	587	1	**338**	29	616	1	**352**	0	616	1	**352**
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	18	88	0	88	0	88	0	88	0	88	0	88
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	166	1	**166**	0	166	**166**	20	186	1	**186**	11	197	1	**197**	0	197	1	**197**
	Left-Through		0							0				0				0	
	Through	466	1	251	0	466	251	85	551	1	296	16	567	1	306	0	567	1	306
	Through-Right		1							1				1				1	
	Right	35	0	35	0	35	35	6	41	0	41	4	45	0	45	0	45	0	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	**35**	0	35	**35**	8	43	1	43	6	49	1	**49**	0	49	1	**49**
	Left-Through		0							0				0				0	
	Through	73	1	73	0	73	73	26	99	1	99	8	107	1	107	0	107	1	107
	Through-Right		0							0				0				0	
	Right	137	1	65	0	137	65	58	195	1	**101**	11	206	1	109	0	206	1	109
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	72	1	72	0	72	72	19	91	1	**91**	1	92	1	92	0	92	1	92
	Left-Through		0							0				0				0	
	Through	118	1	118	0	118	118	29	147	1	147	11	158	1	**158**	0	158	1	**158**
	Through-Right		0							0				0				0	
	Right	213	1	**130**	0	213	**130**	20	233	1	140	23	256	1	158	0	256	1	158
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		458	North-South:		458	North-South:			524	North-South:			549	North-South:			549
		East-West:		165	East-West:		165	East-West:			192	East-West:			207	East-West:			207
		SUM:		623	SUM:		623	SUM:			716	SUM:			756	SUM:			756
VOLUME/CAPACITY (V/C) RATIO:				0.437			0.437				0.502				0.531				0.531
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.437			0.437				0.502				0.531				0.531
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.029	Δ*v/c* after mitigation:	0.029
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	-94	100	1	**100**	33	133	1	**133**	0	133	1	**133**
	Left-Through		0							0				0				0	
	Through	648	1	340	0	648	340	223	871	1	447	52	923	1	476	0	923	1	476
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	-9	22	0	22	7	29	0	29	0	29	0	29
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	16	1	16	0	16	16	29	45	1	45	-1	44	1	44	0	44	1	44
	Left-Through		0							0				0				0	
	Through	467	1	**333**	0	467	**333**	100	567	1	**486**	45	612	1	**508**	0	612	1	**508**
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	205	404	0	404	-1	403	0	403	0	403	0	403
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	1	61	0	61	61	-33	28	1	**28**	-1	27	1	27	0	27	1	27
	Left-Through		0							0				0				0	
	Through	20	0	**84**	0	20	**84**	-15	5	0	12	1	6	0	**15**	0	6	0	**15**
	Through-Right		1							1				1				1	
	Right	64	0	0	0	64	0	-57	7	0	0	2	9	0	0	0	9	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	46	1	**46**	0	46	**46**	-20	26	1	26	4	30	1	**30**	0	30	1	**30**
	Left-Through		0							0				0				0	
	Through	34	2	17	0	34	17	-2	32	2	16	2	34	2	17	0	34	2	17
	Through-Right		1							1				1				1	
	Right	18	0	10	0	18	10	26	44	0	**22**	-6	38	0	16	0	38	0	16
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	527		*North-South:*	527			*North-South:*	586			*North-South:*	641			*North-South:*	641
			East-West:	130		*East-West:*	130			*East-West:*	50			*East-West:*	45			*East-West:*	45
			SUM:	657		*SUM:*	657			*SUM:*	636			*SUM:*	686			*SUM:*	686
VOLUME/CAPACITY *(V/C)* RATIO:				0.438			0.438				0.424				0.457				0.457
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.438			0.438				0.424				0.457				0.457
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.033	Δ*v/c* after mitigation:	0.033
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	226	1	226	0	226	226	174	400	1	**400**	-8	392	1	**392**	0	392	1	**392**
	Left-Through		0							0				0				0	
	Through	561	2	**281**	0	561	**281**	-43	518	2	259	51	569	2	285	0	569	2	285
	Through-Right		0							0				0				0	
	Right	234	1	99	0	234	99	-18	216	1	76	8	224	1	83	0	224	1	83
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	278	1	**278**	0	278	**278**	-90	188	1	188	15	203	1	203	0	203	1	203
	Left-Through		0							0				0				0	
	Through	529	2	265	0	529	265	28	557	2	**279**	28	585	2	**293**	0	585	2	**293**
	Through-Right		0							0				0				0	
	Right	61	1	35	0	61	35	18	79	1	39	2	81	1	38	0	81	1	38
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	27	80	1	80	6	86	1	86	0	86	1	86
	Left-Through		0							0				0				0	
	Through	445	1	**264**	0	445	**264**	223	668	1	**431**	7	675	1	**433**	0	675	1	**433**
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	111	194	0	194	-4	190	0	190	0	190	0	190
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	270	1	**270**	0	270	**270**	10	280	1	**280**	3	283	1	**283**	0	283	1	**283**
	Left-Through		0							0				0				0	
	Through	715	1	456	0	715	456	202	917	1	524	-15	902	1	523	0	902	1	523
	Through-Right		1							1				1				1	
	Right	196	0	196	0	196	196	-65	131	0	131	13	144	0	144	0	144	0	144
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		559	North-South:		559	North-South:			679	North-South:			685	North-South:			685
		East-West:		534	East-West:		534	East-West:			711	East-West:			716	East-West:			716
		SUM:		1093	SUM:		1093	SUM:			1390	SUM:			1401	SUM:			1401
	VOLUME/CAPACITY (V/C) RATIO:			0.795			0.795				1.011				1.019				1.019
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.795			0.795				1.011				1.019				1.019
	LEVEL OF SERVICE (LOS):			C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	254	1	**140**	0	254	**140**	37	291	1	**161**	28	319	1	**176**	0	319	1	**176**
	Left-Through		0							0				0				0	
	Through	13	0	140	0	13	140	2	15	0	161	1	16	0	176	0	16	0	176
	Through-Right		0							0				0				0	
	Right	13	0	0	0	13	0	2	15	0	0	1	16	0	0	0	16	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	19	1	19	0	19	19	2	21	1	21	-1	20	1	20	0	20	1	20
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	131	1	**104**	0	131	**104**	9	140	1	**112**	1	141	1	**113**	0	141	1	**113**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	55	1	**55**	0	55	**55**	2	57	1	**57**	0	57	1	**57**	0	57	1	**57**
	Left-Through		0							0				0				0	
	Through	641	2	321	0	641	321	41	682	2	341	-6	676	2	338	0	676	2	338
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	856	1	**438**	0	856	**438**	92	948	1	**485**	-53	895	1	**457**	0	895	1	**457**
	Through-Right		1							1				1				1	
	Right	19	0	19	0	19	19	2	21	0	21	-2	19	0	19	0	19	0	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		244	North-South:		244	North-South:			273	North-South:			289	North-South:			289
		East-West:		493	East-West:		493	East-West:			542	East-West:			514	East-West:			514
		SUM:		737	SUM:		737	SUM:			815	SUM:			803	SUM:			803
VOLUME/CAPACITY (V/C) RATIO:				0.517			0.517				0.572				0.564				0.564
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.517			0.517				0.572				0.564				0.564
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.008	Δ*v/c* after mitigation:	-0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	129	1	129	0	129	129	92	221	1	**221**	-18	203	1	203	0	203	1	203
	Left-Through		0							0				0				0	
	Through	383	1	**243**	0	383	**243**	72	455	1	274	8	463	1	**280**	0	463	1	**280**
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	-10	93	0	93	4	97	0	97	0	97	0	97
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	**127**	0	127	**127**	-20	107	1	107	12	119	1	**119**	0	119	1	**119**
	Left-Through		0							0				0				0	
	Through	196	1	132	0	196	132	22	218	1	**164**	9	227	1	167	0	227	1	167
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	41	109	0	109	-3	106	0	106	0	106	0	106
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	85	1	85	0	85	85	31	116	1	116	1	117	1	117	0	117	1	117
	Left-Through		0							0				0				0	
	Through	1276	2	**460**	0	1276	**460**	57	1333	2	**492**	49	1382	2	**507**	0	1382	2	**507**
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	39	144	0	144	-4	140	0	140	0	140	0	140
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	50	1	**50**	0	50	**50**	-11	39	1	**39**	3	42	1	**42**	0	42	1	**42**
	Left-Through		0							0				0				0	
	Through	749	2	290	0	749	290	98	847	2	314	13	860	2	322	0	860	2	322
	Through-Right		1							1				1				1	
	Right	121	0	121	0	121	121	-26	95	0	95	12	107	0	107	0	107	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		370	*North-South:*		370	*North-South:*			385	*North-South:*			399	*North-South:*			399
		East-West:		510	*East-West:*		510	*East-West:*			531	*East-West:*			549	*East-West:*			549
		SUM:		880	*SUM:*		880	*SUM:*			916	*SUM:*			948	*SUM:*			948
VOLUME/CAPACITY *(V/C)* RATIO:				0.587			0.587				0.611				0.632				0.632
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.587			0.587				0.611				0.632				0.632
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	26	0	26	0	26	26	-8	18	0	18	-1	17	0	17	0	17	0	17
	Left-Through		1							1				1				1	
	Through	499	0	**309**	0	499	**309**	-39	460	0	**282**	5	465	0	**283**	0	465	0	**283**
	Through-Right		1							1				1				1	
	Right	93	0	309	0	93	309	-8	85	0	282	-1	84	0	283	0	84	0	283
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	235	1	**235**	0	235	**235**	38	273	1	**273**	6	279	1	**279**	0	279	1	**279**
	Left-Through		0							0				0				0	
	Through	582	2	291	0	582	291	87	669	2	335	-4	665	2	333	0	665	2	333
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	262	1	**167**	0	262	**167**	-46	216	1	**147**	-11	205	1	**141**	0	205	1	**141**
	Through-Right		1							1				1				1	
	Right	72	0	72	0	72	72	5	77	0	77	0	77	0	77	0	77	0	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		309	*North-South:*		309	*North-South:*			282	*North-South:*			283	*North-South:*			283
		East-West:		402	*East-West:*		402	*East-West:*			420	*East-West:*			420	*East-West:*			420
		SUM:		711	*SUM:*		711	*SUM:*			702	*SUM:*			703	*SUM:*			703
VOLUME/CAPACITY *(V/C)* RATIO:				0.474			0.474				0.468				0.469				0.469
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.474			0.474				0.468				0.469				0.469
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	180	0	**180**	0	180	**180**	58	238	0	**238**	-6	232	0	**232**	0	232	0	**232**
	Left-Through		1							1				1				1	
	Through	241	0	173	0	241	173	-36	205	0	181	-20	185	0	168	0	185	0	168
	Through-Right		1							1				1				1	
	Right	104	1	0	0	104	0	52	156	1	0	-6	150	1	0	0	150	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	627	1	**348**	0	627	**348**	67	694	1	**372**	7	701	1	**374**	0	701	1	**374**
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	-20	49	0	49	-3	46	0	46	0	46	0	46
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	52	1	**52**	0	52	**52**	-26	26	1	**26**	-3	23	1	**23**	0	23	1	**23**
	Left-Through		0							0				0				0	
	Through	243	2	122	0	243	122	-28	215	2	108	-9	206	2	103	0	206	2	103
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		180	North-South:		180	North-South:			238	North-South:			232	North-South:			232
		East-West:		400	East-West:		400	East-West:			398	East-West:			397	East-West:			397
		SUM:		580	SUM:		580	SUM:			636	SUM:			629	SUM:			629
VOLUME/CAPACITY (V/C) RATIO:				0.387			0.387				0.424				0.419				0.419
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.387			0.387				0.424				0.419				0.419
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.005	Δ*v/c* after mitigation:	-0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	47	1	47	0	47	47	16	63	1	63	-1	62	1	62	0	62	1	62
	Left-Through		0							0				0				0	
	Through	433	1	**314**	0	433	**314**	-42	391	1	**339**	40	431	1	**349**	0	431	1	**349**
	Through-Right		1							1				1				1	
	Right	195	0	195	0	195	195	92	287	0	287	-20	267	0	267	0	267	0	267
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	141	1	**141**	0	141	**141**	19	160	1	**160**	20	180	1	**180**	0	180	1	**180**
	Left-Through		0							0				0				0	
	Through	346	1	346	0	346	346	-18	328	1	328	18	346	1	346	0	346	1	346
	Through-Right		0							0				0				0	
	Right	21	1	14	0	21	14	1	22	1	11	4	26	1	12	0	26	1	12
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	15	1	15	0	15	15	8	23	1	23	5	28	1	28	0	28	1	28
	Left-Through		0							0				0				0	
	Through	88	1	**59**	0	88	**59**	135	223	1	**144**	6	229	1	**145**	0	229	1	**145**
	Through-Right		1							1				1				1	
	Right	30	0	30	0	30	30	34	64	0	64	-3	61	0	61	0	61	0	61
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	282	1	**282**	0	282	**282**	138	420	1	**420**	-50	370	1	**370**	0	370	1	**370**
	Left-Through		0							0				0				0	
	Through	309	1	274	0	309	274	194	503	1	382	-3	500	1	396	0	500	1	396
	Through-Right		1							1				1				1	
	Right	239	0	239	0	239	239	22	261	0	261	30	291	0	291	0	291	0	291
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		455	North-South:		455	North-South:			499	North-South:			529	North-South:			529
		East-West:		341	East-West:		341	East-West:			564	East-West:			515	East-West:			515
		SUM:		796	SUM:		796	SUM:			1063	SUM:			1044	SUM:			1044
VOLUME/CAPACITY (V/C) RATIO:				0.559			0.559				0.746				0.733				0.733
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.559			0.559				0.746				0.733				0.733
LEVEL OF SERVICE (LOS):				A			A				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.013	Δ*v/c* after mitigation:	-0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	15	1	15	0	15	15	-1	14	1	14	-1	13	1	13	0	13	1	13
	Left-Through		0							0				0				0	
	Through	499	0	**585**	0	499	**585**	541	1040	0	**1165**	-28	1012	0	**1135**	0	1012	0	**1135**
	Through-Right		1							1				1				1	
	Right	86	0	0	0	86	0	39	125	0	0	-2	123	0	0	0	123	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	**83**	0	83	**83**	47	130	1	**130**	5	135	1	**135**	0	135	1	**135**
	Left-Through		0							0				0				0	
	Through	188	1	188	0	188	188	255	443	1	443	4	447	1	447	0	447	1	447
	Through-Right		0							0				0				0	
	Right	89	1	0	0	89	0	-1	88	1	0	-2	86	1	0	0	86	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	300	1	**300**	0	300	**300**	99	399	1	**399**	-2	397	1	**397**	0	397	1	**397**
	Left-Through		0							0				0				0	
	Through	539	1	276	0	539	276	-39	500	1	259	1	501	1	259	0	501	1	259
	Through-Right		1							1				1				1	
	Right	12	0	12	0	12	12	5	17	0	17	0	17	0	17	0	17	0	17
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	0	39	0	39	39	27	66	0	66	-2	64	0	64	0	64	0	64
	Left-Through		1							1				1				1	
	Through	215	0	**196**	0	215	**196**	-63	152	0	**221**	-10	142	0	**213**	0	142	0	**213**
	Through-Right		1							1				1				1	
	Right	98	0	196	0	98	196	60	158	0	221	-3	155	0	213	0	155	0	213
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		668	North-South:		668	North-South:			1295	North-South:			1270	North-South:			1270
		East-West:		496	East-West:		496	East-West:			620	East-West:			610	East-West:			610
		SUM:		1164	SUM:		1164	SUM:			1915	SUM:			1880	SUM:			1880
VOLUME/CAPACITY (V/C) RATIO:				0.776			0.776				1.277				1.253				1.253
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.776			0.776				1.277				1.253				1.253
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.024	Δ*v/c* after mitigation:	-0.024
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	112	1	112	0	112	112	127	239	1	239	-14	225	1	225	0	225	1	225
	Left-Through		0							0				0				0	
	Through	544	1	**291**	0	544	**291**	73	617	1	**338**	-48	569	1	**314**	0	569	1	**314**
	Through-Right		1							1				1				1	
	Right	38	0	38	0	38	38	20	58	0	58	1	59	0	59	0	59	0	59
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	170	1	**170**	0	170	**170**	-1	169	1	**169**	2	171	1	**171**	0	171	1	**171**
	Left-Through		0							0				0				0	
	Through	384	1	264	0	384	264	-54	330	1	264	2	332	1	259	0	332	1	259
	Through-Right		1							1				1				1	
	Right	143	0	143	0	143	143	55	198	0	198	-12	186	0	186	0	186	0	186
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	-8	38	0	38	-3	35	0	35	0	35	0	35
	Left-Through		1							1				1				1	
	Through	941	0	**593**	0	941	**593**	109	1050	0	**675**	11	1061	0	**675**	0	1061	0	**675**
	Through-Right		1							1				1				1	
	Right	153	0	593	0	153	593	-6	147	0	675	1	148	0	675	0	148	0	675
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	0	**69**	0	69	**69**	3	72	0	**72**	6	78	0	**78**	0	78	0	**78**
	Left-Through		1							1				1				1	
	Through	346	0	457	0	346	457	235	581	0	576	6	587	0	596	0	587	0	596
	Through-Right		1							1				1				1	
	Right	154	0	457	0	154	457	-16	138	0	576	-1	137	0	596	0	137	0	596
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		461	North-South:		461	North-South:			507	North-South:			485	North-South:			485
		East-West:		662	East-West:		662	East-West:			747	East-West:			753	East-West:			753
		SUM:		1123	SUM:		1123	SUM:			1254	SUM:			1238	SUM:			1238
VOLUME/CAPACITY (V/C) RATIO:				0.749			0.749				0.836				0.825				0.825
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.749			0.749				0.836				0.825				0.825
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.011	Δ*v/c* after mitigation:	-0.011
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	368	2	0	0	368	0	143	511	2	0	-6	505	2	0	0	505	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	870	1	**480**	0	870	**480**	53	923	1	**551**	29	952	1	**563**	0	952	1	**563**
	Left-Through		1							1				1				1	
	Through	570	1	480	0	570	480	160	730	1	551	8	738	1	563	0	738	1	563
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	311	2	**156**	0	311	**156**	76	387	2	**194**	24	411	2	**206**	0	411	2	**206**
	Through-Right		0							0				0				0	
	Right	2	1	2	0	2	2	84	86	1	86	-17	69	1	69	0	69	1	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		0	North-South:		0	North-South:			0	North-South:			0	North-South:			0
		East-West:		636	East-West:		636	East-West:			745	East-West:			769	East-West:			769
		SUM:		636	SUM:		636	SUM:			745	SUM:			769	SUM:			769
VOLUME/CAPACITY (V/C) RATIO:				0.424			0.424				0.497				0.513				0.513
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.424			0.424				0.497				0.513				0.513
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 1 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	34	0	34	34	2	36	1	36	3	39	1	39	0	39	1	39
	Left-Through		0							0				0				0	
	Through	1354	1	**716**	0	1354	**716**	25	1379	1	**731**	77	1456	1	**773**	0	1456	1	**773**
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	5	83	0	83	7	90	0	90	0	90	0	90
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	**112**	0	112	**112**	3	115	1	**115**	2	117	1	**117**	0	117	1	**117**
	Left-Through		0							0				0				0	
	Through	1223	1	645	0	1223	645	35	1258	1	663	12	1270	1	669	0	1270	1	669
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66	1	67	0	67	1	68	0	68	0	68	0	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	112	0	**112**	0	112	**112**	2	114	0	**114**	4	118	0	**118**	0	118	0	**118**
	Left-Through		1							1				1				1	
	Through	257	0	258	0	257	258	16	273	0	269	17	290	0	282	0	290	0	282
	Through-Right		1							1				1				1	
	Right	34	0	258	0	34	258	2	36	0	269	2	38	0	282	0	38	0	282
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	0	31	0	31	31	2	33	0	33	2	35	0	35	0	35	0	35
	Left-Through		1							1				1				1	
	Through	171	0	**188**	0	171	**188**	11	182	0	**214**	12	194	0	**226**	0	194	0	**226**
	Through-Right		1							1				1				1	
	Right	174	0	188	0	174	188	6	180	0	214	7	187	0	226	0	187	0	226
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		828	*North-South:*		828	*North-South:*			846	*North-South:*			890	*North-South:*			890
		East-West:		300	*East-West:*		300	*East-West:*			328	*East-West:*			344	*East-West:*			344
		SUM:		1128	*SUM:*		1128	*SUM:*			1174	*SUM:*			1234	*SUM:*			1234
VOLUME/CAPACITY *(V/C)* RATIO:				0.752			0.752				0.783				0.823				0.823
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.752			0.752				0.783				0.823				0.823
LEVEL OF SERVICE (LOS):				C			C				C				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.040	Δ*v/c* after mitigation:	0.040
Significant impacted?	YES	Fully mitigated?	NO

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 2
AM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	282	1	218	0	282	218	-10	272	1	215	12	284	1	224	0	284	1	224
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	3	157	0	157	6	163	0	163	0	163	0	163
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	691	2	380	0	691	380	101	792	2	436	5	797	2	438	0	797	2	438
	Left-Through		0							0				0				0	
	Through	722	0	**915**	0	722	**915**	23	745	0	**948**	4	749	0	**962**	0	749	0	**962**
	Through-Right		1							1				1				1	
	Right	193	0	0	0	193	0	10	203	0	0	10	213	0	0	0	213	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	81	0	81	0	81	81	2	83	0	83	6	89	0	89	0	89	0	89
	Left-Through		0							0				0				0	
	Through	33	0	**132**	0	33	**132**	3	36	0	**136**	2	38	0	**145**	0	38	0	**145**
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	-1	17	0	0	1	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	457	2	0	0	457	0	62	519	2	0	6	525	2	0	0	525	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		915	*North-South:*		915	*North-South:*			948	*North-South:*			962	*North-South:*			962
		East-West:		132	*East-West:*		132	*East-West:*			136	*East-West:*			145	*East-West:*			145
		SUM:		1047	*SUM:*		1047	*SUM:*			1084	*SUM:*			1107	*SUM:*			1107
VOLUME/CAPACITY *(V/C)* RATIO:				0.735			0.735				0.761				0.777				0.777
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.735			0.735				0.761				0.777				0.777
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	93	1	**93**	0	93	**93**	16	109	1	**109**	29	138	1	**138**	0	138	1	**138**
	Left-Through		0							0				0				0	
	Through	619	2	310	0	619	310	32	651	2	326	59	710	2	355	0	710	2	355
	Through-Right		0							0				0				0	
	Right	2	1	0	0	2	0	1	3	1	0	1	4	1	0	0	4	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	147	1	147	0	147	147	54	201	1	201	-6	195	1	195	0	195	1	195
	Left-Through		0							0				0				0	
	Through	811	1	**436**	0	811	**436**	68	879	1	**477**	12	891	1	**482**	0	891	1	**482**
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	14	75	0	75	-3	72	0	72	0	72	0	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	141	1	141	0	141	141	26	167	1	167	-21	146	1	146	0	146	1	146
	Left-Through		0							0				0				0	
	Through	608	1	**381**	0	608	**381**	291	899	1	**540**	15	914	1	**554**	0	914	1	**554**
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	27	181	0	181	12	193	0	193	0	193	0	193
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	250	1	**250**	0	250	**250**	42	292	1	**292**	2	294	1	**294**	0	294	1	**294**
	Left-Through		0							0				0				0	
	Through	630	1	401	0	630	401	201	831	1	517	-34	797	1	482	0	797	1	482
	Through-Right		1							1				1				1	
	Right	171	0	171	0	171	171	31	202	0	202	-35	167	0	167	0	167	0	167
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		529	North-South:		529	North-South:			586	North-South:			620	North-South:			620
		East-West:		631	East-West:		631	East-West:			832	East-West:			848	East-West:			848
		SUM:		1160	SUM:		1160	SUM:			1418	SUM:			1468	SUM:			1468
VOLUME/CAPACITY (V/C) RATIO:				0.814			0.814				0.995				1.030				1.030
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.814			0.814				0.995				1.030				1.030
LEVEL OF SERVICE (LOS):				D			D				E				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.035	Δ*v/c* after mitigation:	0.035
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	11	205	1	**205**	-38	167	1	**167**	0	167	1	**167**
	Left-Through		0							0				0				0	
	Through	173	0	195	0	173	195	-22	151	0	181	-13	138	0	163	0	138	0	163
	Through-Right		1							1				1				1	
	Right	22	0	0	0	22	0	8	30	0	0	-5	25	0	0	0	25	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	146	1	146	0	146	146	65	211	1	211	7	218	1	218	0	218	1	218
	Left-Through		0							0				0				0	
	Through	284	0	**357**	0	284	**357**	-12	272	0	**354**	7	279	0	**360**	0	279	0	**360**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	9	82	0	0	-1	81	0	0	0	81	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	86	1	**86**	0	86	**86**	11	97	1	**97**	7	104	1	**104**	0	104	1	**104**
	Left-Through		0							0				0				0	
	Through	409	1	280	0	409	280	311	720	1	448	2	722	1	448	0	722	1	448
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	25	175	0	175	-1	174	0	174	0	174	0	174
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	1	39	0	39	39	8	47	1	47	0	47	1	47	0	47	1	47
	Left-Through		0							0				0				0	
	Through	612	1	**368**	0	612	**368**	255	867	1	**506**	-29	838	1	**497**	0	838	1	**497**
	Through-Right		1							1				1				1	
	Right	123	0	123	0	123	123	21	144	0	144	11	155	0	155	0	155	0	155
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		551	North-South:		551	North-South:			559	North-South:			527	North-South:			527
		East-West:		454	East-West:		454	East-West:			603	East-West:			601	East-West:			601
		SUM:		1005	SUM:		1005	SUM:			1162	SUM:			1128	SUM:			1128
VOLUME/CAPACITY (V/C) RATIO:				0.705			0.705				0.815				0.792				0.792
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.705			0.705				0.815				0.792				0.792
LEVEL OF SERVICE (LOS):				C			C				D				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.023	Δ*v/c* after mitigation:	-0.023
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	335	1	**209**	0	335	**209**	80	415	1	**260**	103	518	1	**326**	0	518	1	**326**
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	23	105	0	105	29	134	0	134	0	134	0	134
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	384	1	**384**	0	384	**384**	55	439	1	**439**	-3	436	1	**436**	0	436	1	**436**
	Left-Through		0							0				0				0	
	Through	678	1	341	0	678	341	-6	672	1	338	53	725	1	364	0	725	1	364
	Through-Right		1							1				1				1	
	Right	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		0							0				0				0	
	Through	1	0	**3**	0	1	**3**	0	1	0	**3**	0	1	0	**3**	0	1	0	**3**
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	127	0	**127**	0	127	**127**	0	127	0	**127**	10	137	0	**137**	0	137	0	**137**
	Left-Through		1							1				1				1	
	Through	2	0	129	0	2	129	0	2	0	129	0	2	0	139	0	2	0	139
	Through-Right		0							0				0				0	
	Right	277	1	85	0	277	85	30	307	1	88	-10	297	1	79	0	297	1	79
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		593	North-South:		593	North-South:			699	North-South:			762	North-South:			762
		East-West:		130	East-West:		130	East-West:			130	East-West:			140	East-West:			140
		SUM:		723	SUM:		723	SUM:			829	SUM:			902	SUM:			902
VOLUME/CAPACITY (V/C) RATIO:				0.526			0.526				0.603				0.656				0.656
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.526			0.526				0.603				0.656				0.656
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.053	Δ*v/c* after mitigation:	0.053
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	319	1	**319**	0	319	**319**	23	342	1	**342**	19	361	1	**361**	0	361	1	**361**
	Left-Through		0							0				0				0	
	Through	148	1	148	0	148	148	-12	136	1	136	27	163	1	163	0	163	1	163
	Through-Right		0							0				0				0	
	Right	14	1	0	0	14	0	18	32	1	0	2	34	1	1	0	34	1	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	0	67	67	10	77	1	77	16	93	1	93	0	93	1	93
	Left-Through		0							0				0				0	
	Through	281	1	**281**	0	281	**281**	-62	219	1	**219**	52	271	1	**271**	0	271	1	**271**
	Through-Right		0							0				0				0	
	Right	69	1	61	0	69	61	-32	37	1	32	8	45	1	40	0	45	1	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	1	17	0	17	17	-7	10	1	10	1	11	1	11	0	11	1	11
	Left-Through		0							0				0				0	
	Through	168	0	**493**	0	168	**493**	75	243	0	**561**	-15	228	0	**533**	0	228	0	**533**
	Through-Right		1							1				1				1	
	Right	325	0	0	0	325	0	-7	318	0	0	-13	305	0	0	0	305	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	40	1	**40**	0	40	**40**	26	66	1	**66**	1	67	1	**67**	0	67	1	**67**
	Left-Through		0							0				0				0	
	Through	281	0	311	0	281	311	41	322	0	352	-2	320	0	354	0	320	0	354
	Through-Right		1							1				1				1	
	Right	30	0	0	0	30	0	0	30	0	0	4	34	0	0	0	34	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		600	*North-South:*		600	*North-South:*			561	*North-South:*			632	*North-South:*			632
		East-West:		533	*East-West:*		533	*East-West:*			627	*East-West:*			600	*East-West:*			600
		SUM:		1133	*SUM:*		1133	*SUM:*			1188	*SUM:*			1232	*SUM:*			1232
VOLUME/CAPACITY *(V/C)* RATIO:				0.824			0.824				0.864				0.896				0.896
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.824			0.824				0.864				0.896				0.896
LEVEL OF SERVICE (LOS):				D			D				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.032	Δ*v/c* after mitigation:	0.032
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	22	1	**22**	0	22	**22**	-8	14	1	14	-1	13	1	13	0	13	1	13
	Left-Through		0							0				0				0	
	Through	407	1	265	0	407	265	11	418	1	**302**	113	531	1	**357**	0	531	1	**357**
	Through-Right		1							1				1				1	
	Right	122	0	122	0	122	122	64	186	0	186	-3	183	0	183	0	183	0	183
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	60	1	60	0	60	60	63	123	1	**123**	17	140	1	**140**	0	140	1	**140**
	Left-Through		0							0				0				0	
	Through	744	1	**379**	0	744	**379**	2	746	1	379	49	795	1	404	0	795	1	404
	Through-Right		1							1				1				1	
	Right	14	0	14	0	14	14	-2	12	0	12	1	13	0	13	0	13	0	13
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	0	**17**	0	17	**17**	-4	13	0	**13**	3	16	0	**16**	0	16	0	**16**
	Left-Through		0							0				0				0	
	Through	67	0	98	0	67	98	10	77	0	98	-3	74	0	97	0	74	0	97
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	-6	8	0	0	-1	7	0	0	0	7	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	199	0	199	0	199	199	38	237	0	237	3	240	0	240	0	240	0	240
	Left-Through		0							0				0				0	
	Through	97	0	**330**	0	97	**330**	3	100	0	**393**	2	102	0	**420**	0	102	0	**420**
	Through-Right		0							0				0				0	
	Right	34	0	0	0	34	0	22	56	0	0	22	78	0	0	0	78	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		401	*North-South:*		401	*North-South:*			425	*North-South:*			497	*North-South:*			497
		East-West:		347	*East-West:*		347	*East-West:*			406	*East-West:*			436	*East-West:*			436
		SUM:		748	*SUM:*		748	*SUM:*			831	*SUM:*			933	*SUM:*			933
VOLUME/CAPACITY *(V/C)* RATIO:				0.499			0.499				0.554				0.622				0.622
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.499			0.499				0.554				0.622				0.622
LEVEL OF SERVICE (LOS):				A			A				A				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.068	Δ*v/c* after mitigation:	0.068
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	223	1	**223**	0	223	**223**	13	236	1	**236**	4	240	1	**240**	0	240	1	**240**
	Left-Through		0							0				0				0	
	Through	312	1	312	0	312	312	20	332	1	332	16	348	1	348	0	348	1	348
	Through-Right		0							0				0				0	
	Right	35	1	10	0	35	10	-1	34	1	8	-12	22	1	6	0	22	1	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	68	1	68	0	68	68	-12	56	1	56	2	58	1	58	0	58	1	58
	Left-Through		0							0				0				0	
	Through	524	1	**524**	0	524	**524**	-26	498	1	**498**	8	506	1	**506**	0	506	1	**506**
	Through-Right		0							0				0				0	
	Right	50	1	39	0	50	39	-5	45	1	29	31	76	1	48	0	76	1	48
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	23	1	**23**	0	23	**23**	9	32	1	32	24	56	1	56	0	56	1	56
	Left-Through		0							0				0				0	
	Through	126	1	126	0	126	126	31	157	1	157	9	166	1	166	0	166	1	166
	Through-Right		1							1				1				1	
	Right	295	0	184	0	295	184	127	422	0	**304**	15	437	0	**317**	0	437	0	**317**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	51	1	51	0	51	51	2	53	1	**53**	-20	33	1	**33**	0	33	1	**33**
	Left-Through		0							0				0				0	
	Through	236	1	**236**	0	236	**236**	0	236	1	236	6	242	1	242	0	242	1	242
	Through-Right		0							0				0				0	
	Right	144	1	110	0	144	110	1	145	1	117	8	153	1	124	0	153	1	124
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		747	North-South:		747	North-South:			734	North-South:			746	North-South:			746
		East-West:		259	East-West:		259	East-West:			357	East-West:			350	East-West:			350
		SUM:		1006	SUM:		1006	SUM:			1091	SUM:			1096	SUM:			1096
VOLUME/CAPACITY (V/C) RATIO:				0.671			0.671				0.727				0.731				0.731
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.671			0.671				0.727				0.731				0.731
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	**34**	0	34	**34**	42	76	1	**76**	7	83	1	**83**	0	83	1	**83**
	Left-Through		0							0				0				0	
	Through	450	1	264	0	450	264	-70	380	1	228	31	411	1	238	0	411	1	238
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	-2	75	0	75	-11	64	0	64	0	64	0	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	169	0	169	169	-60	109	1	109	-25	84	1	84	0	84	1	84
	Left-Through		0							0				0				0	
	Through	996	1	**523**	0	996	**523**	-76	920	1	**497**	-6	914	1	**494**	0	914	1	**494**
	Through-Right		1							1				1				1	
	Right	50	0	50	0	50	50	24	74	0	74	-1	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	41	0	41	0	41	41	10	51	0	51	3	54	0	54	0	54	0	54
	Left-Through		0							0				0				0	
	Through	239	0	**353**	0	239	**353**	106	345	0	**547**	-55	290	0	**507**	0	290	0	**507**
	Through-Right		0							0				0				0	
	Right	73	0	0	0	73	0	78	151	0	0	12	163	0	0	0	163	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	93	0	**93**	0	93	**93**	-16	77	0	**77**	-3	74	0	**74**	0	74	0	**74**
	Left-Through		0							0				0				0	
	Through	148	0	358	0	148	358	50	198	0	334	-9	189	0	319	0	189	0	319
	Through-Right		0							0				0				0	
	Right	117	0	0	0	117	0	-58	59	0	0	-3	56	0	0	0	56	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		557	North-South:		557	North-South:			573	North-South:			577	North-South:			577
		East-West:		446	East-West:		446	East-West:			624	East-West:			581	East-West:			581
		SUM:		1003	SUM:		1003	SUM:			1197	SUM:			1158	SUM:			1158
VOLUME/CAPACITY (V/C) RATIO:				0.704			0.704				0.840				0.813				0.813
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.704			0.704				0.840				0.813				0.813
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.027	Δ*v/c* after mitigation:	-0.027
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	10	1	**10**	0	10	**10**	0	10	1	**10**	1	11	1	**11**	0	11	1	**11**
	Left-Through		0							0				0				0	
	Through	424	1	282	0	424	282	13	437	1	309	38	475	1	316	0	475	1	316
	Through-Right		1							1				1				1	
	Right	140	0	140	0	140	140	41	181	0	181	-25	156	0	156	0	156	0	156
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	291	1	291	0	291	291	19	310	1	310	-6	304	1	304	0	304	1	304
	Left-Through		0							0				0				0	
	Through	1236	1	**619**	0	1236	**619**	-11	1225	1	**613**	30	1255	1	**628**	0	1255	1	**628**
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	7	0	**7**	0	7	**7**	0	7	0	**7**	1	8	0	**8**	0	8	0	**8**
	Left-Through		0							0				0				0	
	Through	9	0	16	0	9	16	2	11	0	18	-1	10	0	18	0	10	0	18
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	125	0	125	0	125	125	38	163	0	163	-26	137	0	137	0	137	0	137
	Left-Through		0							0				0				0	
	Through	19	0	**306**	0	19	**306**	2	21	0	**365**	0	21	0	**341**	0	21	0	**341**
	Through-Right		0							0				0				0	
	Right	162	0	0	0	162	0	19	181	0	0	2	183	0	0	0	183	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		629	North-South:		629	North-South:			623	North-South:			639	North-South:			639
		East-West:		313	East-West:		313	East-West:			372	East-West:			349	East-West:			349
		SUM:		942	SUM:		942	SUM:			995	SUM:			988	SUM:			988
VOLUME/CAPACITY (V/C) RATIO:				0.628			0.628				0.663				0.659				0.659
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.628			0.628				0.663				0.659				0.659
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.004	Δ*v/c* after mitigation:	-0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	96	1	96	0	96	96	37	133	1	133	-4	129	1	129	0	129	1	129
	Left-Through		0							0				0				0	
	Through	364	1	**227**	0	364	**227**	29	393	1	**247**	4	397	1	**250**	0	397	1	**250**
	Through-Right		1							1				1				1	
	Right	90	0	90	0	90	90	10	100	0	100	3	103	0	103	0	103	0	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	371	1	**371**	0	371	**371**	24	395	1	**395**	1	396	1	**396**	0	396	1	**396**
	Left-Through		0							0				0				0	
	Through	742	1	381	0	742	381	31	773	1	400	4	777	1	401	0	777	1	401
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	7	27	0	27	-2	25	0	25	0	25	0	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	8	61	1	61	-2	59	1	59	0	59	1	59
	Left-Through		0							0				0				0	
	Through	246	1	246	0	246	246	44	290	1	290	-2	288	1	288	0	288	1	288
	Through-Right		0							0				0				0	
	Right	323	1	**275**	0	323	**275**	49	372	1	**306**	-2	370	1	**306**	0	370	1	**306**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	65	1	**65**	0	65	**65**	6	71	1	**71**	9	80	1	**80**	0	80	1	**80**
	Left-Through		0							0				0				0	
	Through	60	1	60	0	60	60	24	84	1	84	5	89	1	89	0	89	1	89
	Through-Right		0							0				0				0	
	Right	99	1	0	0	99	0	9	108	1	0	11	119	1	0	0	119	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		598	North-South:		598	North-South:			642	North-South:			646	North-South:			646
		East-West:		340	East-West:		340	East-West:			377	East-West:			386	East-West:			386
		SUM:		938	SUM:		938	SUM:			1019	SUM:			1032	SUM:			1032
VOLUME/CAPACITY (V/C) RATIO:				0.658			0.658				0.715				0.724				0.724
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.715				0.724				0.724
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	171	1	**171**	0	171	**171**	-37	134	1	**134**	9	143	1	**143**	0	143	1	**143**
	Left-Through		0							0				0				0	
	Through	447	1	242	0	447	242	131	578	1	307	4	582	1	310	0	582	1	310
	Through-Right		1							1				1				1	
	Right	37	0	37	0	37	37	-1	36	0	36	1	37	0	37	0	37	0	37
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	18	1	18	0	18	18	8	26	1	26	-2	24	1	24	0	24	1	24
	Left-Through		0							0				0				0	
	Through	1032	1	**618**	0	1032	**618**	86	1118	1	**681**	24	1142	1	**687**	0	1142	1	**687**
	Through-Right		1							1				1				1	
	Right	203	0	203	0	203	203	40	243	0	243	-12	231	0	231	0	231	0	231
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	54	0	54	54	15	69	1	69	2	71	1	71	0	71	1	71
	Left-Through		0							0				0				0	
	Through	43	0	**116**	0	43	**116**	-2	41	0	**92**	2	43	0	**103**	0	43	0	**103**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	-22	51	0	0	9	60	0	0	0	60	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	82	1	**82**	0	82	**82**	-4	78	1	**78**	3	81	1	**81**	0	81	1	**81**
	Left-Through		0							0				0				0	
	Through	87	2	36	0	87	36	4	91	2	43	-2	89	2	41	0	89	2	41
	Through-Right		1							1				1				1	
	Right	22	0	22	0	22	22	16	38	0	38	-3	35	0	35	0	35	0	35
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		789	*North-South:*		789	*North-South:*			815	*North-South:*			830	*North-South:*			830
		East-West:		198	*East-West:*		198	*East-West:*			170	*East-West:*			184	*East-West:*			184
		SUM:		987	*SUM:*		987	*SUM:*			985	*SUM:*			1014	*SUM:*			1014
VOLUME/CAPACITY *(V/C)* RATIO:				0.658			0.658				0.657				0.676				0.676
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.657				0.676				0.676
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.019	Δ*v/c* after mitigation:	0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	175	1	**175**	0	175	**175**	94	269	1	**269**	-2	267	1	**267**	0	267	1	**267**
	Left-Through		0							0				0				0	
	Through	348	2	174	0	348	174	-10	338	2	169	13	351	2	176	0	351	2	176
	Through-Right		0							0				0				0	
	Right	241	1	132	0	241	132	-29	212	1	107	13	225	1	116	0	225	1	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	415	1	415	0	415	415	-56	359	1	359	19	378	1	378	0	378	1	378
	Left-Through		0							0				0				0	
	Through	1132	2	**566**	0	1132	**566**	63	1195	2	**598**	17	1212	2	**606**	0	1212	2	**606**
	Through-Right		0							0				0				0	
	Right	35	1	31	0	35	31	18	53	1	46	-1	52	1	45	0	52	1	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	9	1	9	0	9	9	5	14	1	14	0	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	699	1	**407**	0	699	**407**	265	964	1	**579**	5	969	1	**578**	0	969	1	**578**
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	78	193	0	193	-6	187	0	187	0	187	0	187
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	219	1	**219**	0	219	**219**	-8	211	1	**211**	8	219	1	**219**	0	219	1	**219**
	Left-Through		0							0				0				0	
	Through	488	1	339	0	488	339	185	673	1	419	4	677	1	426	0	677	1	426
	Through-Right		1							1				1				1	
	Right	189	0	189	0	189	189	-24	165	0	165	9	174	0	174	0	174	0	174
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		741	North-South:		741	North-South:			867	North-South:			873	North-South:			873
		East-West:		626	East-West:		626	East-West:			790	East-West:			797	East-West:			797
		SUM:		1367	SUM:		1367	SUM:			1657	SUM:			1670	SUM:			1670
VOLUME/CAPACITY (V/C) RATIO:				0.994			0.994				1.205				1.215				1.215
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.994			0.994				1.205				1.215				1.215
LEVEL OF SERVICE (LOS):				E			E				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	306	1	**183**	0	306	**183**	-5	301	1	**183**	6	307	1	**187**	0	307	1	**187**
	Left-Through		0							0				0				0	
	Through	29	0	183	0	29	183	3	32	0	183	1	33	0	187	0	33	0	187
	Through-Right		0							0				0				0	
	Right	30	0	0	0	30	0	3	33	0	0	1	34	0	0	0	34	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	24	0	24	24	7	31	1	31	1	32	1	32	0	32	1	32
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	89	1	**50**	0	89	**50**	14	103	1	**58**	2	105	1	**60**	0	105	1	**60**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	79	1	**79**	0	79	**79**	11	90	1	**90**	1	91	1	**91**	0	91	1	**91**
	Left-Through		0							0				0				0	
	Through	651	2	326	0	651	326	98	749	2	375	12	761	2	381	0	761	2	381
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	681	1	**351**	0	681	**351**	149	830	1	**430**	10	840	1	**435**	0	840	1	**435**
	Through-Right		1							1				1				1	
	Right	21	0	21	0	21	21	8	29	0	29	0	29	0	29	0	29	0	29
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		233	*North-South:*		233	*North-South:*			241	*North-South:*			247	*North-South:*			247
		East-West:		430	*East-West:*		430	*East-West:*			520	*East-West:*			526	*East-West:*			526
		SUM:		663	*SUM:*		663	*SUM:*			761	*SUM:*			773	*SUM:*			773
VOLUME/CAPACITY *(V/C)* RATIO:				0.465			0.465				0.534				0.542				0.542
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.465			0.465				0.534				0.542				0.542
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	90	1	**90**	0	90	**90**	31	121	1	**121**	-4	117	1	**117**	0	117	1	**117**
	Left-Through		0							0				0				0	
	Through	250	1	159	0	250	159	44	294	1	176	8	302	1	181	0	302	1	181
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	-9	58	0	58	1	59	0	59	0	59	0	59
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	111	1	111	0	111	111	-35	76	1	76	3	79	1	79	0	79	1	79
	Left-Through		0							0				0				0	
	Through	335	1	**220**	0	335	**220**	122	457	1	**284**	7	464	1	**287**	0	464	1	**287**
	Through-Right		1							1				1				1	
	Right	104	0	104	0	104	104	7	111	0	111	-2	109	0	109	0	109	0	109
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	**54**	0	54	**54**	31	85	1	**85**	2	87	1	**87**	0	87	1	**87**
	Left-Through		0							0				0				0	
	Through	834	2	303	0	834	303	125	959	2	378	16	975	2	383	0	975	2	383
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	98	174	0	174	-1	173	0	173	0	173	0	173
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	68	1	68	0	68	68	17	85	1	85	4	89	1	89	0	89	1	89
	Left-Through		0							0				0				0	
	Through	1703	2	**604**	0	1703	**604**	-38	1665	2	**587**	25	1690	2	**597**	0	1690	2	**597**
	Through-Right		1							1				1				1	
	Right	110	0	110	0	110	110	-15	95	0	95	7	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		310	North-South:		310	North-South:			405	North-South:			404	North-South:			404
		East-West:		658	East-West:		658	East-West:			672	East-West:			684	East-West:			684
		SUM:		968	SUM:		968	SUM:			1077	SUM:			1088	SUM:			1088
VOLUME/CAPACITY (V/C) RATIO:				0.645			0.645				0.718				0.725				0.725
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.645				0.718				0.725				0.725
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	32	0	32	0	32	32	-2	30	0	30	-3	27	0	27	0	27	0	27
	Left-Through		1							1				1				1	
	Through	377	0	**229**	0	377	**229**	-38	339	0	**204**	-2	337	0	**202**	0	337	0	**202**
	Through-Right		1							1				1				1	
	Right	49	0	229	0	49	229	-10	39	0	204	0	39	0	202	0	39	0	202
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	59	1	**59**	0	59	**59**	-7	52	1	**52**	2	54	1	**54**	0	54	1	**54**
	Left-Through		0							0				0				0	
	Through	229	2	115	0	229	115	-50	179	2	90	8	187	2	94	0	187	2	94
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	743	1	**447**	0	743	**447**	19	762	1	**454**	-14	748	1	**453**	0	748	1	**453**
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	-4	146	0	146	12	158	0	158	0	158	0	158
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		229	North-South:		229	North-South:			204	North-South:			202	North-South:			202
		East-West:		506	East-West:		506	East-West:			506	East-West:			507	East-West:			507
		SUM:		735	SUM:		735	SUM:			710	SUM:			709	SUM:			709
VOLUME/CAPACITY (V/C) RATIO:				0.490			0.490				0.473				0.473				0.473
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.473				0.473				0.473
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	49	0	49	0	49	49	-11	38	0	38	0	38	0	38	0	38	0	38
	Left-Through		1							1				1				1	
	Through	143	0	**140**	0	143	**140**	-3	140	0	**162**	-8	132	0	**155**	0	132	0	**155**
	Through-Right		1							1				1				1	
	Right	227	1	140	0	227	140	81	308	1	162	-12	296	1	155	0	296	1	155
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	218	1	**169**	0	218	**169**	-46	172	1	146	10	182	1	151	0	182	1	151
	Through-Right		1							1				1				1	
	Right	119	0	119	0	119	119	0	119	0	119	0	119	0	119	0	119	0	119
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	**149**	0	149	**149**	-33	116	1	116	-5	111	1	111	0	111	1	111
	Left-Through		0							0				0				0	
	Through	633	2	317	0	633	317	50	683	2	**342**	-12	671	2	**336**	0	671	2	**336**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		140	*North-South:*		140	*North-South:*			162	*North-South:*			155	*North-South:*			155
		East-West:		318	*East-West:*		318	*East-West:*			342	*East-West:*			336	*East-West:*			336
		SUM:		458	*SUM:*		458	*SUM:*			504	*SUM:*			491	*SUM:*			491
VOLUME/CAPACITY *(V/C)* RATIO:				0.305			0.305				0.336				0.327				0.327
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.305			0.305				0.336				0.327				0.327
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.009	Δ*v/c* after mitigation:	-0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	31	1	31	0	31	31	44	75	1	75	-4	71	1	71	0	71	1	71
	Left-Through		0							0				0				0	
	Through	230	1	**230**	0	230	**230**	-24	206	1	206	4	210	1	210	0	210	1	210
	Through-Right		1							1				1				1	
	Right	257	0	203	0	257	203	159	416	0	**327**	-7	409	0	**320**	0	409	0	**320**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	381	1	**381**	0	381	**381**	35	416	1	**416**	7	423	1	**423**	0	423	1	**423**
	Left-Through		0							0				0				0	
	Through	392	1	392	0	392	392	-18	374	1	374	-2	372	1	372	0	372	1	372
	Through-Right		0							0				0				0	
	Right	12	1	0	0	12	0	8	20	1	0	0	20	1	0	0	20	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	12	113	1	113	4	117	1	117	0	117	1	117
	Left-Through		0							0				0				0	
	Through	241	1	**157**	0	241	**157**	244	485	1	**307**	0	485	1	**305**	0	485	1	**305**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	55	128	0	128	-3	125	0	125	0	125	0	125
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	109	1	**109**	0	109	**109**	70	179	1	**179**	0	179	1	**179**	0	179	1	**179**
	Left-Through		0							0				0				0	
	Through	109	1	109	0	109	109	196	305	1	230	-3	302	1	233	0	302	1	233
	Through-Right		1							1				1				1	
	Right	148	0	0	0	148	0	6	154	0	154	9	163	0	163	0	163	0	163
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		611	North-South:		611	North-South:			743	North-South:			743	North-South:			743
		East-West:		266	East-West:		266	East-West:			486	East-West:			484	East-West:			484
		SUM:		877	SUM:		877	SUM:			1229	SUM:			1227	SUM:			1227
VOLUME/CAPACITY (V/C) RATIO:				0.615			0.615				0.862				0.861				0.861
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.615			0.615				0.862				0.861				0.861
LEVEL OF SERVICE (LOS):				B			B				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.001	Δ*v/c* after mitigation:	-0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	5	10	1	**10**	-2	8	1	**8**	0	8	1	**8**
	Left-Through		0							0				0				0	
	Through	331	0	**383**	0	331	**383**	262	593	0	655	-5	588	0	648	0	588	0	648
	Through-Right		1							1				1				1	
	Right	52	0	0	0	52	0	10	62	0	0	-2	60	0	0	0	60	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	158	1	**158**	0	158	**158**	-40	118	1	118	18	136	1	136	0	136	1	136
	Left-Through		0							0				0				0	
	Through	286	1	286	0	286	286	504	790	1	**790**	-9	781	1	**781**	0	781	1	**781**
	Through-Right		0							0				0				0	
	Right	395	1	343	0	395	343	109	504	1	435	-6	498	1	431	0	498	1	431
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	1	**105**	0	105	**105**	33	138	1	**138**	-4	134	1	**134**	0	134	1	**134**
	Left-Through		0							0				0				0	
	Through	141	1	73	0	141	73	-17	124	1	70	-6	118	1	66	0	118	1	66
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	11	16	0	16	-3	13	0	13	0	13	0	13
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	44	0	44	0	44	44	61	105	0	105	-4	101	0	101	0	101	0	101
	Left-Through		1							1				1				1	
	Through	746	0	**427**	0	746	**427**	73	819	0	**493**	-29	790	0	**481**	0	790	0	**481**
	Through-Right		1							1				1				1	
	Right	64	0	427	0	64	427	-2	62	0	493	9	71	0	481	0	71	0	481
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		541	North-South:		541	North-South:			800	North-South:			789	North-South:			789
		East-West:		532	East-West:		532	East-West:			631	East-West:			615	East-West:			615
		SUM:		1073	SUM:		1073	SUM:			1431	SUM:			1404	SUM:			1404
VOLUME/CAPACITY (V/C) RATIO:				0.715			0.715				0.954				0.936				0.936
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.715			0.715				0.954				0.936				0.936
LEVEL OF SERVICE (LOS):				C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.018	Δ*v/c* after mitigation:	-0.018
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	**116**	0	116	**116**	74	190	1	**190**	3	193	1	**193**	0	193	1	**193**
	Left-Through		0							0				0				0	
	Through	259	1	142	0	259	142	88	347	1	190	3	350	1	192	0	350	1	192
	Through-Right		1							1				1				1	
	Right	25	0	25	0	25	25	7	32	0	32	2	34	0	34	0	34	0	34
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	213	1	213	0	213	213	-39	174	1	174	10	184	1	184	0	184	1	184
	Left-Through		0							0				0				0	
	Through	497	1	**443**	0	497	**443**	94	591	1	**497**	-14	577	1	**491**	0	577	1	**491**
	Through-Right		1							1				1				1	
	Right	388	0	388	0	388	388	15	403	0	403	2	405	0	405	0	405	0	405
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	0	**26**	0	26	**26**	8	34	0	**34**	-1	33	0	**33**	0	33	0	**33**
	Left-Through		1							1				1				1	
	Through	419	0	377	0	419	377	110	529	0	530	7	536	0	520	0	536	0	520
	Through-Right		1							1				1				1	
	Right	178	0	377	0	178	377	149	327	0	530	-21	306	0	520	0	306	0	520
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	66	0	66	0	66	66	15	81	0	81	-1	80	0	80	0	80	0	80
	Left-Through		1							1				1				1	
	Through	1080	0	**657**	0	1080	**657**	72	1152	0	**782**	15	1167	0	**788**	0	1167	0	**788**
	Through-Right		1							1				1				1	
	Right	101	0	657	0	101	657	-13	88	0	782	0	88	0	788	0	88	0	788
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			687	North-South:			684	North-South:			684
		East-West:		683	East-West:		683	East-West:			816	East-West:			821	East-West:			821
		SUM:		1242	SUM:		1242	SUM:			1503	SUM:			1505	SUM:			1505
VOLUME/CAPACITY (V/C) RATIO:				0.828			0.828				1.002				1.003				1.003
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.828			0.828				1.002				1.003				1.003
LEVEL OF SERVICE (LOS):				D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	1676	2	**721**	0	1676	**721**	175	1851	2	**769**	7	1858	2	**760**	0	1858	2	**760**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	241	1	**201**	0	241	**201**	47	288	1	**249**	19	307	1	**262**	0	307	1	**262**
	Left-Through		1							1				1				1	
	Through	362	1	201	0	362	201	96	458	1	249	20	478	1	262	0	478	1	262
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	851	2	**426**	0	851	**426**	0	851	2	**426**	13	864	2	**432**	0	864	2	**432**
	Through-Right		0							0				0				0	
	Right	3	1	3	0	3	3	6	9	1	9	-1	8	1	8	0	8	1	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		721	*North-South:*		721	*North-South:*			769	*North-South:*			760	*North-South:*			760
		East-West:		627	*East-West:*		627	*East-West:*			675	*East-West:*			694	*East-West:*			694
		SUM:		1348	*SUM:*		1348	*SUM:*			1444	*SUM:*			1454	*SUM:*			1454
VOLUME/CAPACITY *(V/C)* RATIO:				0.899			0.899				0.963				0.969				0.969
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.899			0.899				0.963				0.969				0.969
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	11	1	**11**	0	11	**11**	4	15	1	**15**	1	16	1	**16**	0	16	1	**16**
	Left-Through		0							0				0				0	
	Through	204	1	105	0	204	105	49	253	1	130	13	266	1	137	0	266	1	137
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	2	7	0	7	0	7	0	7	0	7	0	7
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	83	0	83	83	11	94	1	94	1	95	1	95	0	95	1	95
	Left-Through		0							0				0				0	
	Through	1395	1	**727**	0	1395	**727**	137	1532	1	**799**	8	1540	1	**804**	0	1540	1	**804**
	Through-Right		1							1				1				1	
	Right	59	0	59	0	59	59	7	66	0	66	1	67	0	67	0	67	0	67
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	0	**54**	0	54	**54**	5	59	0	59	1	60	0	**60**	0	60	0	**60**
	Left-Through		1							1				1				1	
	Through	172	0	153	0	172	153	34	206	0	**208**	5	211	0	213	0	211	0	213
	Through-Right		1							1				1				1	
	Right	79	0	153	0	79	153	13	92	0	208	2	94	0	213	0	94	0	213
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	98	0	98	0	98	98	16	114	0	**114**	2	116	0	116	0	116	0	116
	Left-Through		1							1				1				1	
	Through	260	0	**198**	0	260	**198**	48	308	0	232	7	315	0	**295**	0	315	0	**295**
	Through-Right		1							1				1				1	
	Right	38	0	198	0	38	198	3	41	0	232	1	42	0	295	0	42	0	295
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		738	*North-South:*		738	*North-South:*			814	*North-South:*			820	*North-South:*			820
		East-West:		252	*East-West:*		252	*East-West:*			322	*East-West:*			355	*East-West:*			355
		SUM:		990	*SUM:*		990	*SUM:*			1136	*SUM:*			1175	*SUM:*			1175
VOLUME/CAPACITY *(V/C)* RATIO:				0.660			0.660				0.757				0.783				0.783
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.660			0.660				0.757				0.783				0.783
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.026
Significant impacted?	NO	Fully mitigated?	N/A

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 2
PM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2				2				2				2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	2	0	**0**	0	2	**0**	0	2	0	0	0	2	0	0	0	2	0	0
	Left-Through		0							0				0				0	
	Through	619	1	332	0	619	332	-30	589	1	**322**	12	601	1	**332**	0	601	1	**332**
	Through-Right		1							1				1				1	
	Right	45	0	45	0	45	45	10	55	0	55	7	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	357	2	196	0	357	196	86	443	2	**244**	5	448	2	**246**	0	448	2	**246**
	Left-Through		0							0				0				0	
	Through	380	0	**538**	0	380	**538**	-80	300	0	444	28	328	0	481	0	328	0	481
	Through-Right		1							1				1				1	
	Right	158	0	0	0	158	0	-14	144	0	0	9	153	0	0	0	153	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	0	106	0	106	106	-3	103	0	103	1	104	0	104	0	104	0	104
	Left-Through		0							0				0				0	
	Through	17	0	**139**	0	17	**139**	4	21	0	**137**	3	24	0	**144**	0	24	0	**144**
	Through-Right		0							0				0				0	
	Right	16	0	0	0	16	0	-3	13	0	0	3	16	0	0	0	16	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	394	2	**21**	0	394	**21**	100	494	2	**28**	1	495	2	**26**	0	495	2	**26**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		538	*North-South:*		538	*North-South:*			566	*North-South:*			578	*North-South:*			578
		East-West:		160	*East-West:*		160	*East-West:*			165	*East-West:*			170	*East-West:*			170
		SUM:		698	*SUM:*		698	*SUM:*			731	*SUM:*			748	*SUM:*			748
VOLUME/CAPACITY *(V/C)* RATIO:				0.490			0.490				0.513				0.525				0.525
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.513				0.525				0.525
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.012	Δ*v/c* after mitigation:	0.012
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	**151**	0	151	**151**	81	232	1	**232**	24	256	1	**256**	0	256	1	**256**
	Left-Through		0							0				0				0	
	Through	584	2	292	0	584	292	87	671	2	336	30	701	2	351	0	701	2	351
	Through-Right		0							0				0				0	
	Right	3	1	0	0	3	0	0	3	1	0	0	3	1	0	0	3	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	139	1	139	0	139	139	11	150	1	150	-10	140	1	140	0	140	1	140
	Left-Through		0							0				0				0	
	Through	577	1	**316**	0	577	**316**	17	594	1	**336**	16	610	1	**341**	0	610	1	**341**
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	24	78	0	78	-6	72	0	72	0	72	0	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	40	141	1	141	-9	132	1	132	0	132	1	132
	Left-Through		0							0				0				0	
	Through	699	1	**396**	0	699	**396**	277	976	1	**549**	-3	973	1	**554**	0	973	1	**554**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	30	122	0	122	12	134	0	134	0	134	0	134
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	232	1	**232**	0	232	**232**	31	263	1	**263**	27	290	1	**290**	0	290	1	**290**
	Left-Through		0							0				0				0	
	Through	600	1	409	0	600	409	357	957	1	608	-10	947	1	595	0	947	1	595
	Through-Right		1							1				1				1	
	Right	217	0	217	0	217	217	42	259	0	259	-16	243	0	243	0	243	0	243
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		467	*North-South:*		467	*North-South:*			568	*North-South:*			597	*North-South:*			597
		East-West:		628	*East-West:*		628	*East-West:*			812	*East-West:*			844	*East-West:*			844
		SUM:		1095	*SUM:*		1095	*SUM:*			1380	*SUM:*			1441	*SUM:*			1441
VOLUME/CAPACITY *(V/C)* RATIO:				0.768			0.768				0.968				1.011				1.011
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.768			0.768				0.968				1.011				1.011
LEVEL OF SERVICE (LOS):				C			C				E				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.043	Δ*v/c* after mitigation:	0.043
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	333	1	333	0	333	333	13	346	1	346	-6	340	1	340	0	340	1	340
	Left-Through		0							0				0				0	
	Through	352	0	**408**	0	352	**408**	-5	347	0	**422**	0	347	0	**420**	0	347	0	**420**
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	19	75	0	0	-2	73	0	0	0	73	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	261	1	**261**	0	261	**261**	33	294	1	**294**	15	309	1	**309**	0	309	1	**309**
	Left-Through		0							0				0				0	
	Through	253	0	328	0	253	328	-28	225	0	290	-17	208	0	277	0	208	0	277
	Through-Right		1							1				1				1	
	Right	75	0	0	0	75	0	-10	65	0	0	4	69	0	0	0	69	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	1	**106**	0	106	**106**	3	109	1	**109**	4	113	1	**113**	0	113	1	**113**
	Left-Through		0							0				0				0	
	Through	652	1	422	0	652	422	265	917	1	565	8	925	1	557	0	925	1	557
	Through-Right		1							1				1				1	
	Right	192	0	192	0	192	192	21	213	0	213	-24	189	0	189	0	189	0	189
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	1	31	0	31	31	18	49	1	49	-6	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	769	1	**453**	0	769	**453**	426	1195	1	**698**	3	1198	1	**702**	0	1198	1	**702**
	Through-Right		1							1				1				1	
	Right	136	0	136	0	136	136	65	201	0	201	4	205	0	205	0	205	0	205
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		669	*North-South:*		669	*North-South:*			716	*North-South:*			729	*North-South:*			729
		East-West:		559	*East-West:*		559	*East-West:*			807	*East-West:*			815	*East-West:*			815
		SUM:		1228	*SUM:*		1228	*SUM:*			1523	*SUM:*			1544	*SUM:*			1544
VOLUME/CAPACITY *(V/C)* RATIO:				0.862			0.862				1.069				1.084				1.084
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.862			0.862				1.069				1.084				1.084
LEVEL OF SERVICE (LOS):				D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.015	Δ*v/c* after mitigation:	0.015
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	1	6	1	6	1	7	1	7	0	7	1	7
	Left-Through		0							0				0				0	
	Through	604	1	**375**	0	604	**375**	112	716	1	**439**	45	761	1	**479**	0	761	1	**479**
	Through-Right		1							1				1				1	
	Right	146	0	146	0	146	146	15	161	0	161	35	196	0	196	0	196	0	196
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	285	1	**285**	0	285	**285**	12	297	1	**297**	21	318	1	**318**	0	318	1	**318**
	Left-Through		0							0				0				0	
	Through	528	1	267	0	528	267	140	668	1	337	34	702	1	354	0	702	1	354
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	1	6	0	6	0	6	0	6	0	6	0	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through		0							0				0				0	
	Through	4	0	**13**	0	4	**13**	0	4	0	**15**	0	4	0	**15**	0	4	0	**15**
	Through-Right		0							0				0				0	
	Right	6	0	0	0	6	0	2	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	150	0	**150**	0	150	**150**	47	197	0	**197**	11	208	0	**208**	0	208	0	**208**
	Left-Through		1							1				1				1	
	Through	3	0	153	0	3	153	1	4	0	201	0	4	0	212	0	4	0	212
	Through-Right		0							0				0				0	
	Right	263	1	121	0	263	121	43	306	1	158	-19	287	1	128	0	287	1	128
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		660	North-South:		660	North-South:			736	North-South:			797	North-South:			797
		East-West:		163	East-West:		163	East-West:			212	East-West:			223	East-West:			223
		SUM:		823	SUM:		823	SUM:			948	SUM:			1020	SUM:			1020
VOLUME/CAPACITY (V/C) RATIO:				0.599			0.599				0.689				0.742				0.742
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.599			0.599				0.689				0.742				0.742
LEVEL OF SERVICE (LOS):				A			A				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.053	Δ*v/c* after mitigation:	0.053
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	292	1	**292**	0	292	**292**	17	309	1	**309**	11	320	1	**320**	0	320	1	**320**
	Left-Through		0							0				0				0	
	Through	233	1	233	0	233	233	-62	171	1	171	42	213	1	213	0	213	1	213
	Through-Right		0							0				0				0	
	Right	59	1	51	0	59	51	17	76	1	60	2	78	1	61	0	78	1	61
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	89	1	89	0	89	89	14	103	1	103	33	136	1	136	0	136	1	136
	Left-Through		0							0				0				0	
	Through	150	1	**150**	0	150	**150**	29	179	1	**179**	69	248	1	**248**	0	248	1	**248**
	Through-Right		0							0				0				0	
	Right	46	1	6	0	46	6	-2	44	1	17	14	58	1	30	0	58	1	30
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	80	1	80	0	80	80	-26	54	1	54	3	57	1	57	0	57	1	57
	Left-Through		0							0				0				0	
	Through	205	0	**424**	0	205	**424**	39	244	0	**512**	-31	213	0	**459**	0	213	0	**459**
	Through-Right		1							1				1				1	
	Right	219	0	0	0	219	0	49	268	0	0	-22	246	0	0	0	246	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	16	1	**16**	0	16	**16**	17	33	1	**33**	1	34	1	**34**	0	34	1	**34**
	Left-Through		0							0				0				0	
	Through	187	0	226	0	187	226	118	305	0	349	-8	297	0	349	0	297	0	349
	Through-Right		1							1				1				1	
	Right	39	0	0	0	39	0	5	44	0	0	8	52	0	0	0	52	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		442	North-South:		442	North-South:			488	North-South:			568	North-South:			568
		East-West:		440	East-West:		440	East-West:			545	East-West:			493	East-West:			493
		SUM:		882	SUM:		882	SUM:			1033	SUM:			1061	SUM:			1061
VOLUME/CAPACITY (V/C) RATIO:				0.641			0.641				0.751				0.772				0.772
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.641			0.641				0.751				0.772				0.772
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	1	58	0	58	58	-16	42	1	42	3	45	1	45	0	45	1	45
	Left-Through		0							0				0				0	
	Through	701	1	**433**	0	701	**433**	71	772	1	**491**	85	857	1	**534**	0	857	1	**534**
	Through-Right		1							1				1				1	
	Right	164	0	164	0	164	164	45	209	0	209	2	211	0	211	0	211	0	211
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	1	**92**	0	92	**92**	65	157	1	**157**	-4	153	1	**153**	0	153	1	**153**
	Left-Through		0							0				0				0	
	Through	649	1	340	0	649	340	60	709	1	370	49	758	1	395	0	758	1	395
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	-1	30	0	30	1	31	0	31	0	31	0	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	34	0	**34**	0	34	**34**	-1	33	0	**33**	2	35	0	**35**	0	35	0	**35**
	Left-Through		0							0				0				0	
	Through	64	0	119	0	64	119	7	71	0	119	-3	68	0	119	0	68	0	119
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0	-6	15	0	0	1	16	0	0	0	16	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	172	0	172	0	172	172	85	257	0	257	-6	251	0	251	0	251	0	251
	Left-Through		0							0				0				0	
	Through	62	0	**328**	0	62	**328**	20	82	0	**529**	-4	78	0	**515**	0	78	0	**515**
	Through-Right		0							0				0				0	
	Right	94	0	0	0	94	0	96	190	0	0	-4	186	0	0	0	186	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		525	*North-South:*		525	*North-South:*			648	*North-South:*			687	*North-South:*			687
		East-West:		362	*East-West:*		362	*East-West:*			562	*East-West:*			550	*East-West:*			550
		SUM:		887	*SUM:*		887	*SUM:*			1210	*SUM:*			1237	*SUM:*			1237
VOLUME/CAPACITY *(V/C)* RATIO:				0.591			0.591				0.807				0.825				0.825
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.591			0.591				0.807				0.825				0.825
LEVEL OF SERVICE (LOS):				A			A				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.018	Δ*v/c* after mitigation:	0.018
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	189	1	189	0	189	189	125	314	1	**314**	2	316	1	**316**	0	316	1	**316**
	Left-Through		0							0				0				0	
	Through	400	1	**400**	0	400	**400**	1	401	1	401	16	417	1	417	0	417	1	417
	Through-Right		0							0				0				0	
	Right	42	1	29	0	42	29	8	50	1	35	-11	39	1	27	0	39	1	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	74	1	**74**	0	74	**74**	5	79	1	79	4	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	257	1	257	0	257	257	64	321	1	**321**	16	337	1	**337**	0	337	1	**337**
	Through-Right		0							0				0				0	
	Right	54	1	0	0	54	0	26	80	1	28	28	108	1	38	0	108	1	38
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	121	1	121	0	121	121	-16	105	1	105	36	141	1	141	0	141	1	141
	Left-Through		0							0				0				0	
	Through	259	1	**241**	0	259	**241**	10	269	1	**269**	4	273	1	**273**	0	273	1	**273**
	Through-Right		1							1				1				1	
	Right	223	0	223	0	223	223	48	271	0	114	3	274	0	116	0	274	0	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	26	1	**26**	0	26	**26**	4	30	1	**30**	-6	24	1	**24**	0	24	1	**24**
	Left-Through		0							0				0				0	
	Through	108	1	108	0	108	108	38	146	1	146	2	148	1	148	0	148	1	148
	Through-Right		0							0				0				0	
	Right	70	1	33	0	70	33	-13	57	1	18	3	60	1	19	0	60	1	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		474	North-South:		474	North-South:			635	North-South:			653	North-South:			653
		East-West:		267	East-West:		267	East-West:			299	East-West:			297	East-West:			297
		SUM:		741	SUM:		741	SUM:			934	SUM:			950	SUM:			950
VOLUME/CAPACITY (V/C) RATIO:				0.494			0.494				0.623				0.633				0.633
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.494			0.494				0.623				0.633				0.633
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	60	1	60	0	60	60	53	113	1	113	-4	109	1	109	0	109	1	109
	Left-Through		0							0				0				0	
	Through	681	1	**387**	0	681	**387**	-51	630	1	**355**	34	664	1	**363**	0	664	1	**363**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	-12	80	0	80	-18	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	159	1	**159**	0	159	**159**	-28	131	1	**131**	-22	109	1	**109**	0	109	1	**109**
	Left-Through		0							0				0				0	
	Through	618	1	327	0	618	327	-47	571	1	318	7	578	1	322	0	578	1	322
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	28	64	0	64	2	66	0	66	0	66	0	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	39	0	**39**	0	39	**39**	29	68	0	**68**	11	79	0	**79**	0	79	0	**79**
	Left-Through		0							0				0				0	
	Through	154	0	234	0	154	234	100	254	0	398	-39	215	0	372	0	215	0	372
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	35	76	0	0	2	78	0	0	0	78	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	0	115	0	115	115	-23	92	0	92	-2	90	0	90	0	90	0	90
	Left-Through		0							0				0				0	
	Through	237	0	**525**	0	237	**525**	127	364	0	**587**	1	365	0	**599**	0	365	0	**599**
	Through-Right		0							0				0				0	
	Right	173	0	0	0	173	0	-42	131	0	0	13	144	0	0	0	144	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		546	*North-South:*		546	*North-South:*			486	*North-South:*			472	*North-South:*			472
		East-West:		564	*East-West:*		564	*East-West:*			655	*East-West:*			678	*East-West:*			678
		SUM:		1110	*SUM:*		1110	*SUM:*			1141	*SUM:*			1150	*SUM:*			1150
VOLUME/CAPACITY *(V/C)* RATIO:				0.779			0.779				0.801				0.807				0.807
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.779			0.779				0.801				0.807				0.807
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	0	9	9	0	9	1	9	1	10	1	10	0	10	1	10
	Left-Through		0							0				0				0	
	Through	667	1	**379**	0	667	**379**	-2	665	1	**406**	47	712	1	**418**	0	712	1	**418**
	Through-Right		1							1				1				1	
	Right	91	0	91	0	91	91	55	146	0	146	-22	124	0	124	0	124	0	124
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	**169**	0	169	**169**	48	217	1	**217**	-14	203	1	**203**	0	203	1	**203**
	Left-Through		0							0				0				0	
	Through	483	1	242	0	483	242	37	520	1	261	29	549	1	275	0	549	1	275
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	8	0	**8**	0	8	**8**	-1	7	0	**7**	1	8	0	**8**	0	8	0	**8**
	Left-Through		0							0				0				0	
	Through	5	0	13	0	5	13	2	7	0	14	-1	6	0	14	0	6	0	14
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	86	0	86	0	86	86	57	143	0	143	-23	120	0	120	0	120	0	120
	Left-Through		0							0				0				0	
	Through	34	0	**373**	0	34	**373**	8	42	0	**495**	-2	40	0	**450**	0	40	0	**450**
	Through-Right		0							0				0				0	
	Right	253	0	0	0	253	0	57	310	0	0	-20	290	0	0	0	290	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		548	North-South:		548	North-South:			623	North-South:			621	North-South:			621
		East-West:		381	East-West:		381	East-West:			502	East-West:			458	East-West:			458
		SUM:		929	SUM:		929	SUM:			1125	SUM:			1079	SUM:			1079
VOLUME/CAPACITY (V/C) RATIO:				0.619			0.619				0.750				0.719				0.719
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.619			0.619				0.750				0.719				0.719
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.031	Δ*v/c* after mitigation:	-0.031
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	145	0	145	145	53	198	1	198	-2	196	1	196	0	196	1	196
	Left-Through		0							0				0				0	
	Through	513	1	**292**	0	513	**292**	55	568	1	**333**	12	580	1	**337**	0	580	1	**337**
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	27	97	0	97	-3	94	0	94	0	94	0	94
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	166	1	**166**	0	166	**166**	20	186	1	**186**	-1	185	1	**185**	0	185	1	**185**
	Left-Through		0							0				0				0	
	Through	466	1	251	0	466	251	60	526	1	283	6	532	1	286	0	532	1	286
	Through-Right		1							1				1				1	
	Right	35	0	35	0	35	35	4	39	0	39	1	40	0	40	0	40	0	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	**35**	0	35	**35**	5	40	1	40	3	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	73	1	73	0	73	73	30	103	1	**103**	1	104	1	**104**	0	104	1	**104**
	Through-Right		0							0				0				0	
	Right	137	1	65	0	137	65	58	195	1	96	5	200	1	102	0	200	1	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	72	1	72	0	72	72	24	96	1	**96**	1	97	1	**97**	0	97	1	**97**
	Left-Through		0							0				0				0	
	Through	118	1	118	0	118	118	37	155	1	155	3	158	1	158	0	158	1	158
	Through-Right		0							0				0				0	
	Right	213	1	**130**	0	213	**130**	13	226	1	133	12	238	1	146	0	238	1	146
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		458	*North-South:*		458	*North-South:*			519	*North-South:*			522	*North-South:*			522
		East-West:		165	*East-West:*		165	*East-West:*			199	*East-West:*			201	*East-West:*			201
		SUM:		623	*SUM:*		623	*SUM:*			718	*SUM:*			723	*SUM:*			723
VOLUME/CAPACITY *(V/C)* RATIO:				0.437			0.437				0.504				0.507				0.507
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.437			0.437				0.504				0.507				0.507
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	33	227	1	**227**	21	248	1	**248**	0	248	1	**248**
	Left-Through		0							0				0				0	
	Through	648	1	340	0	648	340	213	861	1	448	8	869	1	454	0	869	1	454
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	4	35	0	35	3	38	0	38	0	38	0	38
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	16	1	16	0	16	16	12	28	1	28	1	29	1	29	0	29	1	29
	Left-Through		0							0				0				0	
	Through	467	1	**333**	0	467	**333**	133	600	1	**480**	-1	599	1	**483**	0	599	1	**483**
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	161	360	0	360	7	367	0	367	0	367	0	367
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	1	61	0	61	61	-17	44	1	44	-7	37	1	37	0	37	1	37
	Left-Through		0							0				0				0	
	Through	20	0	**84**	0	20	**84**	-8	12	0	**41**	-1	11	0	**37**	0	11	0	**37**
	Through-Right		1							1				1				1	
	Right	64	0	0	0	64	0	-35	29	0	0	-3	26	0	0	0	26	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	46	1	**46**	0	46	**46**	-5	41	1	**41**	-1	40	1	**40**	0	40	1	**40**
	Left-Through		0							0				0				0	
	Through	34	2	17	0	34	17	9	43	2	22	0	43	2	22	0	43	2	22
	Through-Right		1							1				1				1	
	Right	18	0	10	0	18	10	8	26	0	12	-2	24	0	10	0	24	0	10
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		527	North-South:		527	North-South:			707	North-South:			731	North-South:			731
		East-West:		130	East-West:		130	East-West:			82	East-West:			77	East-West:			77
		SUM:		657	SUM:		657	SUM:			789	SUM:			808	SUM:			808
VOLUME/CAPACITY (V/C) RATIO:				0.438			0.438				0.526				0.539				0.539
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.438			0.438				0.526				0.539				0.539
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.013	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	226	1	226	0	226	226	174	400	1	**400**	-34	366	1	**366**	0	366	1	**366**
	Left-Through		0							0				0				0	
	Through	561	2	**281**	0	561	**281**	36	597	2	299	5	602	2	301	0	602	2	301
	Through-Right		0							0				0				0	
	Right	234	1	99	0	234	99	3	237	1	98	-5	232	1	86	0	232	1	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	278	1	**278**	0	278	**278**	-44	234	1	234	10	244	1	244	0	244	1	244
	Left-Through		0							0				0				0	
	Through	529	2	265	0	529	265	57	586	2	**293**	-2	584	2	**292**	0	584	2	**292**
	Through-Right		0							0				0				0	
	Right	61	1	35	0	61	35	29	90	1	45	-2	88	1	41	0	88	1	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	37	90	1	90	4	94	1	94	0	94	1	94
	Left-Through		0							0				0				0	
	Through	445	1	**264**	0	445	**264**	272	717	1	**447**	13	730	1	**451**	0	730	1	**451**
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	93	176	0	176	-5	171	0	171	0	171	0	171
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	270	1	**270**	0	270	**270**	9	279	1	**279**	14	293	1	**293**	0	293	1	**293**
	Left-Through		0							0				0				0	
	Through	715	1	456	0	715	456	267	982	1	572	28	1010	1	597	0	1010	1	597
	Through-Right		1							1				1				1	
	Right	196	0	196	0	196	196	-34	162	0	162	21	183	0	183	0	183	0	183
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			693	North-South:			658	North-South:			658
		East-West:		534	East-West:		534	East-West:			726	East-West:			744	East-West:			744
		SUM:		1093	SUM:		1093	SUM:			1419	SUM:			1402	SUM:			1402
VOLUME/CAPACITY (V/C) RATIO:				0.795			0.795				1.032				1.020				1.020
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.795			0.795				1.032				1.020				1.020
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.012	Δ*v/c* after mitigation:	-0.012
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	254	1	**140**	0	254	**140**	34	288	1	**161**	13	301	1	**169**	0	301	1	**169**
	Left-Through		0							0				0				0	
	Through	13	0	140	0	13	140	3	16	0	161	1	17	0	169	0	17	0	169
	Through-Right		0							0				0				0	
	Right	13	0	0	0	13	0	5	18	0	0	1	19	0	0	0	19	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	19	1	19	0	19	19	7	26	1	26	0	26	1	26	0	26	1	26
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	131	1	**104**	0	131	**104**	19	150	1	**118**	4	154	1	**122**	0	154	1	**122**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	55	1	**55**	0	55	**55**	9	64	1	**64**	0	64	1	**64**	0	64	1	**64**
	Left-Through		0							0				0				0	
	Through	641	2	321	0	641	321	187	828	2	414	1	829	2	415	0	829	2	415
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	856	1	**438**	0	856	**438**	200	1056	1	**541**	62	1118	1	**573**	0	1118	1	**573**
	Through-Right		1							1				1				1	
	Right	19	0	19	0	19	19	7	26	0	26	1	27	0	27	0	27	0	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		244	*North-South:*		244	*North-South:*			279	*North-South:*			291	*North-South:*			291
		East-West:		493	*East-West:*		493	*East-West:*			605	*East-West:*			637	*East-West:*			637
		SUM:		737	*SUM:*		737	*SUM:*			884	*SUM:*			928	*SUM:*			928
VOLUME/CAPACITY *(V/C)* RATIO:				0.517			0.517				0.620				0.651				0.651
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.517			0.517				0.620				0.651				0.651
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.031	Δ*v/c* after mitigation:	0.031
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	129	1	129	0	129	129	124	253	1	**253**	-9	244	1	**244**	0	244	1	**244**
	Left-Through		0							0				0				0	
	Through	383	1	**243**	0	383	**243**	136	519	1	312	1	520	1	313	0	520	1	313
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	1	104	0	104	1	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	**127**	0	127	**127**	-19	108	1	108	4	112	1	112	0	112	1	112
	Left-Through		0							0				0				0	
	Through	196	1	132	0	196	132	85	281	1	**197**	3	284	1	**198**	0	284	1	**198**
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	44	112	0	112	-1	111	0	111	0	111	0	111
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	85	1	85	0	85	85	39	124	1	124	1	125	1	125	0	125	1	125
	Left-Through		0							0				0				0	
	Through	1276	2	**460**	0	1276	**460**	112	1388	2	**527**	19	1407	2	**533**	0	1407	2	**533**
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	89	194	0	194	-2	192	0	192	0	192	0	192
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	50	1	**50**	0	50	**50**	0	50	1	**50**	2	52	1	**52**	0	52	1	**52**
	Left-Through		0							0				0				0	
	Through	749	2	290	0	749	290	118	867	2	321	14	881	2	328	0	881	2	328
	Through-Right		1							1				1				1	
	Right	121	0	121	0	121	121	-24	97	0	97	5	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		370	North-South:		370	North-South:			450	North-South:			442	North-South:			442
		East-West:		510	East-West:		510	East-West:			577	East-West:			585	East-West:			585
		SUM:		880	SUM:		880	SUM:			1027	SUM:			1027	SUM:			1027
VOLUME/CAPACITY (V/C) RATIO:				0.587			0.587				0.685				0.685				0.685
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.587			0.587				0.685				0.685				0.685
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	26	0	26	0	26	26	-8	18	0	18	-2	16	0	16	0	16	0	16
	Left-Through		1							1				1				1	
	Through	499	0	**309**	0	499	**309**	-14	485	0	**299**	-21	464	0	**286**	0	464	0	**286**
	Through-Right		1							1				1				1	
	Right	93	0	309	0	93	309	1	94	0	299	-3	91	0	286	0	91	0	286
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	235	1	**235**	0	235	**235**	11	246	1	**246**	9	255	1	**255**	0	255	1	**255**
	Left-Through		0							0				0				0	
	Through	582	2	291	0	582	291	49	631	2	316	34	665	2	333	0	665	2	333
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	262	1	**167**	0	262	**167**	-43	219	1	**152**	-11	208	1	**146**	0	208	1	**146**
	Through-Right		1							1				1				1	
	Right	72	0	72	0	72	72	12	84	0	84	0	84	0	84	0	84	0	84
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		309	*North-South:*		309	*North-South:*			299	*North-South:*			286	*North-South:*			286
		East-West:		402	*East-West:*		402	*East-West:*			398	*East-West:*			401	*East-West:*			401
		SUM:		711	*SUM:*		711	*SUM:*			697	*SUM:*			687	*SUM:*			687
VOLUME/CAPACITY *(V/C)* RATIO:				0.474			0.474				0.465				0.458				0.458
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.474			0.474				0.465				0.458				0.458
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.007	Δ*v/c* after mitigation:	-0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	180	0	**180**	0	180	**180**	13	193	0	**193**	5	198	0	**198**	0	198	0	**198**
	Left-Through		1							1				1				1	
	Through	241	0	173	0	241	173	-40	201	0	177	-14	187	0	181	0	187	0	181
	Through-Right		1							1				1				1	
	Right	104	1	0	0	104	0	48	152	1	0	22	174	1	0	0	174	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	627	1	**348**	0	627	**348**	47	674	1	**366**	38	712	1	**384**	0	712	1	**384**
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	-11	58	0	58	-3	55	0	55	0	55	0	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	52	1	**52**	0	52	**52**	-25	27	1	**27**	-6	21	1	**21**	0	21	1	**21**
	Left-Through		0							0				0				0	
	Through	243	2	122	0	243	122	-25	218	2	109	-7	211	2	106	0	211	2	106
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		180	*North-South:*		180	*North-South:*			193	*North-South:*			198	*North-South:*			198
		East-West:		400	*East-West:*		400	*East-West:*			393	*East-West:*			405	*East-West:*			405
		SUM:		580	*SUM:*		580	*SUM:*			586	*SUM:*			603	*SUM:*			603
VOLUME/CAPACITY *(V/C)* RATIO:				0.387			0.387				0.391				0.402				0.402
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.387			0.387				0.391				0.402				0.402
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.011
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	47	1	47	0	47	47	18	65	1	65	-3	62	1	62	0	62	1	62
	Left-Through		0							0				0				0	
	Through	433	1	**314**	0	433	**314**	-62	371	1	**371**	19	390	1	**381**	0	390	1	**381**
	Through-Right		1							1				1				1	
	Right	195	0	195	0	195	195	184	379	0	104	-8	371	0	371	0	371	0	371
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	141	1	**141**	0	141	**141**	5	146	1	**146**	4	150	1	**150**	0	150	1	**150**
	Left-Through		0							0				0				0	
	Through	346	1	346	0	346	346	-79	267	1	267	33	300	1	300	0	300	1	300
	Through-Right		0							0				0				0	
	Right	21	1	14	0	21	14	-6	15	1	5	0	15	1	5	0	15	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	15	1	15	0	15	15	6	21	1	21	0	21	1	21	0	21	1	21
	Left-Through		0							0				0				0	
	Through	88	1	**59**	0	88	**59**	195	283	1	**178**	-13	270	1	**173**	0	270	1	**173**
	Through-Right		1							1				1				1	
	Right	30	0	30	0	30	30	42	72	0	72	3	75	0	75	0	75	0	75
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	282	1	**282**	0	282	**282**	269	551	1	**551**	14	565	1	**565**	0	565	1	**565**
	Left-Through		0							0				0				0	
	Through	309	1	274	0	309	274	264	573	1	424	-50	523	1	400	0	523	1	400
	Through-Right		1							1				1				1	
	Right	239	0	239	0	239	239	36	275	0	275	1	276	0	276	0	276	0	276
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		455	*North-South:*		455	*North-South:*			517	*North-South:*			531	*North-South:*			531
		East-West:		341	*East-West:*		341	*East-West:*			729	*East-West:*			738	*East-West:*			738
		SUM:		796	*SUM:*		796	*SUM:*			1246	*SUM:*			1269	*SUM:*			1269
VOLUME/CAPACITY *(V/C)* RATIO:				0.559			0.559				0.874				0.891				0.891
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.559			0.559				0.874				0.891				0.891
LEVEL OF SERVICE (LOS):				A			A				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.017
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	15	1	15	0	15	15	5	20	1	20	-10	10	1	10	0	10	1	10
	Left-Through		0							0				0				0	
	Through	499	0	**585**	0	499	**585**	735	1234	0	**1387**	-30	1204	0	**1349**	0	1204	0	**1349**
	Through-Right		1							1				1				1	
	Right	86	0	0	0	86	0	67	153	0	0	-8	145	0	0	0	145	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	**83**	0	83	**83**	36	119	1	**119**	31	150	1	**150**	0	150	1	**150**
	Left-Through		0							0				0				0	
	Through	188	1	188	0	188	188	405	593	1	593	-21	572	1	572	0	572	1	572
	Through-Right		0							0				0				0	
	Right	89	1	0	0	89	0	9	98	1	0	-29	69	1	0	0	69	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	300	1	**300**	0	300	**300**	64	364	1	**364**	22	386	1	**386**	0	386	1	**386**
	Left-Through		0							0				0				0	
	Through	539	1	276	0	539	276	-68	471	1	247	12	483	1	251	0	483	1	251
	Through-Right		1							1				1				1	
	Right	12	0	12	0	12	12	11	23	0	23	-5	18	0	18	0	18	0	18
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	0	39	0	39	39	44	83	0	83	2	85	0	85	0	85	0	85
	Left-Through		1							1				1				1	
	Through	215	0	**196**	0	215	**196**	-55	160	0	**229**	-40	120	0	**237**	0	120	0	**237**
	Through-Right		1							1				1				1	
	Right	98	0	196	0	98	196	34	132	0	229	52	184	0	237	0	184	0	237
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		668	*North-South:*		668	*North-South:*			1506	*North-South:*			1499	*North-South:*			1499
		East-West:		496	*East-West:*		496	*East-West:*			593	*East-West:*			623	*East-West:*			623
		SUM:		1164	*SUM:*		1164	*SUM:*			2099	*SUM:*			2122	*SUM:*			2122
VOLUME/CAPACITY *(V/C)* RATIO:				0.776			0.776				1.399				1.415				1.415
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.776			0.776				1.399				1.415				1.415
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	112	1	112	0	112	112	224	336	1	**336**	-3	333	1	**333**	0	333	1	**333**
	Left-Through		0							0				0				0	
	Through	544	1	**291**	0	544	**291**	51	595	1	326	24	619	1	338	0	619	1	338
	Through-Right		1							1				1				1	
	Right	38	0	38	0	38	38	19	57	0	57	-1	56	0	56	0	56	0	56
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	170	1	**170**	0	170	**170**	-48	122	1	122	-2	120	1	120	0	120	1	120
	Left-Through		0							0				0				0	
	Through	384	1	264	0	384	264	58	442	1	**324**	11	453	1	**328**	0	453	1	**328**
	Through-Right		1							1				1				1	
	Right	143	0	143	0	143	143	62	205	0	205	-2	203	0	203	0	203	0	203
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	-6	40	0	40	3	43	0	43	0	43	0	43
	Left-Through		1							1				1				1	
	Through	941	0	**593**	0	941	**593**	176	1117	0	**784**	25	1142	0	**812**	0	1142	0	**812**
	Through-Right		1							1				1				1	
	Right	153	0	593	0	153	593	138	291	0	784	18	309	0	812	0	309	0	812
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	0	**69**	0	69	**69**	38	107	0	**107**	2	109	0	**109**	0	109	0	**109**
	Left-Through		1							1				1				1	
	Through	346	0	457	0	346	457	321	667	0	709	-11	656	0	711	0	656	0	711
	Through-Right		1							1				1				1	
	Right	154	0	457	0	154	457	-46	108	0	709	3	111	0	711	0	111	0	711
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		461	North-South:		461	North-South:			660	North-South:			661	North-South:			661
		East-West:		662	East-West:		662	East-West:			891	East-West:			921	East-West:			921
		SUM:		1123	SUM:		1123	SUM:			1551	SUM:			1582	SUM:			1582
VOLUME/CAPACITY (V/C) RATIO:				0.749			0.749				1.034				1.055				1.055
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.749			0.749				1.034				1.055				1.055
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.021
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	368	2	0	0	368	0	134	502	2	0	-6	496	2	0	0	496	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	870	1	**480**	0	870	**480**	22	892	1	**541**	171	1063	1	**595**	0	1063	1	**595**
	Left-Through		1							1				1				1	
	Through	570	1	480	0	570	480	162	732	1	541	-10	722	1	595	0	722	1	595
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	311	2	**156**	0	311	**156**	44	355	2	**178**	13	368	2	**184**	0	368	2	**184**
	Through-Right		0							0				0				0	
	Right	2	1	2	0	2	2	102	104	1	104	-55	49	1	49	0	49	1	49
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		0	North-South:		0	North-South:			0	North-South:			0	North-South:			0
		East-West:		636	East-West:		636	East-West:			719	East-West:			779	East-West:			779
		SUM:		636	SUM:		636	SUM:			719	SUM:			779	SUM:			779
VOLUME/CAPACITY (V/C) RATIO:				0.424			0.424				0.479				0.519				0.519
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.424			0.424				0.479				0.519				0.519
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.040	Δ*v/c* after mitigation:	0.040
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	ASP CPP Concept 2

No. of Phases				2				2				2				2				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB-- 0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0			0
Override Capacity				0				0				0				0				0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	34	0	34	34	4	38	1	38	2	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	1354	1	**716**	0	1354	**716**	64	1418	1	**754**	38	1456	1	**775**	0	1456	1	**775**
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	11	89	0	89	4	93	0	93	0	93	0	93
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	**112**	0	112	**112**	6	118	1	**118**	1	119	1	**119**	0	119	1	**119**
	Left-Through		0							0				0				0	
	Through	1223	1	645	0	1223	645	79	1302	1	685	11	1313	1	691	0	1313	1	691
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66	2	68	0	68	1	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	112	0	**112**	0	112	**112**	6	118	0	**118**	2	120	0	**120**	0	120	0	**120**
	Left-Through		1							1				1				1	
	Through	257	0	258	0	257	258	37	294	0	285	10	304	0	292	0	304	0	292
	Through-Right		1							1				1				1	
	Right	34	0	258	0	34	258	5	39	0	285	1	40	0	292	0	40	0	292
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	0	31	0	31	31	6	37	0	37	1	38	0	38	0	38	0	38
	Left-Through		1							1				1				1	
	Through	171	0	**188**	0	171	**188**	26	197	0	**229**	7	204	0	**236**	0	204	0	**236**
	Through-Right		1							1				1				1	
	Right	174	0	188	0	174	188	13	187	0	229	4	191	0	236	0	191	0	236
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		828	*North-South:*		828	*North-South:*			872	*North-South:*			894	*North-South:*			894
		East-West:		300	*East-West:*		300	*East-West:*			347	*East-West:*			356	*East-West:*			356
		SUM:		1128	*SUM:*		1128	*SUM:*			1219	*SUM:*			1250	*SUM:*			1250
VOLUME/CAPACITY *(V/C)* RATIO:				0.752			0.752				0.813				0.833				0.833
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.752			0.752				0.813				0.833				0.833
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.020
Significant impacted?	YES	Fully mitigated?	NO

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)
AM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	3
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	282	1	218	0	282	218	-8	274	1	215	14	288	1	226	0	288	1	226
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	2	156	0	156	7	163	0	163	0	163	0	163
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	691	2	380	0	691	380	100	791	2	435	10	801	2	441	0	801	2	441
	Left-Through		0							0				0				0	
	Through	722	0	**915**	0	722	**915**	2	724	0	**921**	1	725	0	**933**	0	725	0	**933**
	Through-Right		1							1				1				1	
	Right	193	0	0	0	193	0	4	197	0	0	11	208	0	0	0	208	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	81	0	81	0	81	81	2	83	0	83	7	90	0	90	0	90	0	90
	Left-Through		0							0				0				0	
	Through	33	0	**132**	0	33	**132**	2	35	0	**135**	3	38	0	**146**	0	38	0	**146**
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	-1	17	0	0	1	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	457	2	0	0	457	0	67	524	2	0	12	536	2	0	0	536	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		915	*North-South:*		915	*North-South:*			921	*North-South:*			933	*North-South:*			933
		East-West:		132	*East-West:*		132	*East-West:*			135	*East-West:*			146	*East-West:*			146
		SUM:		1047	*SUM:*		1047	*SUM:*			1056	*SUM:*			1079	*SUM:*			1079
VOLUME/CAPACITY *(V/C)* RATIO:				0.735			0.735				0.741				0.757				0.757
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.735			0.735				0.741				0.757				0.757
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	93	1	**93**	0	93	**93**	20	113	1	**113**	24	137	1	**137**	0	137	1	**137**
	Left-Through		0							0				0				0	
	Through	619	2	310	0	619	310	-12	607	2	304	60	667	2	334	0	667	2	334
	Through-Right		0							0				0				0	
	Right	2	1	0	0	2	0	1	3	1	0	1	4	1	0	0	4	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	147	1	147	0	147	147	14	161	1	161	4	165	1	165	0	165	1	165
	Left-Through		0							0				0				0	
	Through	811	1	**436**	0	811	**436**	-62	749	1	**406**	-3	746	1	**402**	0	746	1	**402**
	Through-Right		1							1				1				1	
	Right	61	0	61	0	61	61	2	63	0	63	-6	57	0	57	0	57	0	57
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	141	1	141	0	141	141	15	156	1	156	-28	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	608	1	**381**	0	608	**381**	276	884	1	**536**	26	910	1	**549**	0	910	1	**549**
	Through-Right		1							1				1				1	
	Right	154	0	154	0	154	154	34	188	0	188	0	188	0	188	0	188	0	188
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	250	1	**250**	0	250	**250**	36	286	1	**286**	19	305	1	**305**	0	305	1	**305**
	Left-Through		0							0				0				0	
	Through	630	1	401	0	630	401	180	810	1	494	-29	781	1	468	0	781	1	468
	Through-Right		1							1				1				1	
	Right	171	0	171	0	171	171	6	177	0	177	-23	154	0	154	0	154	0	154
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		529	North-South:		529	North-South:			519	North-South:			539	North-South:			539
		East-West:		631	East-West:		631	East-West:			822	East-West:			854	East-West:			854
		SUM:		1160	SUM:		1160	SUM:			1341	SUM:			1393	SUM:			1393
VOLUME/CAPACITY (V/C) RATIO:				0.814			0.814				0.941				0.978				0.978
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.814			0.814				0.941				0.978				0.978
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	0.037
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	-1	193	1	**193**	-29	164	1	**164**	0	164	1	**164**
	Left-Through		0							0				0				0	
	Through	173	0	195	0	173	195	-29	144	0	171	-14	130	0	153	0	130	0	153
	Through-Right		1							1				1				1	
	Right	22	0	0	0	22	0	5	27	0	0	-4	23	0	0	0	23	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	146	1	146	0	146	146	47	193	1	193	0	193	1	193	0	193	1	193
	Left-Through		0							0				0				0	
	Through	284	0	**357**	0	284	**357**	-35	249	0	**328**	3	252	0	**332**	0	252	0	**332**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	6	79	0	0	1	80	0	0	0	80	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	86	1	**86**	0	86	**86**	12	98	1	**98**	10	108	1	**108**	0	108	1	**108**
	Left-Through		0							0				0				0	
	Through	409	1	280	0	409	280	265	674	1	419	16	690	1	430	0	690	1	430
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	14	164	0	164	6	170	0	170	0	170	0	170
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	1	39	0	39	39	4	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	612	1	**368**	0	612	**368**	216	828	1	**484**	-4	824	1	**486**	0	824	1	**486**
	Through-Right		1							1				1				1	
	Right	123	0	123	0	123	123	16	139	0	139	8	147	0	147	0	147	0	147
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		551	*North-South:*		551	*North-South:*			521	*North-South:*			496	*North-South:*			496
		East-West:		454	*East-West:*		454	*East-West:*			582	*East-West:*			594	*East-West:*			594
		SUM:		1005	*SUM:*		1005	*SUM:*			1103	*SUM:*			1090	*SUM:*			1090
VOLUME/CAPACITY *(V/C)* RATIO:				0.705			0.705				0.774				0.765				0.765
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.705			0.705				0.774				0.765				0.765
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.009	Δ*v/c* after mitigation:	-0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	335	1	**209**	0	335	**209**	56	391	1	**253**	126	517	1	**333**	0	517	1	**333**
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	32	114	0	114	35	149	0	149	0	149	0	149
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	384	1	**384**	0	384	**384**	15	399	1	**399**	-18	381	1	**381**	0	381	1	**381**
	Left-Through		0							0				0				0	
	Through	678	1	341	0	678	341	-57	621	1	312	63	684	1	344	0	684	1	344
	Through-Right		1							1				1				1	
	Right	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through		0							0				0				0	
	Through	1	0	**3**	0	1	**3**	0	1	0	**3**	0	1	0	**3**	0	1	0	**3**
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	127	0	**127**	0	127	**127**	13	140	0	**140**	12	152	0	**152**	0	152	0	**152**
	Left-Through		1							1				1				1	
	Through	2	0	129	0	2	129	0	2	0	142	0	2	0	154	0	2	0	154
	Through-Right		0							0				0				0	
	Right	277	1	85	0	277	85	13	290	1	91	-14	276	1	86	0	276	1	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		593	North-South:		593	North-South:			652	North-South:			714	North-South:			714
		East-West:		130	East-West:		130	East-West:			143	East-West:			155	East-West:			155
		SUM:		723	SUM:		723	SUM:			795	SUM:			869	SUM:			869
VOLUME/CAPACITY (V/C) RATIO:				0.526			0.526				0.578				0.632				0.632
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.526			0.526				0.578				0.632				0.632
LEVEL OF SERVICE (LOS):				A			A				A				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.054	Δ*v/c* after mitigation:	0.054
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	319	1	**319**	0	319	**319**	2	321	1	**321**	23	344	1	**344**	0	344	1	**344**
	Left-Through		0							0				0				0	
	Through	148	1	148	0	148	148	-23	125	1	125	26	151	1	151	0	151	1	151
	Through-Right		0							0				0				0	
	Right	14	1	0	0	14	0	13	27	1	0	3	30	1	0	0	30	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	0	67	67	-8	59	1	59	12	71	1	71	0	71	1	71
	Left-Through		0							0				0				0	
	Through	281	1	**281**	0	281	**281**	-93	188	1	**188**	50	238	1	**238**	0	238	1	**238**
	Through-Right		0							0				0				0	
	Right	69	1	61	0	69	61	-37	32	1	28	5	37	1	33	0	37	1	33
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	1	17	0	17	17	-8	9	1	9	0	9	1	9	0	9	1	9
	Left-Through		0							0				0				0	
	Through	168	0	**493**	0	168	**493**	27	195	0	**482**	-10	185	0	**471**	0	185	0	**471**
	Through-Right		1							1				1				1	
	Right	325	0	0	0	325	0	-38	287	0	0	-1	286	0	0	0	286	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	40	1	**40**	0	40	**40**	18	58	1	**58**	4	62	1	**62**	0	62	1	**62**
	Left-Through		0							0				0				0	
	Through	281	0	311	0	281	311	-2	279	0	304	-2	277	0	305	0	277	0	305
	Through-Right		1							1				1				1	
	Right	30	0	0	0	30	0	-5	25	0	0	3	28	0	0	0	28	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		600	North-South:		600	North-South:			509	North-South:			582	North-South:			582
		East-West:		533	East-West:		533	East-West:			540	East-West:			533	East-West:			533
		SUM:		1133	SUM:		1133	SUM:			1049	SUM:			1115	SUM:			1115
VOLUME/CAPACITY (V/C) RATIO:				0.824			0.824				0.763				0.811				0.811
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.824			0.824				0.763				0.811				0.811
LEVEL OF SERVICE (LOS):				D			D				C				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.048	Δ*v/c* after mitigation:	0.048
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	22	1	**22**	0	22	**22**	-6	16	1	**16**	-2	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	407	1	265	0	407	265	-4	403	1	281	132	535	1	**343**	0	535	1	**343**
	Through-Right		1							1				1				1	
	Right	122	0	122	0	122	122	36	158	0	158	-8	150	0	150	0	150	0	150
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	60	1	60	0	60	60	33	93	1	93	19	112	1	**112**	0	112	1	**112**
	Left-Through		0							0				0				0	
	Through	744	1	**379**	0	744	**379**	-16	728	1	**370**	62	790	1	402	0	790	1	402
	Through-Right		1							1				1				1	
	Right	14	0	14	0	14	14	-2	12	0	12	1	13	0	13	0	13	0	13
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	17	0	**17**	0	17	**17**	-3	14	0	**14**	5	19	0	**19**	0	19	0	**19**
	Left-Through		0							0				0				0	
	Through	67	0	98	0	67	98	7	74	0	98	-3	71	0	99	0	71	0	99
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	-4	10	0	0	-1	9	0	0	0	9	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	199	0	199	0	199	199	22	221	0	221	-3	218	0	218	0	218	0	218
	Left-Through		0							0				0				0	
	Through	97	0	**330**	0	97	**330**	1	98	0	**365**	1	99	0	**387**	0	99	0	**387**
	Through-Right		0							0				0				0	
	Right	34	0	0	0	34	0	12	46	0	0	24	70	0	0	0	70	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		401	North-South:		401	North-South:			386	North-South:			455	North-South:			455
		East-West:		347	East-West:		347	East-West:			379	East-West:			406	East-West:			406
		SUM:		748	SUM:		748	SUM:			765	SUM:			861	SUM:			861
VOLUME/CAPACITY (V/C) RATIO:				0.499			0.499				0.510				0.574				0.574
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.499			0.499				0.510				0.574				0.574
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.064	Δ*v/c* after mitigation:	0.064
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	223	1	**223**	0	223	**223**	-19	204	1	**204**	7	211	1	**211**	0	211	1	**211**
	Left-Through		0							0				0				0	
	Through	312	1	312	0	312	312	-15	297	1	297	14	311	1	311	0	311	1	311
	Through-Right		0							0				0				0	
	Right	35	1	10	0	35	10	-1	34	1	8	-15	19	1	5	0	19	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	68	1	68	0	68	68	-11	57	1	57	3	60	1	60	0	60	1	60
	Left-Through		0							0				0				0	
	Through	524	1	**524**	0	524	**524**	-93	431	1	**431**	13	444	1	**444**	0	444	1	**444**
	Through-Right		0							0				0				0	
	Right	50	1	39	0	50	39	-10	40	1	26	38	78	1	50	0	78	1	50
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	23	1	**23**	0	23	**23**	5	28	1	28	28	56	1	**56**	0	56	1	**56**
	Left-Through		0							0				0				0	
	Through	126	1	126	0	126	126	29	155	1	155	11	166	1	166	0	166	1	166
	Through-Right		1							1				1				1	
	Right	295	0	184	0	295	184	58	353	0	**251**	20	373	0	268	0	373	0	268
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	51	1	51	0	51	51	1	52	1	**52**	-23	29	1	29	0	29	1	29
	Left-Through		0							0				0				0	
	Through	236	1	**236**	0	236	**236**	-3	233	1	233	13	246	1	**246**	0	246	1	**246**
	Through-Right		0							0				0				0	
	Right	144	1	110	0	144	110	4	148	1	120	10	158	1	128	0	158	1	128
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		747	North-South:		747	North-South:			635	North-South:			655	North-South:			655
		East-West:		259	East-West:		259	East-West:			303	East-West:			302	East-West:			302
		SUM:		1006	SUM:		1006	SUM:			938	SUM:			957	SUM:			957
VOLUME/CAPACITY (V/C) RATIO:				0.671			0.671				0.625				0.638				0.638
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.671			0.671				0.625				0.638				0.638
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.013	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	**34**	0	34	**34**	39	73	1	**73**	7	80	1	**80**	0	80	1	**80**
	Left-Through		0							0				0				0	
	Through	450	1	264	0	450	264	-74	376	1	228	21	397	1	230	0	397	1	230
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	3	80	0	80	-17	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	169	0	169	169	-54	115	1	115	-31	84	1	84	0	84	1	84
	Left-Through		0							0				0				0	
	Through	996	1	**523**	0	996	**523**	-85	911	1	**491**	-9	902	1	**487**	0	902	1	**487**
	Through-Right		1							1				1				1	
	Right	50	0	50	0	50	50	20	70	0	70	2	72	0	72	0	72	0	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	41	0	41	0	41	41	6	47	0	47	6	53	0	53	0	53	0	53
	Left-Through		0							0				0				0	
	Through	239	0	**353**	0	239	**353**	99	338	0	**523**	-55	283	0	**492**	0	283	0	**492**
	Through-Right		0							0				0				0	
	Right	73	0	0	0	73	0	65	138	0	0	18	156	0	0	0	156	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	93	0	**93**	0	93	**93**	-13	80	0	**80**	-7	73	0	**73**	0	73	0	**73**
	Left-Through		0							0				0				0	
	Through	148	0	358	0	148	358	47	195	0	335	-9	186	0	314	0	186	0	314
	Through-Right		0							0				0				0	
	Right	117	0	0	0	117	0	-57	60	0	0	-5	55	0	0	0	55	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		557	*North-South:*		557	*North-South:*			564	*North-South:*			567	*North-South:*			567
		East-West:		446	*East-West:*		446	*East-West:*			603	*East-West:*			565	*East-West:*			565
		SUM:		1003	*SUM:*		1003	*SUM:*			1167	*SUM:*			1132	*SUM:*			1132
VOLUME/CAPACITY *(V/C)* RATIO:				0.704			0.704				0.819				0.794				0.794
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.704			0.704				0.819				0.794				0.794
LEVEL OF SERVICE (LOS):				C			C				D				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.025	Δ*v/c* after mitigation:	-0.025
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	10	1	**10**	0	10	**10**	-1	9	1	**9**	1	10	1	**10**	0	10	1	**10**
	Left-Through		0							0				0				0	
	Through	424	1	282	0	424	282	-8	416	1	300	38	454	1	309	0	454	1	309
	Through-Right		1							1				1				1	
	Right	140	0	140	0	140	140	44	184	0	184	-20	164	0	164	0	164	0	164
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	291	1	291	0	291	291	2	293	1	293	-10	283	1	283	0	283	1	283
	Left-Through		0							0				0				0	
	Through	1236	1	**619**	0	1236	**619**	-43	1193	1	**597**	25	1218	1	**610**	0	1218	1	**610**
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	7	0	**7**	0	7	**7**	0	7	0	**7**	1	8	0	**8**	0	8	0	**8**
	Left-Through		0							0				0				0	
	Through	9	0	16	0	9	16	2	11	0	18	-1	10	0	18	0	10	0	18
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	125	0	125	0	125	125	62	187	0	187	-30	157	0	157	0	157	0	157
	Left-Through		0							0				0				0	
	Through	19	0	**306**	0	19	**306**	2	21	0	**397**	-1	20	0	**361**	0	20	0	**361**
	Through-Right		0							0				0				0	
	Right	162	0	0	0	162	0	27	189	0	0	-5	184	0	0	0	184	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		629	*North-South:*		629	*North-South:*			606	*North-South:*			620	*North-South:*			620
		East-West:		313	*East-West:*		313	*East-West:*			404	*East-West:*			369	*East-West:*			369
		SUM:		942	*SUM:*		942	*SUM:*			1010	*SUM:*			989	*SUM:*			989
VOLUME/CAPACITY *(V/C)* RATIO:				0.628			0.628				0.673				0.659				0.659
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.628			0.628				0.673				0.659				0.659
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.014	Δ*v/c* after mitigation:	-0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	96	1	96	0	96	96	43	139	1	139	-6	133	1	133	0	133	1	133
	Left-Through		0							0				0				0	
	Through	364	1	**227**	0	364	**227**	32	396	1	**248**	7	403	1	**253**	0	403	1	**253**
	Through-Right		1							1				1				1	
	Right	90	0	90	0	90	90	10	100	0	100	2	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	371	1	**371**	0	371	**371**	3	374	1	**374**	5	379	1	**379**	0	379	1	**379**
	Left-Through		0							0				0				0	
	Through	742	1	381	0	742	381	46	788	1	407	-5	783	1	404	0	783	1	404
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	6	26	0	26	-1	25	0	25	0	25	0	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	4	57	1	57	0	57	1	57	0	57	1	57
	Left-Through		0							0				0				0	
	Through	246	1	246	0	246	246	24	270	1	270	0	270	1	270	0	270	1	270
	Through-Right		0							0				0				0	
	Right	323	1	**275**	0	323	**275**	50	373	1	**304**	-8	365	1	**299**	0	365	1	**299**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	65	1	**65**	0	65	**65**	-1	64	1	**64**	9	73	1	**73**	0	73	1	**73**
	Left-Through		0							0				0				0	
	Through	60	1	60	0	60	60	14	74	1	74	7	81	1	81	0	81	1	81
	Through-Right		0							0				0				0	
	Right	99	1	0	0	99	0	-8	91	1	0	15	106	1	0	0	106	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		598	North-South:		598	North-South:			622	North-South:			632	North-South:			632
		East-West:		340	East-West:		340	East-West:			368	East-West:			372	East-West:			372
		SUM:		938	SUM:		938	SUM:			990	SUM:			1004	SUM:			1004
VOLUME/CAPACITY (V/C) RATIO:				0.658			0.658				0.695				0.705				0.705
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.695				0.705				0.705
LEVEL OF SERVICE (LOS):				B			B				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	171	1	**171**	0	171	**171**	-94	77	1	**77**	10	87	1	**87**	0	87	1	**87**
	Left-Through		0							0				0				0	
	Through	447	1	242	0	447	242	136	583	1	307	4	587	1	311	0	587	1	311
	Through-Right		1							1				1				1	
	Right	37	0	37	0	37	37	-6	31	0	31	3	34	0	34	0	34	0	34
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	18	1	18	0	18	18	26	44	1	44	-3	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	1032	1	**618**	0	1032	**618**	51	1083	1	**678**	13	1096	1	**678**	0	1096	1	**678**
	Through-Right		1							1				1				1	
	Right	203	0	203	0	203	203	69	272	0	272	-13	259	0	259	0	259	0	259
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	54	0	54	54	0	54	1	54	5	59	1	59	0	59	1	59
	Left-Through		0							0				0				0	
	Through	43	0	**116**	0	43	**116**	-16	27	0	**47**	5	32	0	**58**	0	32	0	**58**
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	-53	20	0	0	6	26	0	0	0	26	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	82	1	**82**	0	82	**82**	-26	56	1	**56**	4	60	1	**60**	0	60	1	**60**
	Left-Through		0							0				0				0	
	Through	87	2	36	0	87	36	-11	76	2	38	1	77	2	39	0	77	2	39
	Through-Right		1							1				1				1	
	Right	22	0	22	0	22	22	34	56	0	34	-5	51	0	31	0	51	0	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		789	*North-South:*		789	*North-South:*			755	*North-South:*			765	*North-South:*			765
		East-West:		198	*East-West:*		198	*East-West:*			103	*East-West:*			118	*East-West:*			118
		SUM:		987	*SUM:*		987	*SUM:*			858	*SUM:*			883	*SUM:*			883
VOLUME/CAPACITY *(V/C)* RATIO:				0.658			0.658				0.572				0.589				0.589
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.658			0.658				0.572				0.589				0.589
LEVEL OF SERVICE (LOS):				B			B				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.017
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	175	1	**175**	0	175	**175**	127	302	1	**302**	6	308	1	**308**	0	308	1	**308**
	Left-Through		0							0				0				0	
	Through	348	2	174	0	348	174	-32	316	2	158	12	328	2	164	0	328	2	164
	Through-Right		0							0				0				0	
	Right	241	1	132	0	241	132	-35	206	1	106	14	220	1	115	0	220	1	115
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	415	1	415	0	415	415	-133	282	1	282	3	285	1	285	0	285	1	285
	Left-Through		0							0				0				0	
	Through	1132	2	**566**	0	1132	**566**	17	1149	2	**575**	13	1162	2	**581**	0	1162	2	**581**
	Through-Right		0							0				0				0	
	Right	35	1	31	0	35	31	13	48	1	42	-2	46	1	40	0	46	1	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	9	1	9	0	9	9	3	12	1	12	0	12	1	12	0	12	1	12
	Left-Through		0							0				0				0	
	Through	699	1	**407**	0	699	**407**	207	906	1	**565**	1	907	1	**565**	0	907	1	**565**
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	108	223	0	223	0	223	0	223	0	223	0	223
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	219	1	**219**	0	219	**219**	-18	201	1	**201**	9	210	1	**210**	0	210	1	**210**
	Left-Through		0							0				0				0	
	Through	488	1	339	0	488	339	117	605	1	364	-1	604	1	365	0	604	1	365
	Through-Right		1							1				1				1	
	Right	189	0	189	0	189	189	-66	123	0	123	2	125	0	125	0	125	0	125
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		741	North-South:		741	North-South:			877	North-South:			889	North-South:			889
		East-West:		626	East-West:		626	East-West:			766	East-West:			775	East-West:			775
		SUM:		1367	SUM:		1367	SUM:			1643	SUM:			1664	SUM:			1664
VOLUME/CAPACITY (V/C) RATIO:				0.994			0.994				1.195				1.210				1.210
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.994			0.994				1.195				1.210				1.210
LEVEL OF SERVICE (LOS):				E			E				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.015	Δ*v/c* after mitigation:	0.015
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	306	1	**183**	0	306	**183**	6	312	1	**186**	-1	311	1	**186**	0	311	1	**186**
	Left-Through		0							0				0				0	
	Through	29	0	183	0	29	183	1	30	0	186	0	30	0	186	0	30	0	186
	Through-Right		0							0				0				0	
	Right	30	0	0	0	30	0	0	30	0	0	0	30	0	0	0	30	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	1	24	0	24	24	0	24	1	24	0	24	1	24	0	24	1	24
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	89	1	**50**	0	89	**50**	2	91	1	**52**	0	91	1	**52**	0	91	1	**52**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	79	1	**79**	0	79	**79**	-1	78	1	**78**	0	78	1	**78**	0	78	1	**78**
	Left-Through		0							0				0				0	
	Through	651	2	326	0	651	326	-30	621	2	311	-5	616	2	308	0	616	2	308
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	681	1	**351**	0	681	**351**	32	713	1	**368**	5	718	1	**370**	0	718	1	**370**
	Through-Right		1							1				1				1	
	Right	21	0	21	0	21	21	1	22	0	22	0	22	0	22	0	22	0	22
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		233	North-South:		233	North-South:			238	North-South:			238	North-South:			238
		East-West:		430	East-West:		430	East-West:			446	East-West:			448	East-West:			448
		SUM:		663	SUM:		663	SUM:			684	SUM:			686	SUM:			686
VOLUME/CAPACITY (V/C) RATIO:				0.465			0.465				0.480				0.481				0.481
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.465			0.465				0.480				0.481				0.481
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	90	1	**90**	0	90	**90**	6	96	1	**96**	-5	91	1	**91**	0	91	1	**91**
	Left-Through		0							0				0				0	
	Through	250	1	159	0	250	159	11	261	1	156	1	262	1	156	0	262	1	156
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	-17	50	0	50	0	50	0	50	0	50	0	50
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	111	1	111	0	111	111	-30	81	1	81	2	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	335	1	**220**	0	335	**220**	58	393	1	**251**	-1	392	1	**249**	0	392	1	**249**
	Through-Right		1							1				1				1	
	Right	104	0	104	0	104	104	5	109	0	109	-4	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	1	**54**	0	54	**54**	28	82	1	**82**	3	85	1	**85**	0	85	1	**85**
	Left-Through		0							0				0				0	
	Through	834	2	303	0	834	303	71	905	2	346	31	936	2	357	0	936	2	357
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	57	133	0	133	1	134	0	134	0	134	0	134
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	68	1	68	0	68	68	6	74	1	74	3	77	1	77	0	77	1	77
	Left-Through		0							0				0				0	
	Through	1703	2	**604**	0	1703	**604**	-47	1656	2	**587**	23	1679	2	**597**	0	1679	2	**597**
	Through-Right		1							1				1				1	
	Right	110	0	110	0	110	110	-5	105	0	105	8	113	0	113	0	113	0	113
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		310	North-South:		310	North-South:			347	North-South:			340	North-South:			340
		East-West:		658	East-West:		658	East-West:			669	East-West:			682	East-West:			682
		SUM:		968	SUM:		968	SUM:			1016	SUM:			1022	SUM:			1022
VOLUME/CAPACITY (V/C) RATIO:				0.645			0.645				0.677				0.681				0.681
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.645			0.645				0.677				0.681				0.681
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	32	0	32	0	32	32	-8	24	0	24	0	24	0	24	0	24	0	24
	Left-Through		1							1				1				1	
	Through	377	0	**229**	0	377	**229**	-22	355	0	**204**	-8	347	0	**201**	0	347	0	**201**
	Through-Right		1							1				1				1	
	Right	49	0	229	0	49	229	-20	29	0	204	2	31	0	201	0	31	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	59	1	**59**	0	59	**59**	10	69	1	**69**	1	70	1	**70**	0	70	1	**70**
	Left-Through		0							0				0				0	
	Through	229	2	115	0	229	115	-59	170	2	85	18	188	2	94	0	188	2	94
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	743	1	**447**	0	743	**447**	-6	737	1	**464**	9	746	1	**468**	0	746	1	**468**
	Through-Right		1							1				1				1	
	Right	150	0	150	0	150	150	40	190	0	190	0	190	0	190	0	190	0	190
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		229	North-South:		229	North-South:			204	North-South:			201	North-South:			201
		East-West:		506	East-West:		506	East-West:			533	East-West:			538	East-West:			538
		SUM:		735	SUM:		735	SUM:			737	SUM:			739	SUM:			739
	VOLUME/CAPACITY (V/C) RATIO:			0.490			0.490				0.491				0.493				0.493
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.490			0.490				0.491				0.493				0.493
	LEVEL OF SERVICE (LOS):			A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	49	0	49	0	49	49	-7	42	0	42	1	43	0	43	0	43	0	43
	Left-Through		1							1				1				1	
	Through	143	0	**140**	0	143	**140**	10	153	0	**162**	-11	142	0	**154**	0	142	0	**154**
	Through-Right		1							1				1				1	
	Right	227	1	140	0	227	140	64	291	1	162	-15	276	1	154	0	276	1	154
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	218	1	**169**	0	218	**169**	-41	177	1	149	18	195	1	158	0	195	1	158
	Through-Right		1							1				1				1	
	Right	119	0	119	0	119	119	2	121	0	121	0	121	0	121	0	121	0	121
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	**149**	0	149	**149**	-23	126	1	126	0	126	1	126	0	126	1	126
	Left-Through		0							0				0				0	
	Through	633	2	317	0	633	317	9	642	2	**321**	10	652	2	**326**	0	652	2	**326**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		140	*North-South:*		140	*North-South:*			162	*North-South:*			154	*North-South:*			154
		East-West:		318	*East-West:*		318	*East-West:*			321	*East-West:*			326	*East-West:*			326
		SUM:		458	*SUM:*		458	*SUM:*			483	*SUM:*			480	*SUM:*			480
VOLUME/CAPACITY *(V/C)* RATIO:				0.305			0.305				0.322				0.320				0.320
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.305			0.305				0.322				0.320				0.320
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.002	Δ*v/c* after mitigation:	-0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	31	1	31	0	31	31	15	46	1	46	2	48	1	48	0	48	1	48
	Left-Through		0							0				0				0	
	Through	230	1	**230**	0	230	**230**	-15	215	1	215	10	225	1	225	0	225	1	225
	Through-Right		1							1				1				1	
	Right	257	0	203	0	257	203	113	370	0	**292**	-11	359	0	**286**	0	359	0	**286**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	381	1	**381**	0	381	**381**	26	407	1	**407**	3	410	1	**410**	0	410	1	**410**
	Left-Through		0							0				0				0	
	Through	392	1	392	0	392	392	-26	366	1	366	-2	364	1	364	0	364	1	364
	Through-Right		0							0				0				0	
	Right	12	1	0	0	12	0	1	13	1	0	1	14	1	0	0	14	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	-1	100	1	100	7	107	1	107	0	107	1	107
	Left-Through		0							0				0				0	
	Through	241	1	**157**	0	241	**157**	125	366	1	**232**	-1	365	1	**230**	0	365	1	**230**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	24	97	0	97	-2	95	0	95	0	95	0	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	109	1	**109**	0	109	**109**	47	156	1	**156**	-10	146	1	**146**	0	146	1	**146**
	Left-Through		0							0				0				0	
	Through	109	1	109	0	109	109	76	185	1	172	4	189	1	176	0	189	1	176
	Through-Right		1							1				1				1	
	Right	148	0	0	0	148	0	10	158	0	158	4	162	0	162	0	162	0	162
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		611	North-South:		611	North-South:			699	North-South:			696	North-South:			696
		East-West:		266	East-West:		266	East-West:			388	East-West:			376	East-West:			376
		SUM:		877	SUM:		877	SUM:			1087	SUM:			1072	SUM:			1072
VOLUME/CAPACITY (V/C) RATIO:				0.615			0.615				0.763				0.752				0.752
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.615			0.615				0.763				0.752				0.752
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.011	Δ*v/c* after mitigation:	-0.011
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	0	0	0
Override Capacity	0	0	0	0	0

	MOVEMENT	Existing Condition Volume	No. of Lanes	Lane Volume	Existing Plus Project Project Traffic	Total Volume	Lane Volume	Future Condition W/O Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future Condition W/ Project Added Volume	Total Volume	No. of Lanes	Lane Volume	Future W/ Project W/ Mitigation Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	1	6	1	6	0	6	1	6	0	6	1	6
	Left-Through		0							0				0				0	
	Through	331	0	**383**	0	331	**383**	153	484	0	**525**	-16	468	0	**511**	0	468	0	**511**
	Through-Right		1							1				1				1	
	Right	52	0	0	0	52	0	-11	41	0	0	2	43	0	0	0	43	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	158	1	**158**	0	158	**158**	0	158	1	**158**	9	167	1	**167**	0	167	1	**167**
	Left-Through		0							0				0				0	
	Through	286	1	286	0	286	286	342	628	1	628	-24	604	1	604	0	604	1	604
	Through-Right		0							0				0				0	
	Right	395	1	343	0	395	343	153	548	1	471	-16	532	1	456	0	532	1	456
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	105	1	**105**	0	105	**105**	50	155	1	**155**	-3	152	1	**152**	0	152	1	**152**
	Left-Through		0							0				0				0	
	Through	141	1	73	0	141	73	-28	113	1	61	7	120	1	65	0	120	1	65
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	4	9	0	9	0	9	0	9	0	9	0	9
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	44	0	44	0	44	44	28	72	0	72	-1	71	0	71	0	71	0	71
	Left-Through		1							1				1				1	
	Through	746	0	**427**	0	746	**427**	22	768	0	**464**	-5	763	0	**461**	0	763	0	**461**
	Through-Right		1							1				1				1	
	Right	64	0	427	0	64	427	23	87	0	464	0	87	0	461	0	87	0	461
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		541	North-South:		541	North-South:			683	North-South:			678	North-South:			678
		East-West:		532	East-West:		532	East-West:			619	East-West:			613	East-West:			613
		SUM:		1073	SUM:		1073	SUM:			1302	SUM:			1291	SUM:			1291
VOLUME/CAPACITY (V/C) RATIO:				0.715			0.715				0.868				0.861				0.861
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.715			0.715				0.868				0.861				0.861
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.007	Δ*v/c* after mitigation:	-0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	**116**	0	116	**116**	41	157	1	**157**	-2	155	1	**155**	0	155	1	**155**
	Left-Through		0							0				0				0	
	Through	259	1	142	0	259	142	34	293	1	160	-2	291	1	160	0	291	1	160
	Through-Right		1							1				1				1	
	Right	25	0	25	0	25	25	2	27	0	27	2	29	0	29	0	29	0	29
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	213	1	213	0	213	213	-38	175	1	175	12	187	1	187	0	187	1	187
	Left-Through		0							0				0				0	
	Through	497	1	**443**	0	497	**443**	-33	464	1	**429**	0	464	1	**427**	0	464	1	**427**
	Through-Right		1							1				1				1	
	Right	388	0	388	0	388	388	5	393	0	393	-3	390	0	390	0	390	0	390
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	0	**26**	0	26	**26**	4	30	0	**30**	-2	28	0	**28**	0	28	0	**28**
	Left-Through		1							1				1				1	
	Through	419	0	377	0	419	377	47	466	0	435	3	469	0	424	0	469	0	424
	Through-Right		1							1				1				1	
	Right	178	0	377	0	178	377	46	224	0	435	-13	211	0	424	0	211	0	424
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	66	0	66	0	66	66	-2	64	0	64	2	66	0	66	0	66	0	66
	Left-Through		1							1				1				1	
	Through	1080	0	**657**	0	1080	**657**	57	1137	0	**741**	20	1157	0	**756**	0	1157	0	**756**
	Through-Right		1							1				1				1	
	Right	101	0	657	0	101	657	-12	89	0	741	2	91	0	756	0	91	0	756
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			586	North-South:			582	North-South:			582
		East-West:		683	East-West:		683	East-West:			771	East-West:			784	East-West:			784
		SUM:		1242	SUM:		1242	SUM:			1357	SUM:			1366	SUM:			1366
VOLUME/CAPACITY (V/C) RATIO:				0.828			0.828				0.905				0.911				0.911
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.828			0.828				0.905				0.911				0.911
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	1676	2	**721**	0	1676	**721**	173	1849	2	**783**	-10	1839	2	**762**	0	1839	2	**762**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	241	1	**201**	0	241	**201**	52	293	1	**234**	12	305	1	**249**	0	305	1	**249**
	Left-Through		1							1				1				1	
	Through	362	1	201	0	362	201	48	410	1	234	31	441	1	249	0	441	1	249
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	851	2	**426**	0	851	**426**	7	858	2	**429**	27	885	2	**443**	0	885	2	**443**
	Through-Right		0							0				0				0	
	Right	3	1	3	0	3	3	7	10	1	10	-4	6	1	6	0	6	1	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		721	North-South:		721	North-South:			783	North-South:			762	North-South:			762
		East-West:		627	East-West:		627	East-West:			663	East-West:			692	East-West:			692
		SUM:		1348	SUM:		1348	SUM:			1446	SUM:			1454	SUM:			1454
VOLUME/CAPACITY (V/C) RATIO:				0.899			0.899				0.964				0.969				0.969
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.899			0.899				0.964				0.969				0.969
LEVEL OF SERVICE (LOS):				D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	AM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	11	1	**11**	0	11	**11**	3	14	1	**14**	0	14	1	**14**	0	14	1	**14**
	Left-Through		0							0				0				0	
	Through	204	1	105	0	204	105	33	237	1	122	5	242	1	124	0	242	1	124
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	1	6	0	6	0	6	0	6	0	6	0	6
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	83	0	83	83	8	91	1	91	0	91	1	91	0	91	1	91
	Left-Through		0							0				0				0	
	Through	1395	1	**727**	0	1395	**727**	116	1511	1	**788**	-11	1500	1	**783**	0	1500	1	**783**
	Through-Right		1							1				1				1	
	Right	59	0	59	0	59	59	6	65	0	65	0	65	0	65	0	65	0	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	0	**54**	0	54	**54**	3	57	0	57	0	57	0	57	0	57	0	57
	Left-Through		1							1				1				1	
	Through	172	0	153	0	172	153	26	198	0	**201**	0	198	0	**201**	0	198	0	**201**
	Through-Right		1							1				1				1	
	Right	79	0	153	0	79	153	10	89	0	201	0	89	0	201	0	89	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	98	0	98	0	98	98	13	111	0	**111**	0	111	0	**111**	0	111	0	**111**
	Left-Through		1							1				1				1	
	Through	260	0	**198**	0	260	**198**	37	297	0	224	0	297	0	224	0	297	0	224
	Through-Right		1							1				1				1	
	Right	38	0	198	0	38	198	2	40	0	224	0	40	0	224	0	40	0	224
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		738	North-South:		738	North-South:			802	North-South:			797	North-South:			797
		East-West:		252	East-West:		252	East-West:			312	East-West:			312	East-West:			312
		SUM:		990	SUM:		990	SUM:			1114	SUM:			1109	SUM:			1109
VOLUME/CAPACITY (V/C) RATIO:				0.660			0.660				0.743				0.739				0.739
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.660			0.660				0.743				0.739				0.739
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.004	Δ*v/c* after mitigation:	-0.004
Significant impacted?	NO	Fully mitigated?	N/A

APPENDIX B

LADOT CMA SPREADSHEETS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)
PM PEAK HOUR

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
23	East-West Street:	ASP NB Exit 26B	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	EB-- 0	WB--	3	
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0	
Override Capacity			0			0			0			0			0			0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	2	0	**0**	0	2	**0**	1	3	0	0	0	3	0	0	0	3	0	0
	Left-Through		0							0				0				0	
	Through	619	1	332	0	619	332	-37	582	1	**326**	59	641	1	**358**	0	641	1	**358**
	Through-Right		1							1				1				1	
	Right	45	0	45	0	45	45	25	70	0	70	4	74	0	74	0	74	0	74
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	357	2	196	0	357	196	57	414	2	**228**	19	433	2	**238**	0	433	2	**238**
	Left-Through		0							0				0				0	
	Through	380	0	**538**	0	380	**538**	-20	360	0	516	42	402	0	575	0	402	0	575
	Through-Right		1							1				1				1	
	Right	158	0	0	0	158	0	-2	156	0	0	17	173	0	0	0	173	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	0	106	0	106	106	-8	98	0	98	9	107	0	107	0	107	0	107
	Left-Through		0							0				0				0	
	Through	17	0	**139**	0	17	**139**	9	26	0	**144**	1	27	0	**156**	0	27	0	**156**
	Through-Right		0							0				0				0	
	Right	16	0	0	0	16	0	4	20	0	0	2	22	0	0	0	22	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	394	2	**21**	0	394	**21**	94	488	2	**40**	-8	480	2	**26**	0	480	2	**26**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		538	*North-South:*		538	*North-South:*			554	*North-South:*			596	*North-South:*			596
		East-West:		160	*East-West:*		160	*East-West:*			184	*East-West:*			182	*East-West:*			182
		SUM:		698	*SUM:*		698	*SUM:*			738	*SUM:*			778	*SUM:*			778
VOLUME/CAPACITY *(V/C)* RATIO:				0.490			0.490				0.518				0.546				0.546
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.490			0.490				0.518				0.546				0.546
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.028
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
301	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	**151**	0	151	**151**	67	218	1	**218**	19	237	1	**237**	0	237	1	**237**
	Left-Through		0							0				0				0	
	Through	584	2	292	0	584	292	-27	557	2	279	19	576	2	288	0	576	2	288
	Through-Right		0							0				0				0	
	Right	3	1	0	0	3	0	0	3	1	0	0	3	1	0	0	3	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	139	1	139	0	139	139	-25	114	1	114	-8	106	1	106	0	106	1	106
	Left-Through		0							0				0				0	
	Through	577	1	**316**	0	577	**316**	-77	500	1	**285**	13	513	1	**288**	0	513	1	**288**
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	15	69	0	69	-6	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	39	140	1	140	-10	130	1	130	0	130	1	130
	Left-Through		0							0				0				0	
	Through	699	1	**396**	0	699	**396**	251	950	1	**541**	-3	947	1	**546**	0	947	1	**546**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	40	132	0	132	13	145	0	145	0	145	0	145
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	232	1	**232**	0	232	**232**	24	256	1	**256**	29	285	1	**285**	0	285	1	**285**
	Left-Through		0							0				0				0	
	Through	600	1	409	0	600	409	372	972	1	602	-13	959	1	589	0	959	1	589
	Through-Right		1							1				1				1	
	Right	217	0	217	0	217	217	15	232	0	232	-14	218	0	218	0	218	0	218
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		467	*North-South:*		467	*North-South:*			503	*North-South:*			525	*North-South:*			525
		East-West:		628	*East-West:*		628	*East-West:*			797	*East-West:*			831	*East-West:*			831
		SUM:		1095	*SUM:*		1095	*SUM:*			1300	*SUM:*			1356	*SUM:*			1356
VOLUME/CAPACITY *(V/C)* RATIO:				0.768			0.768				0.912				0.952				0.952
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.768			0.768				0.912				0.952				0.952
LEVEL OF SERVICE (LOS):				C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.040	Δ*v/c* after mitigation:	0.040
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Ave 64	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
302	East-West Street:	York Bl	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	333	1	333	0	333	333	12	345	1	345	-6	339	1	339	0	339	1	339
	Left-Through		0							0				0				0	
	Through	352	0	**408**	0	352	**408**	-27	325	0	**404**	5	330	0	**407**	0	330	0	**407**
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	23	79	0	0	-2	77	0	0	0	77	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	261	1	**261**	0	261	**261**	27	288	1	**288**	19	307	1	**307**	0	307	1	**307**
	Left-Through		0							0				0				0	
	Through	253	0	328	0	253	328	-55	198	0	259	-14	184	0	249	0	184	0	249
	Through-Right		1							1				1				1	
	Right	75	0	0	0	75	0	-14	61	0	0	4	65	0	0	0	65	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	1	**106**	0	106	**106**	-10	96	1	**96**	5	101	1	**101**	0	101	1	**101**
	Left-Through		0							0				0				0	
	Through	652	1	422	0	652	422	242	894	1	541	8	902	1	533	0	902	1	533
	Through-Right		1							1				1				1	
	Right	192	0	192	0	192	192	-5	187	0	187	-23	164	0	164	0	164	0	164
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	1	31	0	31	31	15	46	1	46	-6	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	769	1	**453**	0	769	**453**	413	1182	1	**684**	3	1185	1	**689**	0	1185	1	**689**
	Through-Right		1							1				1				1	
	Right	136	0	136	0	136	136	50	186	0	186	6	192	0	192	0	192	0	192
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		669	*North-South:*		669	*North-South:*			692	*North-South:*			714	*North-South:*			714
		East-West:		559	*East-West:*		559	*East-West:*			780	*East-West:*			790	*East-West:*			790
		SUM:		1228	*SUM:*		1228	*SUM:*			1472	*SUM:*			1504	*SUM:*			1504
VOLUME/CAPACITY *(V/C)* RATIO:				0.862			0.862				1.033				1.055				1.055
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.862			0.862				1.033				1.055				1.055
LEVEL OF SERVICE (LOS):				D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.022	Δ*v/c* after mitigation:	0.022
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
303	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	1	5	0	5	5	1	6	1	6	1	7	1	7	0	7	1	7
	Left-Through		0							0				0				0	
	Through	604	1	**375**	0	604	**375**	87	691	1	**429**	45	736	1	**472**	0	736	1	**472**
	Through-Right		1							1				1				1	
	Right	146	0	146	0	146	146	21	167	0	167	41	208	0	208	0	208	0	208
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	285	1	**285**	0	285	**285**	-47	238	1	**238**	14	252	1	**252**	0	252	1	**252**
	Left-Through		0							0				0				0	
	Through	528	1	267	0	528	267	123	651	1	328	42	693	1	349	0	693	1	349
	Through-Right		1							1				1				1	
	Right	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
	Left-Through		0							0				0				0	
	Through	4	0	**13**	0	4	**13**	0	4	0	**15**	0	4	0	**16**	0	4	0	**16**
	Through-Right		0							0				0				0	
	Right	6	0	0	0	6	0	2	8	0	0	1	9	0	0	0	9	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	150	0	**150**	0	150	**150**	66	216	0	**216**	12	228	0	**228**	0	228	0	**228**
	Left-Through		1							1				1				1	
	Through	3	0	153	0	3	153	0	3	0	219	0	3	0	231	0	3	0	231
	Through-Right		0							0				0				0	
	Right	263	1	121	0	263	121	-5	258	1	139	-26	232	1	106	0	232	1	106
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		660	North-South:		660	North-South:			667	North-South:			724	North-South:			724
		East-West:		163	East-West:		163	East-West:			231	East-West:			244	East-West:			244
		SUM:		823	SUM:		823	SUM:			898	SUM:			968	SUM:			968
VOLUME/CAPACITY (V/C) RATIO:				0.599			0.599				0.653				0.704				0.704
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.599			0.599				0.653				0.704				0.704
LEVEL OF SERVICE (LOS):				A			A				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
304	East-West Street:	Ave 60	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			4				4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1				1				1				1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	292	1	**292**	0	292	**292**	-5	287	1	**287**	0	287	1	**287**	0	287	1	**287**
	Left-Through		0							0				0				0	
	Through	233	1	233	0	233	233	-97	136	1	136	34	170	1	170	0	170	1	170
	Through-Right		0							0				0				0	
	Right	59	1	51	0	59	51	14	73	1	58	3	76	1	60	0	76	1	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	89	1	89	0	89	89	-1	88	1	88	26	114	1	114	0	114	1	114
	Left-Through		0							0				0				0	
	Through	150	1	**150**	0	150	**150**	21	171	1	**171**	58	229	1	**229**	0	229	1	**229**
	Through-Right		0							0				0				0	
	Right	46	1	6	0	46	6	-10	36	1	19	9	45	1	29	0	45	1	29
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	80	1	80	0	80	80	-46	34	1	34	-1	33	1	33	0	33	1	33
	Left-Through		0							0				0				0	
	Through	205	0	**424**	0	205	**424**	-18	187	0	**418**	-34	153	0	**349**	0	153	0	**349**
	Through-Right		1							1				1				1	
	Right	219	0	0	0	219	0	12	231	0	0	-35	196	0	0	0	196	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	16	1	**16**	0	16	**16**	14	30	1	**30**	2	32	1	**32**	0	32	1	**32**
	Left-Through		0							0				0				0	
	Through	187	0	226	0	187	226	55	242	0	272	-3	239	0	276	0	239	0	276
	Through-Right		1							1				1				1	
	Right	39	0	0	0	39	0	-9	30	0	0	7	37	0	0	0	37	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		442	North-South:		442	North-South:			458	North-South:			516	North-South:			516
		East-West:		440	East-West:		440	East-West:			448	East-West:			381	East-West:			381
		SUM:		882	SUM:		882	SUM:			906	SUM:			897	SUM:			897
VOLUME/CAPACITY (V/C) RATIO:				0.641			0.641				0.659				0.652				0.652
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.641			0.641				0.659				0.652				0.652
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.007	Δ*v/c* after mitigation:	-0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
305	East-West Street:	Ave 57	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	1	58	0	58	58	-14	44	1	44	3	47	1	47	0	47	1	47
	Left-Through		0							0				0				0	
	Through	701	1	**433**	0	701	**433**	53	754	1	**478**	82	836	1	**519**	0	836	1	**519**
	Through-Right		1							1				1				1	
	Right	164	0	164	0	164	164	38	202	0	202	0	202	0	202	0	202	0	202
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	1	**92**	0	92	**92**	56	148	1	**148**	-4	144	1	**144**	0	144	1	**144**
	Left-Through		0							0				0				0	
	Through	649	1	340	0	649	340	55	704	1	367	50	754	1	393	0	754	1	393
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	-1	30	0	30	1	31	0	31	0	31	0	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	34	0	**34**	0	34	**34**	-1	33	0	**33**	2	35	0	**35**	0	35	0	**35**
	Left-Through		0							0				0				0	
	Through	64	0	119	0	64	119	7	71	0	120	-3	68	0	120	0	68	0	120
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0	-5	16	0	0	1	17	0	0	0	17	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	172	0	172	0	172	172	76	248	0	248	-7	241	0	241	0	241	0	241
	Left-Through		0							0				0				0	
	Through	62	0	**328**	0	62	**328**	18	80	0	**503**	-5	75	0	**487**	0	75	0	**487**
	Through-Right		0							0				0				0	
	Right	94	0	0	0	94	0	81	175	0	0	-4	171	0	0	0	171	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		525	North-South:		525	North-South:			626	North-South:			663	North-South:			663
		East-West:		362	East-West:		362	East-West:			536	East-West:			522	East-West:			522
		SUM:		887	SUM:		887	SUM:			1162	SUM:			1185	SUM:			1185
VOLUME/CAPACITY (V/C) RATIO:				0.591			0.591				0.775				0.790				0.790
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.591			0.591				0.775				0.790				0.790
LEVEL OF SERVICE (LOS):				A			A				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.015	Δ*v/c* after mitigation:	0.015
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Monterey Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
306	East-West Street:	Via Marisol	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	189	1	189	0	189	189	79	268	1	**268**	12	280	1	**280**	0	280	1	**280**
	Left-Through		0							0				0				0	
	Through	400	1	**400**	0	400	**400**	-57	343	1	343	3	346	1	346	0	346	1	346
	Through-Right		0							0				0				0	
	Right	42	1	29	0	42	29	2	44	1	33	-10	34	1	25	0	34	1	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	74	1	**74**	0	74	**74**	11	85	1	85	-2	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	257	1	257	0	257	257	5	262	1	**262**	0	262	1	**262**	0	262	1	**262**
	Through-Right		0							0				0				0	
	Right	54	1	0	0	54	0	30	84	1	33	26	110	1	42	0	110	1	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	121	1	121	0	121	121	-19	102	1	102	34	136	1	**136**	0	136	1	**136**
	Left-Through		0							0				0				0	
	Through	259	1	**241**	0	259	**241**	9	268	1	**236**	8	276	1	246	0	276	1	246
	Through-Right		1							1				1				1	
	Right	223	0	223	0	223	223	-19	204	0	204	11	215	0	215	0	215	0	215
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	26	1	**26**	0	26	**26**	-3	23	1	**23**	-5	18	1	18	0	18	1	18
	Left-Through		0							0				0				0	
	Through	108	1	108	0	108	108	41	149	1	149	4	153	1	**153**	0	153	1	**153**
	Through-Right		0							0				0				0	
	Right	70	1	33	0	70	33	-12	58	1	16	0	58	1	17	0	58	1	17
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		474	North-South:		474	North-South:			530	North-South:			542	North-South:			542
		East-West:		267	East-West:		267	East-West:			259	East-West:			289	East-West:			289
		SUM:		741	SUM:		741	SUM:			789	SUM:			831	SUM:			831
VOLUME/CAPACITY (V/C) RATIO:				0.494			0.494				0.526				0.554				0.554
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.494			0.494				0.526				0.554				0.554
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.028
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
307	East-West Street:	Ave 52	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	60	1	60	0	60	60	44	104	1	104	1	105	1	105	0	105	1	105
	Left-Through		0							0				0				0	
	Through	681	1	**387**	0	681	**387**	-61	620	1	**348**	14	634	1	**346**	0	634	1	**346**
	Through-Right		1							1				1				1	
	Right	92	0	92	0	92	92	-16	76	0	76	-18	58	0	58	0	58	0	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	159	1	**159**	0	159	**159**	-30	129	1	**129**	-29	100	1	**100**	0	100	1	**100**
	Left-Through		0							0				0				0	
	Through	618	1	327	0	618	327	-42	576	1	319	-2	574	1	319	0	574	1	319
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	25	61	0	61	2	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	39	0	**39**	0	39	**39**	27	66	0	**66**	9	75	0	**75**	0	75	0	**75**
	Left-Through		0							0				0				0	
	Through	154	0	234	0	154	234	81	235	0	373	-38	197	0	350	0	197	0	350
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	31	72	0	0	6	78	0	0	0	78	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	0	115	0	115	115	-24	91	0	91	-3	88	0	88	0	88	0	88
	Left-Through		0							0				0				0	
	Through	237	0	**525**	0	237	**525**	107	344	0	**567**	-1	343	0	**565**	0	343	0	**565**
	Through-Right		0							0				0				0	
	Right	173	0	0	0	173	0	-41	132	0	0	2	134	0	0	0	134	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		546	*North-South:*		546	*North-South:*			477	*North-South:*			446	*North-South:*			446
		East-West:		564	*East-West:*		564	*East-West:*			633	*East-West:*			640	*East-West:*			640
		SUM:		1110	*SUM:*		1110	*SUM:*			1110	*SUM:*			1086	*SUM:*			1086
VOLUME/CAPACITY *(V/C)* RATIO:				0.779			0.779				0.779				0.762				0.762
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.779			0.779				0.779				0.762				0.762
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.017	Δ*v/c* after mitigation:	-0.017
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
308	East-West Street:	Ave 43	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	0	9	9	1	10	1	10	1	11	1	11	0	11	1	11
	Left-Through		0							0				0				0	
	Through	667	1	**379**	0	667	**379**	-16	651	1	**411**	21	672	1	**414**	0	672	1	**414**
	Through-Right		1							1				1				1	
	Right	91	0	91	0	91	91	80	171	0	171	-15	156	0	156	0	156	0	156
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	169	1	**169**	0	169	**169**	33	202	1	**202**	-14	188	1	**188**	0	188	1	**188**
	Left-Through		0							0				0				0	
	Through	483	1	242	0	483	242	30	513	1	257	13	526	1	264	0	526	1	264
	Through-Right		1							1				1				1	
	Right	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	8	0	**8**	0	8	**8**	-1	7	0	**7**	0	7	0	**7**	0	7	0	**7**
	Left-Through		0							0				0				0	
	Through	5	0	13	0	5	13	3	8	0	15	-1	7	0	14	0	7	0	14
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	86	0	86	0	86	86	74	160	0	160	-13	147	0	147	0	147	0	147
	Left-Through		0							0				0				0	
	Through	34	0	**373**	0	34	**373**	7	41	0	**477**	-1	40	0	**448**	0	40	0	**448**
	Through-Right		0							0				0				0	
	Right	253	0	0	0	253	0	23	276	0	0	-15	261	0	0	0	261	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		548	North-South:		548	North-South:			613	North-South:			602	North-South:			602
		East-West:		381	East-West:		381	East-West:			484	East-West:			455	East-West:			455
		SUM:		929	SUM:		929	SUM:			1097	SUM:			1057	SUM:			1057
VOLUME/CAPACITY (V/C) RATIO:				0.619			0.619				0.731				0.705				0.705
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.619			0.619				0.731				0.705				0.705
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.026	Δ*v/c* after mitigation:	-0.026
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
310	East-West Street:	Marmion Wy/Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	145	0	145	145	44	189	1	189	-1	188	1	188	0	188	1	188
	Left-Through		0							0				0				0	
	Through	513	1	**292**	0	513	**292**	74	587	1	**338**	1	588	1	**337**	0	588	1	**337**
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	18	88	0	88	-3	85	0	85	0	85	0	85
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	166	1	**166**	0	166	**166**	20	186	1	**186**	1	187	1	**187**	0	187	1	**187**
	Left-Through		0							0				0				0	
	Through	466	1	251	0	466	251	85	551	1	296	0	551	1	297	0	551	1	297
	Through-Right		1							1				1				1	
	Right	35	0	35	0	35	35	6	41	0	41	1	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	**35**	0	35	**35**	8	43	1	43	2	45	1	45	0	45	1	45
	Left-Through		0							0				0				0	
	Through	73	1	73	0	73	73	26	99	1	99	2	101	1	101	0	101	1	101
	Through-Right		0							0				0				0	
	Right	137	1	65	0	137	65	58	195	1	**101**	3	198	1	**104**	0	198	1	**104**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	72	1	72	0	72	72	19	91	1	**91**	-1	90	1	**90**	0	90	1	**90**
	Left-Through		0							0				0				0	
	Through	118	1	118	0	118	118	29	147	1	147	2	149	1	149	0	149	1	149
	Through-Right		0							0				0				0	
	Right	213	1	**130**	0	213	**130**	20	233	1	140	5	238	1	145	0	238	1	145
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		458	*North-South:*		458	*North-South:*			524	*North-South:*			524	*North-South:*			524
		East-West:		165	*East-West:*		165	*East-West:*			192	*East-West:*			194	*East-West:*			194
		SUM:		623	*SUM:*		623	*SUM:*			716	*SUM:*			718	*SUM:*			718
VOLUME/CAPACITY *(V/C)* RATIO:				0.437			0.437				0.502				0.504				0.504
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.437			0.437				0.502				0.504				0.504
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
311	East-West Street:	Cypress Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	194	1	**194**	0	194	**194**	-94	100	1	**100**	35	135	1	**135**	0	135	1	**135**
	Left-Through		0							0				0				0	
	Through	648	1	340	0	648	340	223	871	1	447	1	872	1	450	0	872	1	450
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	-9	22	0	22	6	28	0	28	0	28	0	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	16	1	16	0	16	16	29	45	1	45	-2	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	467	1	**333**	0	467	**333**	100	567	1	**486**	1	568	1	**491**	0	568	1	**491**
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	205	404	0	404	9	413	0	413	0	413	0	413
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	1	61	0	61	61	-33	28	1	**28**	4	32	1	**32**	0	32	1	**32**
	Left-Through		0							0				0				0	
	Through	20	0	**84**	0	20	**84**	-15	5	0	12	2	7	0	18	0	7	0	18
	Through-Right		1							1				1				1	
	Right	64	0	0	0	64	0	-57	7	0	0	4	11	0	0	0	11	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	46	1	**46**	0	46	**46**	-20	26	1	26	3	29	1	29	0	29	1	29
	Left-Through		0							0				0				0	
	Through	34	2	17	0	34	17	-2	32	2	16	4	36	2	**18**	0	36	2	**18**
	Through-Right		1							1				1				1	
	Right	18	0	10	0	18	10	26	44	0	**22**	-7	37	0	16	0	37	0	16
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		527	North-South:		527	North-South:			586	North-South:			626	North-South:			626
		East-West:		130	East-West:		130	East-West:			50	East-West:			50	East-West:			50
		SUM:		657	SUM:		657	SUM:			636	SUM:			676	SUM:			676
VOLUME/CAPACITY (V/C) RATIO:				0.438			0.438				0.424				0.451				0.451
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.438			0.438				0.424				0.451				0.451
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	0.027
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
312	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			4			4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--		0	NB-- 0	SB--		0	NB-- 0	SB--		0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--		0	EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?			0			0				0				0				0
Override Capacity			0			0				0				0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	226	1	226	0	226	226	174	400	1	**400**	-9	391	1	**391**	0	391	1	**391**
	Left-Through		0							0				0				0	
	Through	561	2	**281**	0	561	**281**	-43	518	2	259	3	521	2	261	0	521	2	261
	Through-Right		0							0				0				0	
	Right	234	1	99	0	234	99	-18	216	1	76	-2	214	1	73	0	214	1	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	278	1	**278**	0	278	**278**	-90	188	1	188	-2	186	1	186	0	186	1	186
	Left-Through		0							0				0				0	
	Through	529	2	265	0	529	265	28	557	2	**279**	-1	556	2	**278**	0	556	2	**278**
	Through-Right		0							0				0				0	
	Right	61	1	35	0	61	35	18	79	1	39	-2	77	1	38	0	77	1	38
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	27	80	1	80	-1	79	1	79	0	79	1	79
	Left-Through		0							0				0				0	
	Through	445	1	**264**	0	445	**264**	223	668	1	**431**	-18	650	1	**420**	0	650	1	**420**
	Through-Right		1							1				1				1	
	Right	83	0	83	0	83	83	111	194	0	194	-4	190	0	190	0	190	0	190
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	270	1	**270**	0	270	**270**	10	280	1	**280**	2	282	1	**282**	0	282	1	**282**
	Left-Through		0							0				0				0	
	Through	715	1	456	0	715	456	202	917	1	524	-9	908	1	521	0	908	1	521
	Through-Right		1							1				1				1	
	Right	196	0	196	0	196	196	-65	131	0	131	3	134	0	134	0	134	0	134
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		559	North-South:		559	North-South:			679	North-South:			669	North-South:			669
		East-West:		534	East-West:		534	East-West:			711	East-West:			702	East-West:			702
		SUM:		1093	SUM:		1093	SUM:			1390	SUM:			1371	SUM:			1371
VOLUME/CAPACITY (V/C) RATIO:				0.795			0.795				1.011				0.997				0.997
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.795			0.795				1.011				0.997				0.997
LEVEL OF SERVICE (LOS):				C			C				F				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.014	Δ*v/c* after mitigation:	-0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lacy St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
313	East-West Street:	Ave 26	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	254	1	**140**	0	254	**140**	37	291	1	**161**	6	297	1	**164**	0	297	1	**164**
	Left-Through		0							0				0				0	
	Through	13	0	140	0	13	140	2	15	0	161	0	15	0	164	0	15	0	164
	Through-Right		0							0				0				0	
	Right	13	0	0	0	13	0	2	15	0	0	0	15	0	0	0	15	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	19	1	19	0	19	19	2	21	1	21	-1	20	1	20	0	20	1	20
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	131	1	**104**	0	131	**104**	9	140	1	**112**	1	141	1	**113**	0	141	1	**113**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	55	1	**55**	0	55	**55**	2	57	1	**57**	0	57	1	**57**	0	57	1	**57**
	Left-Through		0							0				0				0	
	Through	641	2	321	0	641	321	41	682	2	341	-16	666	2	333	0	666	2	333
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	856	1	**438**	0	856	**438**	92	948	1	**485**	30	978	1	**500**	0	978	1	**500**
	Through-Right		1							1				1				1	
	Right	19	0	19	0	19	19	2	21	0	21	0	21	0	21	0	21	0	21
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	244		*North-South:*	244			*North-South:*	273			*North-South:*	277			*North-South:*	277
			East-West:	493		*East-West:*	493			*East-West:*	542			*East-West:*	557			*East-West:*	557
			SUM:	737		*SUM:*	737			*SUM:*	815			*SUM:*	834			*SUM:*	834
VOLUME/CAPACITY *(V/C)* RATIO:				0.517			0.517				0.572				0.585				0.585
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.517			0.517				0.572				0.585				0.585
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.013	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Griffin Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
314	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	129	1	129	0	129	129	92	221	1	**221**	-10	211	1	211	0	211	1	211
	Left-Through		0							0				0				0	
	Through	383	1	**243**	0	383	**243**	72	455	1	274	-16	439	1	**267**	0	439	1	**267**
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	-10	93	0	93	2	95	0	95	0	95	0	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	**127**	0	127	**127**	-20	107	1	107	1	108	1	**108**	0	108	1	**108**
	Left-Through		0							0				0				0	
	Through	196	1	132	0	196	132	22	218	1	**164**	-2	216	1	160	0	216	1	160
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	41	109	0	109	-6	103	0	103	0	103	0	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	85	1	85	0	85	85	31	116	1	116	-3	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	1276	2	**460**	0	1276	**460**	57	1333	2	**492**	33	1366	2	**504**	0	1366	2	**504**
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	39	144	0	144	1	145	0	145	0	145	0	145
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	50	1	**50**	0	50	**50**	-11	39	1	**39**	2	41	1	**41**	0	41	1	**41**
	Left-Through		0							0				0				0	
	Through	749	2	290	0	749	290	98	847	2	314	4	851	2	316	0	851	2	316
	Through-Right		1							1				1				1	
	Right	121	0	121	0	121	121	-26	95	0	95	2	97	0	97	0	97	0	97
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		370	*North-South:*		370	*North-South:*			385	*North-South:*			375	*North-South:*			375
		East-West:		510	*East-West:*		510	*East-West:*			531	*East-West:*			545	*East-West:*			545
		SUM:		880	*SUM:*		880	*SUM:*			916	*SUM:*			920	*SUM:*			920
VOLUME/CAPACITY *(V/C)* RATIO:				0.587			0.587				0.611				0.613				0.613
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.587			0.587				0.611				0.613				0.613
LEVEL OF SERVICE (LOS):				A			A				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 NB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
315	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	26	0	26	0	26	26	-8	18	0	18	0	18	0	18	0	18	0	18
	Left-Through		1							1				1				1	
	Through	499	0	**309**	0	499	**309**	-39	460	0	**282**	-11	449	0	**276**	0	449	0	**276**
	Through-Right		1							1				1				1	
	Right	93	0	309	0	93	309	-8	85	0	282	0	85	0	276	0	85	0	276
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	235	1	**235**	0	235	**235**	38	273	1	**273**	17	290	1	**290**	0	290	1	**290**
	Left-Through		0							0				0				0	
	Through	582	2	291	0	582	291	87	669	2	335	62	731	2	366	0	731	2	366
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	262	1	**167**	0	262	**167**	-46	216	1	**147**	-17	199	1	**134**	0	199	1	**134**
	Through-Right		1							1				1				1	
	Right	72	0	72	0	72	72	5	77	0	77	-8	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		309	*North-South:*		309	*North-South:*			282	*North-South:*			276	*North-South:*			276
		East-West:		402	*East-West:*		402	*East-West:*			420	*East-West:*			424	*East-West:*			424
		SUM:		711	*SUM:*		711	*SUM:*			702	*SUM:*			700	*SUM:*			700
VOLUME/CAPACITY *(V/C)* RATIO:				0.474			0.474				0.468				0.467				0.467
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.474			0.474				0.468				0.467				0.467
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.001	Δ*v/c* after mitigation:	-0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 SB ramps	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
316	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	180	0	**180**	0	180	**180**	58	238	0	**238**	40	278	0	**278**	0	278	0	**278**
	Left-Through		1							1				1				1	
	Through	241	0	173	0	241	173	-36	205	0	181	-11	194	0	176	0	194	0	176
	Through-Right		1							1				1				1	
	Right	104	1	0	0	104	0	52	156	1	0	1	157	1	0	0	157	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	627	1	**348**	0	627	**348**	67	694	1	**372**	38	732	1	**387**	0	732	1	**387**
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	-20	49	0	49	-7	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	52	1	**52**	0	52	**52**	-26	26	1	**26**	-3	23	1	**23**	0	23	1	**23**
	Left-Through		0							0				0				0	
	Through	243	2	122	0	243	122	-28	215	2	108	-14	201	2	101	0	201	2	101
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		180	North-South:		180	North-South:			238	North-South:			278	North-South:			278
		East-West:		400	East-West:		400	East-West:			398	East-West:			410	East-West:			410
		SUM:		580	SUM:		580	SUM:			636	SUM:			688	SUM:			688
VOLUME/CAPACITY (V/C) RATIO:				0.387			0.387				0.424				0.459				0.459
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.387			0.387				0.424				0.459				0.459
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.035	Δ*v/c* after mitigation:	0.035
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Figueroa St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
318	East-West Street:	San Fernando Rd	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				0				0				0				0				0
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	47	1	47	0	47	47	16	63	1	63	-5	58	1	58	0	58	1	58
	Left-Through		0							0				0				0	
	Through	433	1	**314**	0	433	**314**	-42	391	1	**339**	26	417	1	**342**	0	417	1	**342**
	Through-Right		1							1				1				1	
	Right	195	0	195	0	195	195	92	287	0	287	-20	267	0	267	0	267	0	267
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	141	1	**141**	0	141	**141**	19	160	1	**160**	12	172	1	**172**	0	172	1	**172**
	Left-Through		0							0				0				0	
	Through	346	1	346	0	346	346	-18	328	1	328	28	356	1	356	0	356	1	356
	Through-Right		0							0				0				0	
	Right	21	1	14	0	21	14	1	22	1	11	1	23	1	10	0	23	1	10
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	15	1	15	0	15	15	8	23	1	23	4	27	1	27	0	27	1	27
	Left-Through		0							0				0				0	
	Through	88	1	**59**	0	88	**59**	135	223	1	**144**	7	230	1	**149**	0	230	1	**149**
	Through-Right		1							1				1				1	
	Right	30	0	30	0	30	30	34	64	0	64	3	67	0	67	0	67	0	67
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	282	1	**282**	0	282	**282**	138	420	1	**420**	-6	414	1	**414**	0	414	1	**414**
	Left-Through		0							0				0				0	
	Through	309	1	274	0	309	274	194	503	1	382	-18	485	1	389	0	485	1	389
	Through-Right		1							1				1				1	
	Right	239	0	239	0	239	239	22	261	0	261	32	293	0	293	0	293	0	293
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		455	North-South:		455	North-South:			499	North-South:			514	North-South:			514
		East-West:		341	East-West:		341	East-West:			564	East-West:			563	East-West:			563
		SUM:		796	SUM:		796	SUM:			1063	SUM:			1077	SUM:			1077
VOLUME/CAPACITY (V/C) RATIO:				0.559			0.559				0.746				0.756				0.756
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.559			0.559				0.746				0.756				0.756
LEVEL OF SERVICE (LOS):				A			A				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	San Fernando Rd	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
319	East-West Street:	Pasadena Av	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0				0
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	15	1	15	0	15	15	-1	14	1	14	-2	12	1	12	0	12	1	12
	Left-Through		0							0				0				0	
	Through	499	0	**585**	0	499	**585**	541	1040	0	**1165**	-21	1019	0	**1143**	0	1019	0	**1143**
	Through-Right		1							1				1				1	
	Right	86	0	0	0	86	0	39	125	0	0	-1	124	0	0	0	124	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	1	**83**	0	83	**83**	47	130	1	**130**	11	141	1	**141**	0	141	1	**141**
	Left-Through		0							0				0				0	
	Through	188	1	188	0	188	188	255	443	1	443	13	456	1	456	0	456	1	456
	Through-Right		0							0				0				0	
	Right	89	1	0	0	89	0	-1	88	1	0	-8	80	1	0	0	80	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	300	1	**300**	0	300	**300**	99	399	1	**399**	11	410	1	**410**	0	410	1	**410**
	Left-Through		0							0				0				0	
	Through	539	1	276	0	539	276	-39	500	1	259	21	521	1	269	0	521	1	269
	Through-Right		1							1				1				1	
	Right	12	0	12	0	12	12	5	17	0	17	0	17	0	17	0	17	0	17
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	39	0	39	0	39	39	27	66	0	66	0	66	0	66	0	66	0	66
	Left-Through		1							1				1				1	
	Through	215	0	**196**	0	215	**196**	-63	152	0	**221**	-19	133	0	**215**	0	133	0	**215**
	Through-Right		1							1				1				1	
	Right	98	0	196	0	98	196	60	158	0	221	6	164	0	215	0	164	0	215
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		668	*North-South:*		668	*North-South:*			1295	*North-South:*			1284	*North-South:*			1284
		East-West:		496	*East-West:*		496	*East-West:*			620	*East-West:*			625	*East-West:*			625
		SUM:		1164	*SUM:*		1164	*SUM:*			1915	*SUM:*			1909	*SUM:*			1909
VOLUME/CAPACITY *(V/C)* RATIO:				0.776			0.776				1.277				1.273				1.273
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.776			0.776				1.277				1.273				1.273
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.004	Δ*v/c* after mitigation:	-0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Daly St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
320	East-West Street:	Main St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	112	1	112	0	112	112	127	239	1	239	-5	234	1	234	0	234	1	234
	Left-Through		0							0				0				0	
	Through	544	1	**291**	0	544	**291**	73	617	1	**338**	-37	580	1	**321**	0	580	1	**321**
	Through-Right		1							1				1				1	
	Right	38	0	38	0	38	38	20	58	0	58	3	61	0	61	0	61	0	61
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	170	1	**170**	0	170	**170**	-1	169	1	**169**	2	171	1	**171**	0	171	1	**171**
	Left-Through		0							0				0				0	
	Through	384	1	264	0	384	264	-54	330	1	264	-9	321	1	255	0	321	1	255
	Through-Right		1							1				1				1	
	Right	143	0	143	0	143	143	55	198	0	198	-10	188	0	188	0	188	0	188
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	-8	38	0	38	-4	34	0	34	0	34	0	34
	Left-Through		1							1				1				1	
	Through	941	0	**593**	0	941	**593**	109	1050	0	**675**	-14	1036	0	**656**	0	1036	0	**656**
	Through-Right		1							1				1				1	
	Right	153	0	593	0	153	593	-6	147	0	675	-7	140	0	656	0	140	0	656
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	0	**69**	0	69	**69**	3	72	0	**72**	2	74	0	**74**	0	74	0	**74**
	Left-Through		1							1				1				1	
	Through	346	0	457	0	346	457	235	581	0	576	4	585	0	581	0	585	0	581
	Through-Right		1							1				1				1	
	Right	154	0	457	0	154	457	-16	138	0	576	-5	133	0	581	0	133	0	581
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		461	North-South:		461	North-South:			507	North-South:			492	North-South:			492
		East-West:		662	East-West:		662	East-West:			747	East-West:			730	East-West:			730
		SUM:		1123	SUM:		1123	SUM:			1254	SUM:			1222	SUM:			1222
VOLUME/CAPACITY (V/C) RATIO:				0.749			0.749				0.836				0.815				0.815
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.749			0.749				0.836				0.815				0.815
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.021	Δ*v/c* after mitigation:	-0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pasadena Av	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
322	East-West Street:	Broadway	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2				2				2				2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3	NB-- 0	SB--	3
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	368	2	0	0	368	0	143	511	2	0	-8	503	2	0	0	503	2	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	870	1	**480**	0	870	**480**	53	923	1	**551**	183	1106	1	**598**	0	1106	1	**598**
	Left-Through		1							1				1				1	
	Through	570	1	480	0	570	480	160	730	1	551	-41	689	1	598	0	689	1	598
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	311	2	**156**	0	311	**156**	76	387	2	**194**	-2	385	2	**193**	0	385	2	**193**
	Through-Right		0							0				0				0	
	Right	2	1	2	0	2	2	84	86	1	86	-86	0	1	0	0	0	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		0	North-South:		0	North-South:			0	North-South:			0	North-South:			0
		East-West:		636	East-West:		636	East-West:			745	East-West:			791	East-West:			791
		SUM:		636	SUM:		636	SUM:			745	SUM:			791	SUM:			791
VOLUME/CAPACITY (V/C) RATIO:				0.424			0.424				0.497				0.527				0.527
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.424			0.424				0.497				0.527				0.527
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.030	Δ*v/c* after mitigation:	0.030
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Hill St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	IBI Group	Date:	4/9/2012
323	East-West Street:	College St	Projection Year:	2035	Peak Hour:	PM	Reviewed by:		Project:	Concept 2 (SR-710 SA)

No. of Phases			2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			0			0			0			0			0
Override Capacity			0			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	34	1	34	0	34	34	2	36	1	36	4	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	1354	1	**716**	0	1354	**716**	25	1379	1	**731**	107	1486	1	**789**	0	1486	1	**789**
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	5	83	0	83	8	91	0	91	0	91	0	91
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	**112**	0	112	**112**	3	115	1	**115**	2	117	1	**117**	0	117	1	**117**
	Left-Through		0							0				0				0	
	Through	1223	1	645	0	1223	645	35	1258	1	663	2	1260	1	664	0	1260	1	664
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66	1	67	0	67	1	68	0	68	0	68	0	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	112	0	**112**	0	112	**112**	2	114	0	**114**	5	119	0	**119**	0	119	0	**119**
	Left-Through		1							1				1				1	
	Through	257	0	258	0	257	258	16	273	0	269	19	292	0	284	0	292	0	284
	Through-Right		1							1				1				1	
	Right	34	0	258	0	34	258	2	36	0	269	2	38	0	284	0	38	0	284
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	0	31	0	31	31	2	33	0	33	2	35	0	35	0	35	0	35
	Left-Through		1							1				1				1	
	Through	171	0	**188**	0	171	**188**	11	182	0	**214**	13	195	0	**227**	0	195	0	**227**
	Through-Right		1							1				1				1	
	Right	174	0	188	0	174	188	6	180	0	214	9	189	0	227	0	189	0	227
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		828	*North-South:*		828	*North-South:*			846	*North-South:*			906	*North-South:*			906
		East-West:		300	*East-West:*		300	*East-West:*			328	*East-West:*			346	*East-West:*			346
		SUM:		1128	*SUM:*		1128	*SUM:*			1174	*SUM:*			1252	*SUM:*			1252
VOLUME/CAPACITY *(V/C)* RATIO:				0.752			0.752				0.783				0.835				0.835
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.752			0.752				0.783				0.835				0.835
LEVEL OF SERVICE (LOS):				C			C				C				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.052	Δ*v/c* after mitigation:	0.052
Significant impacted?	YES	Fully mitigated?	NO

APPENDIX B

ICU WORKSHEETS

EXISTING (YEAR 2011) CONDITION
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.658
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	Level Of Service:	B

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	67	1299	166	54	990	122	99	228	82	396	330	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	1299	166	54	990	122	99	228	82	396	330	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	67	1299	166	54	990	122	99	228	0	396	330	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	1299	166	54	990	122	99	228	0	396	330	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	67	1299	166	54	990	122	99	228	0	396	330	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.66	0.34	1.00	2.67	0.33	1.00	2.00	1.00	1.00	1.74	0.26
Final Sat.:	1600	4256	544	1600	4273	527	1600	3200	1600	1600	2786	414
Capacity Analysis Module:												
Vol/Sat:	0.04	0.31	0.31	0.03	0.23	0.23	0.06	0.07	0.00	0.25	0.12	0.12
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.532
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	347	1312	62	1	705	154	0	0	0	246	80	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	347	1312	62	1	705	154	0	0	0	246	80	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	347	1312	62	1	705	154	0	0	0	246	80	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	347	1312	62	1	705	154	0	0	0	246	80	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	347	1312	62	1	705	154	0	0	0	246	80	44
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.91	0.09	1.00	2.00	1.00	0.00	0.00	0.00	1.51	0.49	1.00
Final Sat.:	2880	3056	144	1600	3200	1600	0	0	0	2415	785	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.43	0.43	0.00	0.22	0.10	0.00	0.00	0.00	0.10	0.10	0.03
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.574
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	A

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1064	17	0	948	0	193	90	132	9	0	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1064	17	0	948	0	193	90	132	9	0	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1064	17	0	948	0	193	90	132	9	0	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1064	17	0	948	0	193	90	132	9	0	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1064	17	0	948	0	193	90	132	9	0	464
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.93	0.43	0.64	0.04	0.00	1.96
Final Sat.:	0	4725	75	0	3200	0	1488	694	1018	61	0	3139
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.23	0.00	0.30	0.00	0.13	0.13	0.13	0.15	0.00	0.15
Crit Moves:	****				****			****				****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.308
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	131	834	0	0	290	1175	0	0	0	57	0	15	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	131	834	0	0	290	1175	0	0	0	57	0	15	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	131	834	0	0	290	0	0	0	0	57	0	15	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	131	834	0	0	290	0	0	0	0	57	0	15	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	131	834	0	0	290	0	0	0	0	57	0	15	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.79	0.00	0.21	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1267	0	333	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.26	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.04	0.00	0.05	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.393
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	428	97	17	328	0	536	2	63	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	428	97	17	328	0	536	2	63	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	428	97	17	328	0	536	2	63	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	428	97	17	328	0	536	2	63	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	428	97	17	328	0	536	2	63	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.63	0.37	1.00	1.00	0.00	1.78	0.01	0.21	0.00	0.00	0.00	
Final Sat.:	0	2609	591	1600	1600	0	2854	11	335	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.16	0.16	0.01	0.21	0.00	0.19	0.19	0.19	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.531
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1007	18	156	1068	0	0	0	0	79	0	181
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1007	18	156	1068	0	0	0	0	79	0	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1007	18	156	1068	0	0	0	0	79	0	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1007	18	156	1068	0	0	0	0	79	0	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1007	18	156	1068	0	0	0	0	79	0	181
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.96	0.04	0.25	1.75	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3144	56	408	2792	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.32	0.10	0.38	0.00	0.00	0.00	0.00	0.05	0.00	0.11
Crit Moves:		****		****								****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.570
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	52	885	212	18	538	111	24	175	11	91	193	128
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	885	212	18	538	111	24	175	11	91	193	128
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	885	212	18	538	111	24	175	11	91	193	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	885	212	18	538	111	24	175	11	91	193	128
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	885	212	18	538	111	24	175	11	91	193	128
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.61	0.39	1.00	1.66	0.34	1.00	0.94	0.06	1.00	0.60	0.40
Final Sat.:	1600	2582	618	1600	2653	547	1600	1505	95	1600	962	638
Capacity Analysis Module:												
Vol/Sat:	0.03	0.34	0.34	0.01	0.20	0.20	0.02	0.12	0.12	0.06	0.20	0.20
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.327
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	72	0	87	113	385	0	0	323	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	72	0	87	113	385	0	0	323	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	72	0	87	113	385	0	0	323	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	72	0	87	113	385	0	0	323	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	72	0	87	113	385	0	0	323	90
OvlAdjVol:												50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.05	0.07	0.12	0.00	0.00	0.20	0.06
OvlAdjV/S:												0.03
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.590
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	97	242	4	14	150	192	145	209	87	2	403	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	242	4	14	150	192	145	209	87	2	403	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	97	242	4	14	150	192	145	209	87	2	403	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	242	4	14	150	192	145	209	87	2	403	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	97	242	4	14	150	192	145	209	87	2	403	39
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.28	0.71	0.01	0.09	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	452	1129	19	137	1463	1600	1600	1600	1600	1600	1459	141
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.21	0.01	0.10	0.12	0.09	0.13	0.05	0.00	0.28	0.28
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.699
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1	
Volume Module:													
Base Vol:	3	705	299	99	1261	18	19	47	17	343	28	50	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	705	299	99	1261	18	19	47	17	343	28	50	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	705	299	99	1261	18	19	47	17	343	28	50	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	705	299	99	1261	18	19	47	17	343	28	50	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	705	299	99	1261	18	19	47	17	343	28	50	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.14	1.83	0.03	0.23	0.57	0.20	0.92	0.08	1.00	
Final Sat.:	14	3186	1600	230	2928	42	366	906	328	1479	121	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.22	0.19	0.06	0.43	0.43	0.01	0.05	0.05	0.21	0.23	0.03	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.520
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0	
Volume Module:													
Base Vol:	150	1200	7	4	787	50	153	8	81	11	19	42	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	150	1200	7	4	787	50	153	8	81	11	19	42	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	150	1200	7	4	787	50	153	8	81	11	19	42	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	150	1200	7	4	787	50	153	8	81	11	19	42	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	150	1200	7	4	787	50	153	8	81	11	19	42	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.95	0.05	1.00	0.15	0.26	0.59	
Final Sat.:	1600	3181	19	1600	3009	191	1520	80	1600	244	422	933	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.38	0.38	0.00	0.26	0.26	0.10	0.10	0.05	0.01	0.05	0.05	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.401
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	172	0	208	327	242	0	0	254	123	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	172	0	208	327	242	0	0	254	123	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	172	0	208	327	242	0	0	254	123	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	172	0	208	327	242	0	0	254	123	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	172	0	208	327	242	0	0	254	123	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.36	0.00	1.64	1.00	2.00	0.00	0.00	1.35	0.65	
Final Sat.:	0	0	0	2173	0	2627	1600	3200	0	0	2156	1044	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.08	0.20	0.08	0.00	0.00	0.12	0.12	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.597
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	80	644	37	80	550	29	56	233	111	41	280	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	644	37	80	550	29	56	233	111	41	280	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	644	37	80	550	29	56	233	111	41	280	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	644	37	80	550	29	56	233	111	41	280	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	644	37	80	550	29	56	233	111	41	280	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.35	0.65	1.00	1.59	0.41
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2167	1033	1600	2545	655
Capacity Analysis Module:												
Vol/Sat:	0.05	0.40	0.02	0.05	0.34	0.02	0.04	0.11	0.11	0.03	0.11	0.11
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	Level Of Service:	A

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	77	904	14	74	742	63	72	150	51	25	221	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	904	14	74	742	63	72	150	51	25	221	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	904	14	74	742	63	72	150	51	25	221	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	904	14	74	742	63	72	150	51	25	221	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	904	14	74	742	63	72	150	51	25	221	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.97	0.03	1.00	1.84	0.16	1.00	0.75	0.25	1.00	0.64	0.36
Final Sat.:	1600	3151	49	1600	2950	250	1600	1194	406	1600	1016	584
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.29	0.05	0.25	0.25	0.05	0.13	0.13	0.02	0.22	0.22
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.353
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	22	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	1
	0	0	1	0	0	2	0	0					
Volume Module:													
Base Vol:	113	0	58	0	0	0	0	522	119	74	517	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	113	0	58	0	0	0	0	522	119	74	517	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	113	0	58	0	0	0	0	522	119	74	517	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	113	0	58	0	0	0	0	522	119	74	517	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	113	0	58	0	0	0	0	522	119	74	517	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.66	0.00	0.34	0.00	0.00	0.00	0.00	1.63	0.37	1.00	2.00	0.00	
Final Sat.:	1057	0	543	0	0	0	0	2606	594	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.00	0.11	0.00	0.00	0.00	0.00	0.20	0.20	0.05	0.16	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.211
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	24	Level Of Service:	A

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	66	490	0	0	503	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	66	490	0	0	503	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	66	490	0	0	503	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	66	490	0	0	503	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	66	490	0	0	503	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.85	0.15
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2959	241
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.15	0.00	0.00	0.17	0.17
Crit Moves:							****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.477
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Monterey Rd							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Split Phase			Split Phase			Permitted			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1	
Volume Module:													
Base Vol:	60	0	289	0	0	3	0	457	62	243	482	4	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	60	0	289	0	0	3	0	457	62	243	482	4	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	60	0	289	0	0	3	0	457	62	243	482	4	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	60	0	289	0	0	3	0	457	62	243	482	4	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	60	0	289	0	0	3	0	457	62	243	482	4	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00	
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.00	0.18	0.00	0.00	0.00	0.00	0.14	0.04	0.15	0.15	0.00	
Crit Moves:			****			****		****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.724
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	125	655	50	33	625	18	58	500	204	57	484	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	655	50	33	625	18	58	500	204	57	484	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	655	50	33	625	18	58	500	204	57	484	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	655	50	33	625	18	58	500	204	57	484	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	655	50	33	625	18	58	500	204	57	484	56
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.42	0.58	1.00	1.79	0.21
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2273	927	1600	2868	332
Capacity Analysis Module:												
Vol/Sat:	0.08	0.41	0.03	0.02	0.39	0.01	0.04	0.22	0.22	0.04	0.17	0.17
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.616
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	199	733	44	64	871	55	83	205	258	65	273	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	199	733	44	64	871	55	83	205	258	65	273	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	199	733	44	64	871	55	83	205	258	65	273	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	199	733	44	64	871	55	83	205	258	65	273	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	199	733	44	64	871	55	83	205	258	65	273	66
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.61	0.39
Final Sat.:	1600	3200	1600	1600	3010	190	1600	1600	1600	1600	2577	623
Capacity Analysis Module:												
Vol/Sat:	0.12	0.23	0.03	0.04	0.29	0.29	0.05	0.13	0.16	0.04	0.11	0.11
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.287
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	95	742	253	73	1164	229	227	576	46	593	1535	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	742	253	73	1164	229	227	576	46	593	1535	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	742	253	73	1164	229	227	576	46	593	1535	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	742	253	73	1164	229	227	576	46	593	1535	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	742	253	73	1164	229	227	576	46	593	1535	74
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4445	355	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.46	0.16	0.05	0.73	0.14	0.14	0.13	0.13	0.37	0.32	0.05
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.762
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	78	Level Of Service:	C

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	488	0	408	345	447	0	0	1252	620
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	488	0	408	345	447	0	0	1252	620
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	488	0	408	345	447	0	0	1252	620
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	488	0	408	345	447	0	0	1252	620
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	488	0	408	345	447	0	0	1252	620
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.00	0.26	0.12	0.09	0.00	0.00	0.26	0.39
Crit Moves:						****	****					****

APPENDIX B

ICU WORKSHEETS

EXISTING CONDITION – YEAR 2011
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	51	1237	442	127	1285	135	114	392	240	316	213	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	1237	442	127	1285	135	114	392	240	316	213	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	51	1237	442	127	1285	135	114	392	0	316	213	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	1237	442	127	1285	135	114	392	0	316	213	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	51	1237	442	127	1285	135	114	392	0	316	213	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.21	0.79	1.00	2.71	0.29	1.00	2.00	1.00	1.00	1.49	0.51
Final Sat.:	1600	3536	1264	1600	4344	456	1600	3200	1600	1600	2392	808
Capacity Analysis Module:												
Vol/Sat:	0.03	0.35	0.35	0.08	0.30	0.30	0.07	0.12	0.00	0.20	0.09	0.09
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	228	1166	91	9	828	198	0	0	0	237	39	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	228	1166	91	9	828	198	0	0	0	237	39	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	228	1166	91	9	828	198	0	0	0	237	39	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	1166	91	9	828	198	0	0	0	237	39	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	228	1166	91	9	828	198	0	0	0	237	39	40
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.86	0.14	1.00	2.00	1.00	0.00	0.00	0.00	1.72	0.28	1.00
Final Sat.:	2880	2968	232	1600	3200	1600	0	0	0	2748	452	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.39	0.39	0.01	0.26	0.12	0.00	0.00	0.00	0.09	0.09	0.03
Crit Moves:		****		****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.663
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	994	28	0	1072	0	217	328	221	13	0	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	994	28	0	1072	0	217	328	221	13	0	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	994	28	0	1072	0	217	328	221	13	0	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	994	28	0	1072	0	217	328	221	13	0	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	994	28	0	1072	0	217	328	221	13	0	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.57	0.86	0.58	0.09	0.00	1.91
Final Sat.:	0	4668	132	0	3200	0	907	1370	923	146	0	3054
Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.21	0.00	0.34	0.00	0.24	0.24	0.24	0.09	0.00	0.09
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.475
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	119	1225	0	0	323	572	0	0	0	129	0	19	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	119	1225	0	0	323	572	0	0	0	129	0	19	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	119	1225	0	0	323	0	0	0	0	129	0	19	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	119	1225	0	0	323	0	0	0	0	129	0	19	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	119	1225	0	0	323	0	0	0	0	129	0	19	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1395	0	205	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.38	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.08	0.00	0.09	
Crit Moves:		****										****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	83	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0 1	1 0	1	0 1	0 0	1	0 1!	0 0	0	0 0	0 0	
Volume Module:													
Base Vol:	0	404	80	13	437	0	938	3	184	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	404	80	13	437	0	938	3	184	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	404	80	13	437	0	938	3	184	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	404	80	13	437	0	938	3	184	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	404	80	13	437	0	938	3	184	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.67	0.33	1.00	1.00	0.00	1.67	0.01	0.33	0.00	0.00	0.00	
Final Sat.:	0	2671	529	1600	1600	0	2668	9	523	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.15	0.15	0.01	0.27	0.00	0.35	0.35	0.35	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.526
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	987	17	158	892	0	0	0	0	39	0	182
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	987	17	158	892	0	0	0	0	39	0	182
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	987	17	158	892	0	0	0	0	39	0	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	987	17	158	892	0	0	0	0	39	0	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	987	17	158	892	0	0	0	0	39	0	182
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.97	0.03	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3146	54	482	2718	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.31	0.10	0.33	0.00	0.00	0.00	0.00	0.02	0.00	0.11
Crit Moves:		****		****								****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.599
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Fair Oaks Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0	
Volume Module:													
Base Vol:	30	754	174	166	839	19	12	147	16	166	198	74	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	30	754	174	166	839	19	12	147	16	166	198	74	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	30	754	174	166	839	19	12	147	16	166	198	74	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	30	754	174	166	839	19	12	147	16	166	198	74	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	30	754	174	166	839	19	12	147	16	166	198	74	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.62	0.38	1.00	1.96	0.04	1.00	0.90	0.10	1.00	0.73	0.27	
Final Sat.:	1600	2600	600	1600	3129	71	1600	1443	157	1600	1165	435	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.29	0.29	0.10	0.27	0.27	0.01	0.10	0.10	0.10	0.17	0.17	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.351
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Raymond Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0	0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1	
Volume Module:													
Base Vol:	0	0	0	112	0	128	100	422	0	0	333	60	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	112	0	128	100	422	0	0	333	60	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	112	0	128	100	422	0	0	333	60	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	112	0	128	100	422	0	0	333	60	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	112	0	128	100	422	0	0	333	60	
OvlAdjVol:												0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.08	0.06	0.13	0.00	0.00	0.21	0.04	
OvlAdjV/S:												0.00	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.633
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	86	229	12	35	283	237	309	474	185	10	271	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	229	12	35	283	237	309	474	185	10	271	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	86	229	12	35	283	237	309	474	185	10	271	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	229	12	35	283	237	309	474	185	10	271	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	86	229	12	35	283	237	309	474	185	10	271	29
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.26	0.70	0.04	0.11	0.89	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	421	1120	59	176	1424	1600	1600	1600	1600	1600	1445	155
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.20	0.02	0.20	0.15	0.19	0.30	0.12	0.01	0.19	0.19
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.593
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!	0
Volume Module:													
Base Vol:	6	983	393	88	754	32	27	44	12	284	51	51	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	6	983	393	88	754	32	27	44	12	284	51	51	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	6	983	393	88	754	32	27	44	12	284	51	51	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	6	983	393	88	754	32	27	44	12	284	51	51	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	6	983	393	88	754	32	27	44	12	284	51	51	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.20	1.73	0.07	0.33	0.53	0.14	0.85	0.15	1.00	
Final Sat.:	19	3181	1600	322	2761	117	520	848	231	1356	244	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.31	0.25	0.06	0.27	0.27	0.02	0.05	0.05	0.18	0.21	0.03	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.503
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	99	1028	19	28	969	150	111	19	91	2	13	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	1028	19	28	969	150	111	19	91	2	13	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	1028	19	28	969	150	111	19	91	2	13	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	1028	19	28	969	150	111	19	91	2	13	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	1028	19	28	969	150	111	19	91	2	13	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.85	0.15	1.00	0.06	0.36	0.58
Final Sat.:	1600	3142	58	1600	2771	429	1366	234	1600	89	578	933
Capacity Analysis Module:												
Vol/Sat:	0.06	0.33	0.33	0.02	0.35	0.35	0.07	0.08	0.06	0.00	0.02	0.02
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	237	0	292	273	296	0	0	309	131	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	237	0	292	273	296	0	0	309	131	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	237	0	292	273	296	0	0	309	131	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	237	0	292	273	296	0	0	309	131	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	237	0	292	273	296	0	0	309	131	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.34	0.00	1.66	1.00	2.00	0.00	0.00	1.40	0.60	
Final Sat.:	0	0	0	2150	0	2650	1600	3200	0	0	2247	953	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.11	0.17	0.09	0.00	0.00	0.14	0.14	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.648
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	109	627	36	95	620	27	65	356	135	63	322	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	627	36	95	620	27	65	356	135	63	322	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	627	36	95	620	27	65	356	135	63	322	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	627	36	95	620	27	65	356	135	63	322	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	627	36	95	620	27	65	356	135	63	322	63
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.45	0.55	1.00	1.67	0.33
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2320	880	1600	2676	524
Capacity Analysis Module:												
Vol/Sat:	0.07	0.39	0.02	0.06	0.39	0.02	0.04	0.15	0.15	0.04	0.12	0.12
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.657
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	84	812	22	108	1007	75	118	249	82	44	210	98
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	812	22	108	1007	75	118	249	82	44	210	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	84	812	22	108	1007	75	118	249	82	44	210	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	812	22	108	1007	75	118	249	82	44	210	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	812	22	108	1007	75	118	249	82	44	210	98
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.95	0.05	1.00	1.86	0.14	1.00	0.75	0.25	1.00	0.68	0.32
Final Sat.:	1600	3116	84	1600	2978	222	1600	1204	396	1600	1091	509
Capacity Analysis Module:												
Vol/Sat:	0.05	0.26	0.26	0.07	0.34	0.34	0.07	0.21	0.21	0.03	0.19	0.19
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.425
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	0	0	0	1	1 0
Lanes:	1	0	2 0	0									
Volume Module:													
Base Vol:	115	0	191	0	0	0	0	576	112	30	611	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	115	0	191	0	0	0	0	576	112	30	611	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	115	0	191	0	0	0	0	576	112	30	611	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	115	0	191	0	0	0	0	576	112	30	611	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	115	0	191	0	0	0	0	576	112	30	611	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.38	0.00	0.62	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00	
Final Sat.:	601	0	999	0	0	0	0	2679	521	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.00	0.19	0.00	0.00	0.00	0.00	0.21	0.22	0.02	0.19	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.186
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	23	Level Of Service:	A

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	78	519	0	0	415	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	78	519	0	0	415	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	78	519	0	0	415	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	78	519	0	0	415	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	78	519	0	0	415	25
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.89	0.11
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	3018	182
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.16	0.00	0.00	0.14	0.14
Crit Moves:							****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.430
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Monterey Rd							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Split Phase			Split Phase			Permitted			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1	
Volume Module:													
Base Vol:	47	0	258	0	0	0	0	514	43	173	393	4	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	47	0	258	0	0	0	0	514	43	173	393	4	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	47	0	258	0	0	0	0	514	43	173	393	4	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	47	0	258	0	0	0	0	514	43	173	393	4	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	47	0	258	0	0	0	0	514	43	173	393	4	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00	
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.00	0.16	0.00	0.00	0.00	0.00	0.16	0.03	0.11	0.12	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.775
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	174	642	53	106	654	36	63	555	182	43	542	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	174	642	53	106	654	36	63	555	182	43	542	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	174	642	53	106	654	36	63	555	182	43	542	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	642	53	106	654	36	63	555	182	43	542	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	174	642	53	106	654	36	63	555	182	43	542	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	0.49	1.00	1.81	0.19
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2410	790	1600	2891	309
Capacity Analysis Module:												
Vol/Sat:	0.11	0.40	0.03	0.07	0.41	0.02	0.04	0.23	0.23	0.03	0.19	0.19
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.662
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	B

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 2	0 1	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	206	701	39	98	1074	55	94	269	205	51	211	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	206	701	39	98	1074	55	94	269	205	51	211	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	206	701	39	98	1074	55	94	269	205	51	211	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	206	701	39	98	1074	55	94	269	205	51	211	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	206	701	39	98	1074	55	94	269	205	51	211	66
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.14	0.87	1.00	1.52	0.48
Final Sat.:	1600	3200	1600	1600	3044	156	1600	1816	1384	1600	2438	762
Capacity Analysis Module:												
Vol/Sat:	0.13	0.22	0.02	0.06	0.35	0.35	0.06	0.15	0.15	0.03	0.09	0.09
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.344
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	58	1252	362	153	832	110	310	1107	34	365	536	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	1252	362	153	832	110	310	1107	34	365	536	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	58	1252	362	153	832	110	310	1107	34	365	536	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	1252	362	153	832	110	310	1107	34	365	536	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	58	1252	362	153	832	110	310	1107	34	365	536	96
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.91	0.09	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4657	143	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.78	0.23	0.10	0.52	0.07	0.19	0.24	0.24	0.23	0.11	0.06
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	Level Of Service:	C

Street Name:	Fair Oaks Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1	
Volume Module:													
Base Vol:	0	0	0	825	0	437	423	1030	0	0	530	460	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	825	0	437	423	1030	0	0	530	460	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	825	0	437	423	1030	0	0	530	460	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	825	0	437	423	1030	0	0	530	460	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	825	0	437	423	1030	0	0	530	460	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.29	0.00	0.27	0.15	0.21	0.00	0.00	0.11	0.29	
Crit Moves:				****			****					****	

APPENDIX B

ICU WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.802
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	115	Level Of Service:	D

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	281	1110	430	17	748	62	35	247	214	609	342	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	281	1110	430	17	748	62	35	247	214	609	342	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	281	1110	430	17	748	62	35	247	0	609	342	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	281	1110	430	17	748	62	35	247	0	609	342	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	281	1110	430	17	748	62	35	247	0	609	342	10
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.16	0.84	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.94	0.06
Final Sat.:	1600	3460	1340	1600	4433	367	1600	3200	1600	1600	3109	91
Capacity Analysis Module:												
Vol/Sat:	0.18	0.32	0.32	0.01	0.17	0.17	0.02	0.08	0.00	0.38	0.11	0.11
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.544
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	319	1384	54	1	805	171	0	0	0	228	72	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	1384	54	1	805	171	0	0	0	228	72	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	319	1384	54	1	805	171	0	0	0	228	72	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	319	1384	54	1	805	171	0	0	0	228	72	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	1384	54	1	805	171	0	0	0	228	72	45
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.52	0.48	1.00
Final Sat.:	2880	3080	120	1600	3200	1600	0	0	0	2432	768	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.45	0.45	0.00	0.25	0.11	0.00	0.00	0.00	0.09	0.09	0.03
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.630
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1101	17	0	1030	0	199	90	223	15	0	458
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1101	17	0	1030	0	199	90	223	15	0	458
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1101	17	0	1030	0	199	90	223	15	0	458
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1101	17	0	1030	0	199	90	223	15	0	458
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1101	17	0	1030	0	199	90	223	15	0	458
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.78	0.35	0.87	0.06	0.00	1.94
Final Sat.:	0	4727	73	0	3200	0	1244	563	1394	101	0	3099
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.23	0.00	0.32	0.00	0.16	0.16	0.16	0.15	0.00	0.15
Crit Moves:	****				****			****				****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.373
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	0	0 0	1 0	1	0 0	0 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	156	754	0	0	357	1182	0	0	0	71	0	12	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	156	754	0	0	357	1182	0	0	0	71	0	12	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	156	754	0	0	357	0	0	0	0	71	0	12	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	156	754	0	0	357	0	0	0	0	71	0	12	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	156	754	0	0	357	0	0	0	0	71	0	12	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.86	0.00	0.14	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1369	0	231	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.24	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.04	0.00	0.05	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	416	164	24	402	0	493	3	87	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	416	164	24	402	0	493	3	87	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	416	164	24	402	0	493	3	87	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	416	164	24	402	0	493	3	87	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	416	164	24	402	0	493	3	87	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.43	0.57	1.00	1.00	0.00	1.69	0.01	0.30	0.00	0.00	0.00	
Final Sat.:	0	2295	905	1600	1600	0	2706	16	478	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.18	0.18	0.02	0.25	0.00	0.18	0.18	0.18	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1115	74	193	1093	0	0	0	0	187	0	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1115	74	193	1093	0	0	0	0	187	0	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1115	74	193	1093	0	0	0	0	187	0	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1115	74	193	1093	0	0	0	0	187	0	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1115	74	193	1093	0	0	0	0	187	0	141
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.88	0.12	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3001	199	480	2720	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.37	0.37	0.12	0.40	0.00	0.00	0.00	0.00	0.12	0.00	0.09
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.765
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	23	1011	181	66	691	211	45	245	5	61	190	327
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	1011	181	66	691	211	45	245	5	61	190	327
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	1011	181	66	691	211	45	245	5	61	190	327
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	1011	181	66	691	211	45	245	5	61	190	327
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	1011	181	66	691	211	45	245	5	61	190	327
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.70	0.30	1.00	1.53	0.47	1.00	0.98	0.02	1.00	0.37	0.63
Final Sat.:	1600	2714	486	1600	2451	749	1600	1568	32	1600	588	1012
Capacity Analysis Module:												
Vol/Sat:	0.01	0.37	0.37	0.04	0.28	0.28	0.03	0.16	0.16	0.04	0.32	0.32
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.469
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	136	0	164	191	395	0	0	396	182
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	136	0	164	191	395	0	0	396	182
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	136	0	164	191	395	0	0	396	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	136	0	164	191	395	0	0	396	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	136	0	164	191	395	0	0	396	182
OvlAdjVol:												106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.10	0.12	0.12	0.00	0.00	0.25	0.11
OvlAdjV/S:												0.07
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.781
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	Level Of Service:	C

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	87	248	3	17	160	289	285	296	106	2	531	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	87	248	3	17	160	289	285	296	106	2	531	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	248	3	17	160	289	285	296	106	2	531	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	248	3	17	160	289	285	296	106	2	531	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	248	3	17	160	289	285	296	106	2	531	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.26	0.73	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	412	1174	14	154	1446	1600	1600	1600	1600	1600	1442	158
Capacity Analysis Module:												
Vol/Sat:	0.05	0.21	0.21	0.01	0.11	0.18	0.18	0.19	0.07	0.00	0.37	0.37
Crit Moves:	****					****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.720
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!	0
Volume Module:													
Base Vol:	3	606	290	101	1324	18	17	47	18	345	27	43	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	606	290	101	1324	18	17	47	18	345	27	43	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	606	290	101	1324	18	17	47	18	345	27	43	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	606	290	101	1324	18	17	47	18	345	27	43	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	606	290	101	1324	18	17	47	18	345	27	43	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.14	1.84	0.02	0.21	0.57	0.22	0.93	0.07	1.00	
Final Sat.:	16	3184	1600	224	2936	40	332	917	351	1484	116	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.19	0.18	0.06	0.45	0.45	0.01	0.05	0.05	0.22	0.23	0.03	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.558
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0	1!	0	0
Volume Module:													
Base Vol:	166	1257	8	5	895	59	170	9	92	12	22	46	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	166	1257	8	5	895	59	170	9	92	12	22	46	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	166	1257	8	5	895	59	170	9	92	12	22	46	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	166	1257	8	5	895	59	170	9	92	12	22	46	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	166	1257	8	5	895	59	170	9	92	12	22	46	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.95	0.05	1.00	0.15	0.28	0.57	
Final Sat.:	1600	3180	20	1600	3002	198	1520	80	1600	240	440	920	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.40	0.40	0.00	0.30	0.30	0.11	0.11	0.06	0.01	0.05	0.05	
Crit Moves:	****				****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.479
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	208	0	270	385	347	0	0	324	120	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	208	0	270	385	347	0	0	324	120	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	208	0	270	385	347	0	0	324	120	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	208	0	270	385	347	0	0	324	120	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	208	0	270	385	347	0	0	324	120	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.31	0.00	1.69	1.00	2.00	0.00	0.00	1.46	0.54	
Final Sat.:	0	0	0	2089	0	2711	1600	3200	0	0	2335	865	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.10	0.24	0.11	0.00	0.00	0.14	0.14	
Crit Moves:				****			****					****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	65	714	21	107	595	55	132	286	111	22	257	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	714	21	107	595	55	132	286	111	22	257	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	714	21	107	595	55	132	286	111	22	257	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	714	21	107	595	55	132	286	111	22	257	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	714	21	107	595	55	132	286	111	22	257	90
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	1.48	0.52
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2305	895	1600	2370	830
Capacity Analysis Module:												
Vol/Sat:	0.04	0.45	0.01	0.07	0.37	0.03	0.08	0.12	0.12	0.01	0.11	0.11
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.683
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	69	1034	30	113	999	40	55	216	65	54	227	166
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	1034	30	113	999	40	55	216	65	54	227	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	1034	30	113	999	40	55	216	65	54	227	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1034	30	113	999	40	55	216	65	54	227	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1034	30	113	999	40	55	216	65	54	227	166
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.92	0.08	1.00	0.77	0.23	1.00	0.58	0.42
Final Sat.:	1600	3110	90	1600	3077	123	1600	1230	370	1600	924	676
Capacity Analysis Module:												
Vol/Sat:	0.04	0.33	0.33	0.07	0.32	0.32	0.03	0.18	0.18	0.03	0.25	0.25
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.464
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1	0	2	0	0
Volume Module:													
Base Vol:	97	0	64	0	0	0	0	887	116	80	766	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	97	0	64	0	0	0	0	887	116	80	766	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	97	0	64	0	0	0	0	887	116	80	766	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	97	0	64	0	0	0	0	887	116	80	766	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	97	0	64	0	0	0	0	887	116	80	766	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.60	0.00	0.40	0.00	0.00	0.00	0.00	1.77	0.23	1.00	2.00	0.00	
Final Sat.:	964	0	636	0	0	0	0	2830	370	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.00	0.10	0.00	0.00	0.00	0.00	0.31	0.31	0.05	0.24	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.582
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	A

Street Name:	Pasadena Av							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	68	0	308	258	714	0	0	639	91	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	68	0	308	258	714	0	0	639	91	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	68	0	308	258	714	0	0	639	91	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	68	0	308	258	714	0	0	639	91	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	68	0	308	258	714	0	0	639	91	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.75	0.25	
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2801	399	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.19	0.16	0.22	0.00	0.00	0.23	0.23	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.686
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	141	0	268	0	0	264	0	721	214	205	474	237
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	141	0	268	0	0	264	0	721	214	205	474	237
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	141	0	268	0	0	264	0	721	214	205	474	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	141	0	268	0	0	264	0	721	214	205	474	237
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	141	0	268	0	0	264	0	721	214	205	474	237
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.17	0.00	0.00	0.17	0.00	0.23	0.13	0.13	0.15	0.15
Crit Moves:			****			****		****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.801
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	145	629	42	56	603	43	108	811	187	35	741	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	145	629	42	56	603	43	108	811	187	35	741	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	145	629	42	56	603	43	108	811	187	35	741	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	629	42	56	603	43	108	811	187	35	741	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	145	629	42	56	603	43	108	811	187	35	741	71
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.63	0.37	1.00	1.83	0.17
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2600	600	1600	2920	280
Capacity Analysis Module:												
Vol/Sat:	0.09	0.39	0.03	0.04	0.38	0.03	0.07	0.31	0.31	0.02	0.25	0.25
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.026
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	395	890	69	54	1178	58	81	261	529	99	324	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	890	69	54	1178	58	81	261	529	99	324	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	890	69	54	1178	58	81	261	529	99	324	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	890	69	54	1178	58	81	261	529	99	324	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	890	69	54	1178	58	81	261	529	99	324	48
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.74	0.26
Final Sat.:	1600	3200	1600	1600	3050	150	1600	1600	1600	1600	2787	413
Capacity Analysis Module:												
Vol/Sat:	0.25	0.28	0.04	0.03	0.39	0.39	0.05	0.16	0.33	0.06	0.12	0.12
Crit Moves:	****					****			****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.311
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	103	680	310	67	1043	187	192	650	50	719	1697	69	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	103	680	310	67	1043	187	192	650	50	719	1697	69	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	103	680	310	67	1043	187	192	650	50	719	1697	69	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	103	680	310	67	1043	187	192	650	50	719	1697	69	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	103	680	310	67	1043	187	192	650	50	719	1697	69	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.79	0.21	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4457	343	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.43	0.19	0.04	0.65	0.12	0.12	0.15	0.15	0.45	0.35	0.04	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.096
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1	
Volume Module:													
Base Vol:	0	0	0	914	0	594	416	499	0	0	1349	928	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	914	0	594	416	499	0	0	1349	928	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	914	0	594	416	499	0	0	1349	928	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	914	0	594	416	499	0	0	1349	928	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	914	0	594	416	499	0	0	1349	928	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.32	0.00	0.37	0.14	0.10	0.00	0.00	0.28	0.58	
Crit Moves:						****	****					****	

APPENDIX B

ICU WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.093
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	143	888	862	55	1022	83	45	420	476	621	325	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	888	862	55	1022	83	45	420	476	621	325	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	143	888	862	55	1022	83	45	420	0	621	325	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	888	862	55	1022	83	45	420	0	621	325	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	143	888	862	55	1022	83	45	420	0	621	325	28
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.84	0.16
Final Sat.:	1600	3200	1600	1600	4439	361	1600	3200	1600	1600	2946	254
Capacity Analysis Module:												
Vol/Sat:	0.09	0.28	0.54	0.03	0.23	0.23	0.03	0.13	0.00	0.39	0.11	0.11
Crit Moves:			****	****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.537
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	298	1307	128	10	915	211	0	0	0	226	36	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	298	1307	128	10	915	211	0	0	0	226	36	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	298	1307	128	10	915	211	0	0	0	226	36	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	298	1307	128	10	915	211	0	0	0	226	36	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	298	1307	128	10	915	211	0	0	0	226	36	31
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.82	0.18	1.00	2.00	1.00	0.00	0.00	0.00	1.73	0.27	1.00
Final Sat.:	2880	2915	285	1600	3200	1600	0	0	0	2760	440	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.45	0.45	0.01	0.29	0.13	0.00	0.00	0.00	0.08	0.08	0.02
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.724
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1238	33	0	1149	0	227	323	335	18	0	266
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1238	33	0	1149	0	227	323	335	18	0	266
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1238	33	0	1149	0	227	323	335	18	0	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1238	33	0	1149	0	227	323	335	18	0	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1238	33	0	1149	0	227	323	335	18	0	266
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.51	0.73	0.76	0.13	0.00	1.87
Final Sat.:	0	4675	125	0	3200	0	821	1168	1211	203	0	2997
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.26	0.00	0.36	0.00	0.28	0.28	0.28	0.09	0.00	0.09
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.491
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	205	1121	0	0	400	573	0	0	0	169	0	11	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	205	1121	0	0	400	573	0	0	0	169	0	11	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	205	1121	0	0	400	0	0	0	0	169	0	11	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	205	1121	0	0	400	0	0	0	0	169	0	11	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	205	1121	0	0	400	0	0	0	0	169	0	11	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.94	0.00	0.06	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1502	0	98	
Capacity Analysis Module:													
Vol/Sat:	0.13	0.35	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.11	0.00	0.11	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.685
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	136	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	411	158	28	539	0	913	6	196	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	411	158	28	539	0	913	6	196	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	411	158	28	539	0	913	6	196	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	411	158	28	539	0	913	6	196	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	411	158	28	539	0	913	6	196	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.44	0.56	1.00	1.00	0.00	1.64	0.01	0.35	0.00	0.00	0.00	
Final Sat.:	0	2311	889	1600	1600	0	2620	17	563	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.18	0.18	0.02	0.34	0.00	0.35	0.35	0.35	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.589
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	A

Street Name:	Pasadena Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1	
Volume Module:													
Base Vol:	0	1078	84	204	981	0	0	0	0	131	0	158	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	1078	84	204	981	0	0	0	0	131	0	158	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	1078	84	204	981	0	0	0	0	131	0	158	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	1078	84	204	981	0	0	0	0	131	0	158	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	1078	84	204	981	0	0	0	0	131	0	158	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.86	0.14	0.34	1.66	0.00	0.00	0.00	0.00	1.00	0.00	1.00	
Final Sat.:	0	2969	231	551	2649	0	0	0	0	1600	0	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.36	0.36	0.13	0.37	0.00	0.00	0.00	0.00	0.08	0.00	0.10	
Crit Moves:		****		****								****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.895
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	137	Level Of Service:	D

Street Name:	Fair Oaks Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0	
Volume Module:													
Base Vol:	18	1011	101	360	993	42	42	222	13	116	255	219	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	18	1011	101	360	993	42	42	222	13	116	255	219	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	18	1011	101	360	993	42	42	222	13	116	255	219	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	18	1011	101	360	993	42	42	222	13	116	255	219	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	18	1011	101	360	993	42	42	222	13	116	255	219	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.82	0.18	1.00	1.92	0.08	1.00	0.94	0.06	1.00	0.54	0.46	
Final Sat.:	1600	2909	291	1600	3070	130	1600	1511	89	1600	861	739	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.35	0.35	0.23	0.32	0.32	0.03	0.15	0.15	0.07	0.30	0.30	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.499
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	202	0	201	165	552	0	0	432	113
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	202	0	201	165	552	0	0	432	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	202	0	201	165	552	0	0	432	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	202	0	201	165	552	0	0	432	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	202	0	201	165	552	0	0	432	113
OvlAdjVol:												1
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.13	0.10	0.17	0.00	0.00	0.27	0.07
OvlAdjV/S:												0.00
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.893
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	134	Level Of Service:	D

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	131	267	13	43	272	401	462	677	205	8	401	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	267	13	43	272	401	462	677	205	8	401	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	267	13	43	272	401	462	677	205	8	401	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	267	13	43	272	401	462	677	205	8	401	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	267	13	43	272	401	462	677	205	8	401	33
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.32	0.65	0.03	0.14	0.86	1.00	1.00	1.00	1.00	1.00	0.92	0.08
Final Sat.:	510	1039	51	218	1382	1600	1600	1600	1600	1600	1478	122
Capacity Analysis Module:												
Vol/Sat:	0.08	0.26	0.26	0.03	0.20	0.25	0.29	0.42	0.13	0.01	0.27	0.27
Crit Moves:	****					****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.550
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	6	868	378	83	807	32	24	42	13	281	47	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	868	378	83	807	32	24	42	13	281	47	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	868	378	83	807	32	24	42	13	281	47	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	868	378	83	807	32	24	42	13	281	47	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	868	378	83	807	32	24	42	13	281	47	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.01	1.99	1.00	0.18	1.75	0.07	0.30	0.54	0.16	0.86	0.14	1.00
Final Sat.:	22	3178	1600	288	2801	111	486	851	263	1371	229	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.24	0.05	0.29	0.29	0.02	0.05	0.05	0.18	0.21	0.03
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.553
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	1!	0	0
Volume Module:													
Base Vol:	114	1143	22	30	1054	164	122	22	103	2	15	23	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	114	1143	22	30	1054	164	122	22	103	2	15	23	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	114	1143	22	30	1054	164	122	22	103	2	15	23	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	114	1143	22	30	1054	164	122	22	103	2	15	23	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	114	1143	22	30	1054	164	122	22	103	2	15	23	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.85	0.15	1.00	0.05	0.38	0.57	
Final Sat.:	1600	3140	60	1600	2769	431	1356	244	1600	80	600	920	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.36	0.36	0.02	0.38	0.38	0.08	0.09	0.06	0.00	0.03	0.03	
Crit Moves:	****				****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.537
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	262	0	381	337	400	0	0	463	152	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	262	0	381	337	400	0	0	463	152	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	262	0	381	337	400	0	0	463	152	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	262	0	381	337	400	0	0	463	152	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	262	0	381	337	400	0	0	463	152	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.22	0.00	1.78	1.00	2.00	0.00	0.00	1.51	0.49	
Final Sat.:	0	0	0	1956	0	2844	1600	3200	0	0	2409	791	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.13	0.00	0.13	0.21	0.13	0.00	0.00	0.19	0.19	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.754
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	Level Of Service:	C

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	129	684	22	116	692	64	144	437	152	38	410	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	684	22	116	692	64	144	437	152	38	410	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	129	684	22	116	692	64	144	437	152	38	410	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	684	22	116	692	64	144	437	152	38	410	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	684	22	116	692	64	144	437	152	38	410	74
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.69	0.31
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2374	826	1600	2711	489
Capacity Analysis Module:												
Vol/Sat:	0.08	0.43	0.01	0.07	0.43	0.04	0.09	0.18	0.18	0.02	0.15	0.15
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.804
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	116	Level Of Service:	D

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	106	1145	53	144	1187	53	95	343	100	100	284	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	1145	53	144	1187	53	95	343	100	100	284	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	1145	53	144	1187	53	95	343	100	100	284	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	1145	53	144	1187	53	95	343	100	100	284	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	1145	53	144	1187	53	95	343	100	100	284	148
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.91	0.09	1.00	0.77	0.23	1.00	0.66	0.34
Final Sat.:	1600	3058	142	1600	3063	137	1600	1239	361	1600	1052	548
Capacity Analysis Module:												
Vol/Sat:	0.07	0.37	0.37	0.09	0.39	0.39	0.06	0.28	0.28	0.06	0.27	0.27
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.621
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1	0	2	0	0
Volume Module:													
Base Vol:	74	0	310	0	0	0	0	813	153	126	1057	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	74	0	310	0	0	0	0	813	153	126	1057	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	74	0	310	0	0	0	0	813	153	126	1057	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	74	0	310	0	0	0	0	813	153	126	1057	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	74	0	310	0	0	0	0	813	153	126	1057	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.19	0.00	0.81	0.00	0.00	0.00	0.00	1.68	0.32	1.00	2.00	0.00	
Final Sat.:	308	0	1292	0	0	0	0	2693	507	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.00	0.24	0.00	0.00	0.00	0.00	0.30	0.30	0.08	0.33	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.714
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	65	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	74	0	388	371	643	0	0	709	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	74	0	388	371	643	0	0	709	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	74	0	388	371	643	0	0	709	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	74	0	388	371	643	0	0	709	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	74	0	388	371	643	0	0	709	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.85	0.15
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2958	242
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.24	0.23	0.20	0.00	0.00	0.24	0.24
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.356
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Monterey Rd							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Split Phase			Split Phase			Permitted			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1	
Volume Module:													
Base Vol:	300	0	64	0	0	0	0	724	250	41	582	274	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	300	0	64	0	0	0	0	724	250	41	582	274	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	300	0	64	0	0	0	0	724	250	41	582	274	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	300	0	64	0	0	0	0	724	250	41	582	274	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	300	0	64	0	0	0	0	724	250	41	582	274	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00	
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.00	0.04	0.00	0.00	0.00	0.00	0.23	0.16	0.03	0.18	0.17	
Crit Moves:	****							****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.903
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	149	Level Of Service:	E

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	173	608	41	172	611	76	118	846	159	35	986	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	608	41	172	611	76	118	846	159	35	986	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	608	41	172	611	76	118	846	159	35	986	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	608	41	172	611	76	118	846	159	35	986	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	608	41	172	611	76	118	846	159	35	986	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.68	0.32	1.00	1.82	0.18
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2694	506	1600	2905	295
Capacity Analysis Module:												
Vol/Sat:	0.11	0.38	0.03	0.11	0.38	0.05	0.07	0.31	0.31	0.02	0.34	0.34
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.131
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	558	1084	71	73	1347	61	105	353	456	91	331	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	558	1084	71	73	1347	61	105	353	456	91	331	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	558	1084	71	73	1347	61	105	353	456	91	331	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	558	1084	71	73	1347	61	105	353	456	91	331	59
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	558	1084	71	73	1347	61	105	353	456	91	331	59
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.70	0.30
Final Sat.:	1600	3200	1600	1600	3061	139	1600	1600	1600	1600	2716	484
Capacity Analysis Module:												
Vol/Sat:	0.35	0.34	0.04	0.05	0.44	0.44	0.07	0.22	0.28	0.06	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.361
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	75	1160	483	144	713	100	245	1259	35	442	691	89	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	75	1160	483	144	713	100	245	1259	35	442	691	89	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	75	1160	483	144	713	100	245	1259	35	442	691	89	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	75	1160	483	144	713	100	245	1259	35	442	691	89	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	75	1160	483	144	713	100	245	1259	35	442	691	89	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.92	0.08	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4670	130	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.73	0.30	0.09	0.45	0.06	0.15	0.27	0.27	0.28	0.14	0.06	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.317
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1	
Volume Module:													
Base Vol:	0	0	0	1306	0	520	605	1097	0	0	673	1045	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	1306	0	520	605	1097	0	0	673	1045	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	1306	0	520	605	1097	0	0	673	1045	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	1306	0	520	605	1097	0	0	673	1045	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	1306	0	520	605	1097	0	0	673	1045	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.45	0.00	0.33	0.21	0.23	0.00	0.00	0.14	0.65	
Crit Moves:				****			****					****	

APPENDIX B

ICU WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.754
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	93	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	311	977	405	11	536	45	34	255	255	574	327	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	977	405	11	536	45	34	255	255	574	327	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	311	977	405	11	536	45	34	255	0	574	327	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	977	405	11	536	45	34	255	0	574	327	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	311	977	405	11	536	45	34	255	0	574	327	8
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.12	0.88	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.95	0.05
Final Sat.:	1600	3393	1407	1600	4428	372	1600	3200	1600	1600	3124	76
Capacity Analysis Module:												
Vol/Sat:	0.19	0.29	0.29	0.01	0.12	0.12	0.02	0.08	0.00	0.36	0.10	0.10
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.450
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	344	1147	50	1	469	170	0	0	0	157	85	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	344	1147	50	1	469	170	0	0	0	157	85	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	344	1147	50	1	469	170	0	0	0	157	85	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	344	1147	50	1	469	170	0	0	0	157	85	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	344	1147	50	1	469	170	0	0	0	157	85	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.30	0.70	1.00
Final Sat.:	2880	3066	134	1600	3200	1600	0	0	0	2076	1124	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.37	0.37	0.00	0.15	0.11	0.00	0.00	0.00	0.08	0.08	0.03
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	886	14	0	623	0	201	93	308	20	0	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	886	14	0	623	0	201	93	308	20	0	453
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	886	14	0	623	0	201	93	308	20	0	453
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	886	14	0	623	0	201	93	308	20	0	453
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	886	14	0	623	0	201	93	308	20	0	453
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.67	0.33	1.00	0.08	0.00	1.92
Final Sat.:	0	4725	75	0	3200	0	1068	532	1600	135	0	3065
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.00	0.19	0.00	0.19	0.17	0.19	0.15	0.00	0.15
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.349
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	188	671	0	0	294	1161	0	0	0	67	0	10	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	188	671	0	0	294	1161	0	0	0	67	0	10	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	188	671	0	0	294	0	0	0	0	67	0	10	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	188	671	0	0	294	0	0	0	0	67	0	10	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	188	671	0	0	294	0	0	0	0	67	0	10	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1392	0	208	
Capacity Analysis Module:													
Vol/Sat:	0.12	0.21	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.04	0.00	0.05	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.390
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	355	152	26	333	0	503	4	75	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	355	152	26	333	0	503	4	75	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	355	152	26	333	0	503	4	75	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	355	152	26	333	0	503	4	75	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	355	152	26	333	0	503	4	75	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.40	0.60	1.00	1.00	0.00	1.73	0.01	0.26	0.00	0.00	0.00	
Final Sat.:	0	2241	959	1600	1600	0	2766	22	412	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.16	0.16	0.02	0.21	0.00	0.18	0.18	0.18	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.523
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	947	65	177	939	0	0	0	0	154	0	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	947	65	177	939	0	0	0	0	154	0	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	947	65	177	939	0	0	0	0	154	0	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	947	65	177	939	0	0	0	0	154	0	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	947	65	177	939	0	0	0	0	154	0	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.87	0.13	0.32	1.68	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2994	206	508	2692	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.32	0.11	0.35	0.00	0.00	0.00	0.00	0.10	0.00	0.07
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.732
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	12	767	188	118	387	196	31	234	2	31	160	385
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	767	188	118	387	196	31	234	2	31	160	385
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	767	188	118	387	196	31	234	2	31	160	385
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	767	188	118	387	196	31	234	2	31	160	385
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	767	188	118	387	196	31	234	2	31	160	385
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.61	0.39	1.00	1.33	0.67	1.00	0.99	0.01	1.00	0.29	0.71
Final Sat.:	1600	2570	630	1600	2124	1076	1600	1586	14	1600	470	1130
Capacity Analysis Module:												
Vol/Sat:	0.01	0.30	0.30	0.07	0.18	0.18	0.02	0.15	0.15	0.02	0.34	0.34
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.478
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	148	0	169	206	427	0	0	389	188
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	148	0	169	206	427	0	0	389	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	148	0	169	206	427	0	0	389	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	148	0	169	206	427	0	0	389	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	148	0	169	206	427	0	0	389	188
OvlAdjVol:												106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.11	0.13	0.13	0.00	0.00	0.24	0.12
OvlAdjV/S:												0.07
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.741
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	Level Of Service:	C

Street Name:	Marengo Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1	0 1 1 0 0 1 0
Volume Module:													
Base Vol:	85	208	2	12	113	273	298	268	97	1	483	46	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	85	208	2	12	113	273	298	268	97	1	483	46	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	85	208	2	12	113	273	298	268	97	1	483	46	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	85	208	2	12	113	273	298	268	97	1	483	46	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	85	208	2	12	113	273	298	268	97	1	483	46	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.29	0.70	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.91	0.09	
Final Sat.:	461	1128	11	154	1446	1600	1600	1600	1600	1600	1461	139	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.18	0.18	0.01	0.08	0.17	0.19	0.17	0.06	0.00	0.33	0.33	
Crit Moves:	****					****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!	0
Volume Module:													
Base Vol:	4	531	265	64	1285	16	12	35	20	301	21	23	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	4	531	265	64	1285	16	12	35	20	301	21	23	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	4	531	265	64	1285	16	12	35	20	301	21	23	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	4	531	265	64	1285	16	12	35	20	301	21	23	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	4	531	265	64	1285	16	12	35	20	301	21	23	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.09	1.89	0.02	0.18	0.52	0.30	0.93	0.07	1.00	
Final Sat.:	24	3176	1600	150	3012	38	287	836	478	1496	104	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.17	0.17	0.04	0.43	0.43	0.01	0.04	0.04	0.19	0.20	0.01	
Crit Moves:	****				****			****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.444
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0	
Volume Module:													
Base Vol:	117	1066	6	3	584	34	117	6	60	8	13	33	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	117	1066	6	3	584	34	117	6	60	8	13	33	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	117	1066	6	3	584	34	117	6	60	8	13	33	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	117	1066	6	3	584	34	117	6	60	8	13	33	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	117	1066	6	3	584	34	117	6	60	8	13	33	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.95	0.05	1.00	0.15	0.24	0.61	
Final Sat.:	1600	3182	18	1600	3024	176	1522	78	1600	237	385	978	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.34	0.33	0.00	0.19	0.19	0.07	0.08	0.04	0.01	0.03	0.03	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.417
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	151	0	246	358	359	0	0	280	74	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	151	0	246	358	359	0	0	280	74	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	151	0	246	358	359	0	0	280	74	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	151	0	246	358	359	0	0	280	74	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	151	0	246	358	359	0	0	280	74	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.14	0.00	1.86	1.00	2.00	0.00	0.00	1.58	0.42	
Final Sat.:	0	0	0	1826	0	2974	1600	3200	0	0	2531	669	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.08	0.22	0.11	0.00	0.00	0.11	0.11	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.564
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	61	601	14	65	466	46	125	217	108	13	169	53
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	601	14	65	466	46	125	217	108	13	169	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	601	14	65	466	46	125	217	108	13	169	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	601	14	65	466	46	125	217	108	13	169	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	601	14	65	466	46	125	217	108	13	169	53
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.34	0.66	1.00	1.52	0.48
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2137	1063	1600	2436	764
Capacity Analysis Module:												
Vol/Sat:	0.04	0.38	0.01	0.04	0.29	0.03	0.08	0.10	0.10	0.01	0.07	0.07
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	Level Of Service:	A

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	28	819	20	125	707	27	44	147	28	37	148	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	819	20	125	707	27	44	147	28	37	148	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	819	20	125	707	27	44	147	28	37	148	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	819	20	125	707	27	44	147	28	37	148	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	819	20	125	707	27	44	147	28	37	148	210
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.84	0.16	1.00	0.41	0.59
Final Sat.:	1600	3124	76	1600	3082	118	1600	1344	256	1600	661	939
Capacity Analysis Module:												
Vol/Sat:	0.02	0.26	0.26	0.08	0.23	0.23	0.03	0.11	0.11	0.02	0.22	0.22
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.456
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	98	0	69	0	0	0	0	830	118	88	721	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	98	0	69	0	0	0	0	830	118	88	721	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	98	0	69	0	0	0	0	830	118	88	721	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	98	0	69	0	0	0	0	830	118	88	721	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	98	0	69	0	0	0	0	830	118	88	721	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.59	0.00	0.41	0.00	0.00	0.00	0.00	1.75	0.25	1.00	2.00	0.00	
Final Sat.:	939	0	661	0	0	0	0	2802	398	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.00	0.10	0.00	0.00	0.00	0.00	0.30	0.30	0.06	0.23	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.510
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Pasadena Av							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	62	0	261	238	581	0	0	539	94	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	62	0	261	238	581	0	0	539	94	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	62	0	261	238	581	0	0	539	94	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	62	0	261	238	581	0	0	539	94	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	62	0	261	238	581	0	0	539	94	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.70	0.30	
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2725	475	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.16	0.15	0.18	0.00	0.00	0.20	0.20	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.593
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	Level Of Service:	A

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	133	0	260	0	0	211	0	613	169	172	416	230
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	0	260	0	0	211	0	613	169	172	416	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	0	260	0	0	211	0	613	169	172	416	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	0	260	0	0	211	0	613	169	172	416	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	0	260	0	0	211	0	613	169	172	416	230
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.16	0.00	0.00	0.13	0.00	0.19	0.11	0.11	0.13	0.14
Crit Moves:			****			****		****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.703
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	152	532	31	32	496	34	102	664	225	32	646	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	532	31	32	496	34	102	664	225	32	646	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	532	31	32	496	34	102	664	225	32	646	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	532	31	32	496	34	102	664	225	32	646	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	532	31	32	496	34	102	664	225	32	646	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.86	0.14
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2390	810	1600	2970	230
Capacity Analysis Module:												
Vol/Sat:	0.10	0.33	0.02	0.02	0.31	0.02	0.06	0.28	0.28	0.02	0.22	0.22
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	70	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	278	637	58	54	841	49	68	255	366	85	331	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	278	637	58	54	841	49	68	255	366	85	331	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	278	637	58	54	841	49	68	255	366	85	331	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	278	637	58	54	841	49	68	255	366	85	331	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	278	637	58	54	841	49	68	255	366	85	331	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.00	1.00	1.00	1.74	0.26
Final Sat.:	1600	3200	1600	1600	3024	176	1600	1600	1600	1600	2780	420
Capacity Analysis Module:												
Vol/Sat:	0.17	0.20	0.04	0.03	0.28	0.28	0.04	0.16	0.23	0.05	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.143
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	119	691	211	35	1026	164	104	236	35	594	1246	45	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	119	691	211	35	1026	164	104	236	35	594	1246	45	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	119	691	211	35	1026	164	104	236	35	594	1246	45	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	119	691	211	35	1026	164	104	236	35	594	1246	45	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	119	691	211	35	1026	164	104	236	35	594	1246	45	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.61	0.39	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4180	620	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.43	0.13	0.02	0.64	0.10	0.07	0.06	0.06	0.37	0.26	0.03	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.940
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	980	0	15	7	363	0	0	1329	955
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	980	0	15	7	363	0	0	1329	955
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	980	0	15	7	363	0	0	1329	955
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	980	0	15	7	363	0	0	1329	955
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	980	0	15	7	363	0	0	1329	955
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.34	0.00	0.01	0.00	0.08	0.00	0.00	0.28	0.60
Crit Moves:				****			****					****

APPENDIX B

ICU WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.014
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	160	728	802	43	903	80	39	409	514	573	325	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	160	728	802	43	903	80	39	409	514	573	325	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	160	728	802	43	903	80	39	409	0	573	325	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	728	802	43	903	80	39	409	0	573	325	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	160	728	802	43	903	80	39	409	0	573	325	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.76	0.24	1.00	2.00	1.00	1.00	1.88	0.12
Final Sat.:	1600	3200	1600	1600	4409	391	1600	3200	1600	1600	3006	194
Capacity Analysis Module:												
Vol/Sat:	0.10	0.23	0.50	0.03	0.20	0.20	0.02	0.13	0.00	0.36	0.11	0.11
Crit Moves:			****	****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.396
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	307	987	90	8	609	241	0	0	0	137	37	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	307	987	90	8	609	241	0	0	0	137	37	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	307	987	90	8	609	241	0	0	0	137	37	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	307	987	90	8	609	241	0	0	0	137	37	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	307	987	90	8	609	241	0	0	0	137	37	24
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.83	0.17	1.00	2.00	1.00	0.00	0.00	0.00	1.57	0.43	1.00
Final Sat.:	2880	2933	267	1600	3200	1600	0	0	0	2520	680	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.34	0.34	0.01	0.19	0.15	0.00	0.00	0.00	0.05	0.05	0.02
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.639
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	849	20	0	753	0	267	336	405	19	0	265
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	849	20	0	753	0	267	336	405	19	0	265
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	849	20	0	753	0	267	336	405	19	0	265
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	849	20	0	753	0	267	336	405	19	0	265
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	849	20	0	753	0	267	336	405	19	0	265
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.93	0.07	0.00	2.00	0.00	0.53	0.67	0.80	0.13	0.00	1.87
Final Sat.:	0	4690	110	0	3200	0	848	1067	1286	214	0	2986
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.18	0.00	0.24	0.00	0.31	0.31	0.31	0.09	0.00	0.09
Crit Moves:	****				****		****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.436
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	235	951	0	0	279	590	0	0	0	171	0	12	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	235	951	0	0	279	590	0	0	0	171	0	12	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	235	951	0	0	279	0	0	0	0	171	0	12	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	235	951	0	0	279	0	0	0	0	171	0	12	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	235	951	0	0	279	0	0	0	0	171	0	12	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.93	0.00	0.07	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1495	0	105	
Capacity Analysis Module:													
Vol/Sat:	0.15	0.30	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.11	0.00	0.11	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.611
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	335	113	15	432	0	848	5	237	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	335	113	15	432	0	848	5	237	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	335	113	15	432	0	848	5	237	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	335	113	15	432	0	848	5	237	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	335	113	15	432	0	848	5	237	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.50	0.50	1.00	1.00	0.00	1.56	0.01	0.43	0.00	0.00	0.00	
Final Sat.:	0	2393	807	1600	1600	0	2490	15	696	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.14	0.14	0.01	0.27	0.00	0.34	0.34	0.34	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.483
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	824	76	198	834	0	0	0	0	107	0	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	824	76	198	834	0	0	0	0	107	0	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	824	76	198	834	0	0	0	0	107	0	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	824	76	198	834	0	0	0	0	107	0	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	824	76	198	834	0	0	0	0	107	0	125
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.83	0.17	0.38	1.62	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2930	270	614	2586	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.12	0.32	0.00	0.00	0.00	0.00	0.07	0.00	0.08
Crit Moves:		****		****								****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.801
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	D

Street Name:	Fair Oaks Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0
Volume Module:													
Base Vol:	9	660	92	396	712	25	29	215	8	124	225	255	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	660	92	396	712	25	29	215	8	124	225	255	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	660	92	396	712	25	29	215	8	124	225	255	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	660	92	396	712	25	29	215	8	124	225	255	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	660	92	396	712	25	29	215	8	124	225	255	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.76	0.24	1.00	1.93	0.07	1.00	0.96	0.04	1.00	0.47	0.53	
Final Sat.:	1600	2809	391	1600	3091	109	1600	1543	57	1600	750	850	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.23	0.24	0.25	0.23	0.23	0.02	0.14	0.14	0.08	0.30	0.30	
Crit Moves:			****	****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.513
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	211	0	209	172	566	0	0	440	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	211	0	209	172	566	0	0	440	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	211	0	209	172	566	0	0	440	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	211	0	209	172	566	0	0	440	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	211	0	209	172	566	0	0	440	118
OvlAdjVol:												1
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.13	0.11	0.18	0.00	0.00	0.28	0.07
OvlAdjV/S:												0.00
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.840
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	D

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	130	240	12	37	254	383	429	628	206	8	374	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	130	240	12	37	254	383	429	628	206	8	374	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	130	240	12	37	254	383	429	628	206	8	374	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	240	12	37	254	383	429	628	206	8	374	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	130	240	12	37	254	383	429	628	206	8	374	28
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.34	0.63	0.03	0.13	0.87	1.00	1.00	1.00	1.00	1.00	0.93	0.07
Final Sat.:	545	1005	50	203	1397	1600	1600	1600	1600	1600	1489	111
Capacity Analysis Module:												
Vol/Sat:	0.08	0.24	0.24	0.02	0.18	0.24	0.27	0.39	0.13	0.01	0.25	0.25
Crit Moves:	****					****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.444
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!	0
Volume Module:													
Base Vol:	9	730	329	36	748	25	15	28	18	236	33	16	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	730	329	36	748	25	15	28	18	236	33	16	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	730	329	36	748	25	15	28	18	236	33	16	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	730	329	36	748	25	15	28	18	236	33	16	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	730	329	36	748	25	15	28	18	236	33	16	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.02	1.98	1.00	0.09	1.85	0.06	0.25	0.46	0.29	0.88	0.12	1.00	
Final Sat.:	39	3161	1600	142	2959	99	393	734	472	1404	196	1600	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.23	0.21	0.02	0.25	0.25	0.01	0.04	0.04	0.15	0.17	0.01	
Crit Moves:	****				****			****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.421
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0	
Volume Module:													
Base Vol:	76	861	15	24	819	127	94	15	70	2	10	18	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	76	861	15	24	819	127	94	15	70	2	10	18	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	76	861	15	24	819	127	94	15	70	2	10	18	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	76	861	15	24	819	127	94	15	70	2	10	18	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	76	861	15	24	819	127	94	15	70	2	10	18	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.97	0.03	1.00	1.73	0.27	0.86	0.14	1.00	0.07	0.33	0.60	
Final Sat.:	1600	3145	55	1600	2770	430	1380	220	1600	107	533	960	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.27	0.27	0.02	0.30	0.30	0.06	0.07	0.04	0.00	0.02	0.02	
Crit Moves:	****				****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.469
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	192	0	385	279	416	0	0	470	89	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	192	0	385	279	416	0	0	470	89	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	192	0	385	279	416	0	0	470	89	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	192	0	385	279	416	0	0	470	89	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	192	0	385	279	416	0	0	470	89	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	1.00	2.00	0.00	0.00	1.68	0.32	
Final Sat.:	0	0	0	1600	0	3200	1600	3200	0	0	2691	509	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.12	0.00	0.12	0.17	0.13	0.00	0.00	0.17	0.17	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.616
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	120	516	15	72	560	53	124	351	158	29	317	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	516	15	72	560	53	124	351	158	29	317	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	120	516	15	72	560	53	124	351	158	29	317	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	516	15	72	560	53	124	351	158	29	317	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	120	516	15	72	560	53	124	351	158	29	317	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.38	0.62	1.00	1.74	0.26
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2207	993	1600	2787	413
Capacity Analysis Module:												
Vol/Sat:	0.08	0.32	0.01	0.05	0.35	0.03	0.08	0.16	0.16	0.02	0.11	0.11
Crit Moves:	****				****		****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.666
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	68	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	49	798	37	178	923	43	76	273	50	74	221	173
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	49	798	37	178	923	43	76	273	50	74	221	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	798	37	178	923	43	76	273	50	74	221	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	798	37	178	923	43	76	273	50	74	221	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	798	37	178	923	43	76	273	50	74	221	173
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.91	0.09	1.00	0.85	0.15	1.00	0.56	0.44
Final Sat.:	1600	3058	142	1600	3058	142	1600	1352	248	1600	897	703
Capacity Analysis Module:												
Vol/Sat:	0.03	0.26	0.26	0.11	0.30	0.30	0.05	0.20	0.20	0.05	0.25	0.25
Crit Moves:		****		****			****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	71	0	317	0	0	0	0	791	156	139	1049	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	71	0	317	0	0	0	0	791	156	139	1049	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	71	0	317	0	0	0	0	791	156	139	1049	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	71	0	317	0	0	0	0	791	156	139	1049	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	71	0	317	0	0	0	0	791	156	139	1049	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00	
Final Sat.:	293	0	1307	0	0	0	0	2673	527	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.00	0.24	0.00	0.00	0.00	0.00	0.30	0.30	0.09	0.33	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.681
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	83	0	407	355	557	0	0	597	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	83	0	407	355	557	0	0	597	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	83	0	407	355	557	0	0	597	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	83	0	407	355	557	0	0	597	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	83	0	407	355	557	0	0	597	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.82	0.18
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2917	283
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.25	0.22	0.17	0.00	0.00	0.20	0.20
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.309
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	255	0	40	0	0	0	0	652	219	26	512	247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	0	40	0	0	0	0	652	219	26	512	247
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	255	0	40	0	0	0	0	652	219	26	512	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	255	0	40	0	0	0	0	652	219	26	512	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	255	0	40	0	0	0	0	652	219	26	512	247
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.03	0.00	0.00	0.00	0.00	0.20	0.14	0.02	0.16	0.15
Crit Moves:	****							****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.805
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	74	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	187	474	32	120	533	72	105	755	179	28	862	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	474	32	120	533	72	105	755	179	28	862	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	474	32	120	533	72	105	755	179	28	862	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	474	32	120	533	72	105	755	179	28	862	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	474	32	120	533	72	105	755	179	28	862	63
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.62	0.38	1.00	1.86	0.14
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2587	613	1600	2982	218
Capacity Analysis Module:												
Vol/Sat:	0.12	0.30	0.02	0.08	0.33	0.05	0.07	0.29	0.29	0.02	0.29	0.29
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	109	Level Of Service:	D

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	384	685	55	77	1007	57	86	352	322	74	340	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	384	685	55	77	1007	57	86	352	322	74	340	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	384	685	55	77	1007	57	86	352	322	74	340	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	384	685	55	77	1007	57	86	352	322	74	340	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	384	685	55	77	1007	57	86	352	322	74	340	56
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.04	0.96	1.00	1.72	0.28
Final Sat.:	1600	3200	1600	1600	3029	171	1600	1671	1529	1600	2747	453
Capacity Analysis Module:												
Vol/Sat:	0.24	0.21	0.03	0.05	0.33	0.33	0.05	0.21	0.21	0.05	0.12	0.12
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.123
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	53	1144	398	121	698	73	164	704	23	289	335	59	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	53	1144	398	121	698	73	164	704	23	289	335	59	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	53	1144	398	121	698	73	164	704	23	289	335	59	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	53	1144	398	121	698	73	164	704	23	289	335	59	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	53	1144	398	121	698	73	164	704	23	289	335	59	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.91	0.09	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4648	152	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.72	0.25	0.08	0.44	0.05	0.10	0.15	0.15	0.18	0.07	0.04	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.671
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	95	Level Of Service:	B

Street Name:	Fair Oaks Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	0	0	0	2	0	0	0	1	2	0	3	0	0	0	0	3	0	1
Volume Module:																				
Base Vol:	0	0	0	1319	0	17	20	1021	0	0	636	1041								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	1319	0	17	20	1021	0	0	636	1041								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	1319	0	17	20	1021	0	0	636	1041								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
Reduced Vol:	0	0	0	1319	0	17	20	1021	0	0	636	1041								
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
FinalVolume:	0	0	0	1319	0	17	20	1021	0	0	636	1041								
Saturation Flow Module:																				
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600								
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00								
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00								
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600								
Capacity Analysis Module:																				
Vol/Sat:	0.00	0.00	0.00	0.46	0.00	0.01	0.01	0.21	0.00	0.00	0.13	0.65								
Crit Moves:				****				****												

APPENDIX B

ICU WORKSHEETS

CONCEPT 1
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.564
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	161	1443	49	1	858	132	0	0	0	252	58	75
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1443	49	1	858	132	0	0	0	252	58	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1443	49	1	858	132	0	0	0	252	58	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1443	49	1	858	132	0	0	0	252	58	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1443	49	1	858	132	0	0	0	252	58	75
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.93	0.07	1.00	2.00	1.00	0.00	0.00	0.00	1.63	0.37	1.00
Final Sat.:	2880	3095	105	1600	3200	1600	0	0	0	2601	599	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.47	0.47	0.00	0.27	0.08	0.00	0.00	0.00	0.10	0.10	0.05
Crit Moves:			****	****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.611
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	997	16	0	1107	0	188	91	70	5	0	468
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	997	16	0	1107	0	188	91	70	5	0	468
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	997	16	0	1107	0	188	91	70	5	0	468
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	997	16	0	1107	0	188	91	70	5	0	468
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	997	16	0	1107	0	188	91	70	5	0	468
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	1.00	0.60	0.40	0.02	0.00	1.98
Final Sat.:	0	4724	76	0	3200	0	1600	958	642	34	0	3166
Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.21	0.00	0.35	0.00	0.12	0.09	0.11	0.15	0.00	0.15
Crit Moves:	****				****		****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.377
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	135	758	0	0	355	1180	0	0	0	95	0	18	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	135	758	0	0	355	1180	0	0	0	95	0	18	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	135	758	0	0	355	0	0	0	0	95	0	18	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	135	758	0	0	355	0	0	0	0	95	0	18	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	135	758	0	0	355	0	0	0	0	95	0	18	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.84	0.00	0.16	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1345	0	255	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.24	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.06	0.00	0.07	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.440
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	A

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	419	142	23	426	0	473	3	80	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	419	142	23	426	0	473	3	80	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	419	142	23	426	0	473	3	80	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	419	142	23	426	0	473	3	80	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	419	142	23	426	0	473	3	80	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	1.70	0.01	0.29	0.00	0.00	0.00
Final Sat.:	0	2390	810	1600	1600	0	2722	17	460	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.18	0.01	0.27	0.00	0.17	0.17	0.17	0.00	0.00	0.00
Crit Moves:					****				****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	7.5
Optimal Cycle:	55	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1088	76	175	1084	0	0	0	0	192	0	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.60	0.60	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.87	0.13	0.28	1.72	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3341	233	316	1955	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.33	0.55	0.55	0.00	0.00	0.00	0.00	0.11	0.00	0.08
Crit Moves:					****					****		
Green/Cycle:	0.00	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.16	0.00	0.16
Volume/Cap:	0.00	0.39	0.39	0.66	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.48
Delay/Veh:	0.0	2.0	2.0	3.8	3.8	0.0	0.0	0.0	0.0	44.9	0.0	39.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	2.0	2.0	3.8	3.8	0.0	0.0	0.0	0.0	44.9	0.0	39.6
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	5	5	9	9	0	0	0	0	7	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1088	179	43	698	194	45	228	8	66	187	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1088	179	43	698	194	45	228	8	66	187	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1088	179	43	698	194	45	228	8	66	187	249
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.93	0.93	0.13	0.92	0.92	0.28	1.00	1.00	0.47	0.91	0.91
Lanes:	1.00	1.72	0.28	1.00	1.57	0.43	1.00	0.97	0.03	1.00	0.43	0.57
Final Sat.:	454	3035	499	245	2732	759	524	1826	64	901	745	992
Capacity Analysis Module:												
Vol/Sat:	0.07	0.36	0.36	0.18	0.26	0.26	0.09	0.12	0.12	0.07	0.25	0.25
Crit Moves:		****									****	
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.12	0.61	0.61	0.30	0.43	0.43	0.21	0.30	0.30	0.18	0.61	0.61
Delay/Veh:	9.3	13.8	13.8	11.5	11.5	11.5	19.4	20.0	20.0	18.9	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.3	13.8	13.8	11.5	11.5	11.5	19.4	20.0	20.0	18.9	24.6	24.6
LOS by Move:	A	B	B	B	B	B	B	B	B	B	C	C
HCM2kAvgQ:	1	13	13	1	8	8	1	5	5	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.270
Loss Time (sec):	0	Average Delay (sec/veh):	8.5
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	106	0	128	155	388	0	0	363	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	106	0	128	155	388	0	0	363	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	106	0	128	155	388	0	0	363	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	128	155	388	0	0	363	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	106	0	128	155	388	0	0	363	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.47	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	901	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.17	0.11	0.00	0.00	0.19	0.09
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.29	0.00	0.29	0.71	0.71	0.00	0.00	0.71	1.00
Volume/Cap:	0.00	0.00	0.00	0.10	0.00	0.27	0.24	0.15	0.00	0.00	0.27	0.09
Delay/Veh:	0.0	0.0	0.0	25.8	0.0	27.4	5.4	4.8	0.0	0.0	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.8	0.0	27.4	5.4	4.8	0.0	0.0	5.4	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	2	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	89	257	3	16	173	230	238	276	118	2	492	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	257	3	16	173	230	238	276	118	2	492	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	257	3	16	173	230	238	276	118	2	492	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	257	3	16	173	230	238	276	118	2	492	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	257	3	16	173	230	238	276	118	2	492	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.96	0.96	0.85	0.34	1.00	0.85	0.52	0.99	0.99
Lanes:	0.25	0.74	0.01	0.08	0.92	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	422	1217	14	155	1674	1615	648	1900	1615	993	1683	188
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.10	0.10	0.14	0.37	0.15	0.07	0.00	0.29	0.29
Crit Moves:		****					****					
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.63	0.63	0.63	0.63	0.63	0.63
Volume/Cap:	0.58	0.58	0.58	0.28	0.28	0.39	0.58	0.23	0.12	0.00	0.46	0.46
Delay/Veh:	26.9	26.9	26.9	22.7	22.7	23.9	12.6	7.9	7.2	6.7	9.7	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.9	26.9	26.9	22.7	22.7	23.9	12.6	7.9	7.2	6.7	9.7	9.7
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	9	9	9	4	4	5	5	4	1	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	70	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	622	295	108	1330	19	18	49	17	353	28	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	622	295	108	1330	19	18	49	17	353	28	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	622	295	108	1330	19	18	49	17	353	28	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	622	295	108	1330	19	18	49	17	353	28	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	622	295	108	1330	19	18	49	17	353	28	47
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.79	0.79	0.79	0.89	0.89	0.89	0.65	0.65	0.85
Lanes:	0.01	1.99	1.00	0.15	1.82	0.03	0.21	0.59	0.20	0.93	0.07	1.00
Final Sat.:	16	3413	1615	223	2746	39	361	982	341	1142	91	1615
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.48	0.48	0.48	0.05	0.05	0.05	0.31	0.31	0.03
Crit Moves:					****						****	
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.30	0.30	0.30	0.79	0.79	0.79	0.13	0.13	0.13	0.79	0.79	0.07
Delay/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.7	19.7	19.7	35.8	35.8	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.7	19.7	19.7	35.8	35.8	19.2
LOS by Move:	A	A	A	B	B	B	B	B	B	D	D	B
HCM2kAvgQ:	5	5	4	19	19	19	2	2	2	12	12	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	0	Average Delay (sec/veh):	9.6
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0	1!	0	0
Volume Module:													
Base Vol:	176	1336	8	5	907	61	180	10	95	13	23	49	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	1336	8	5	907	61	180	10	95	13	23	49	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	1336	8	5	907	61	180	10	95	13	23	49	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	1336	8	5	907	61	180	10	95	13	23	49	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	1336	8	5	907	61	180	10	95	13	23	49	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.95	0.95	0.15	0.94	0.94	0.65	0.65	0.85	0.88	0.88	0.88	
Lanes:	1.00	1.99	0.01	1.00	1.87	0.13	0.95	0.05	1.00	0.15	0.27	0.58	
Final Sat.:	471	3585	21	283	3352	225	1166	65	1615	257	454	967	
Capacity Analysis Module:													
Vol/Sat:	0.37	0.37	0.37	0.02	0.27	0.27	0.15	0.15	0.06	0.05	0.05	0.05	
Crit Moves:		****						****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.53	0.53	0.53	0.02	0.38	0.38	0.53	0.53	0.20	0.17	0.17	0.17	
Delay/Veh:	8.4	7.0	7.0	4.4	6.0	6.0	31.0	31.0	26.8	26.5	26.5	26.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.4	7.0	7.0	4.4	6.0	6.0	31.0	31.0	26.8	26.5	26.5	26.5	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	3	10	10	0	6	6	5	5	2	2	2	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	193	0	301	392	400	0	0	345	94	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	193	0	301	392	400	0	0	345	94	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	193	0	301	392	400	0	0	345	94	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	193	0	301	392	400	0	0	345	94	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	193	0	301	392	400	0	0	345	94	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.17	xxxx	1.83	1.00	2.00	0.00	0.00	1.57	0.43	
Final Sat.:	0	0	0	1875	0	2925	1600	3200	0	0	2515	685	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.10	0.25	0.13	0.00	0.00	0.14	0.14	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.688
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Fremont Av							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	53	679	21	121	584	50	136	310	104	21	235	96	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	53	679	21	121	584	50	136	310	104	21	235	96	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	53	679	21	121	584	50	136	310	104	21	235	96	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	53	679	21	121	584	50	136	310	104	21	235	96	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	53	679	21	121	584	50	136	310	104	21	235	96	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.50	0.50	1.00	1.42	0.58	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2396	804	1600	2272	928	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.42	0.01	0.08	0.37	0.03	0.09	0.13	0.13	0.01	0.10	0.10	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	62	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	69	973	27	86	965	35	62	227	87	58	217	149
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	973	27	86	965	35	62	227	87	58	217	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	973	27	86	965	35	62	227	87	58	217	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	973	27	86	965	35	62	227	87	58	217	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	973	27	86	965	35	62	227	87	58	217	149
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.72	0.28	1.00	0.59	0.41
Final Sat.:	1600	3114	86	1600	3088	112	1600	1157	443	1600	949	651
Capacity Analysis Module:												
Vol/Sat:	0.04	0.31	0.31	0.05	0.31	0.31	0.04	0.20	0.20	0.04	0.23	0.23
Crit Moves:		****		****			****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.554
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	168	0	123	0	0	0	0	888	120	91	756	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	168	0	123	0	0	0	0	888	120	91	756	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	168	0	123	0	0	0	0	888	120	91	756	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	168	0	123	0	0	0	0	888	120	91	756	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	168	0	123	0	0	0	0	888	120	91	756	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.58	0.00	0.42	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00	
Final Sat.:	924	0	676	0	0	0	0	2819	381	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.11	0.00	0.18	0.00	0.00	0.00	0.00	0.31	0.32	0.06	0.24	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	B

Street Name:	Pasadena Av							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0	
Volume Module:													
Base Vol:	0	0	0	94	0	329	288	732	0	0	639	130	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	94	0	329	288	732	0	0	639	130	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	94	0	329	288	732	0	0	639	130	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	94	0	329	288	732	0	0	639	130	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	94	0	329	288	732	0	0	639	130	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.66	0.34	
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2659	541	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.21	0.18	0.23	0.00	0.00	0.24	0.24	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.754
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	76	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	146	0	295	0	0	311	0	718	265	241	419	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	0	295	0	0	311	0	718	265	241	419	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	0	295	0	0	311	0	718	265	241	419	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	0	295	0	0	311	0	718	265	241	419	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	146	0	295	0	0	311	0	718	265	241	419	294
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.18	0.00	0.00	0.19	0.00	0.22	0.17	0.15	0.13	0.18
Crit Moves:			****			****		****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.806
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	74	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	154	590	40	51	588	43	107	821	202	36	770	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	590	40	51	588	43	107	821	202	36	770	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	590	40	51	588	43	107	821	202	36	770	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	590	40	51	588	43	107	821	202	36	770	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	590	40	51	588	43	107	821	202	36	770	65
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.61	0.39	1.00	1.84	0.16
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2568	632	1600	2951	249
Capacity Analysis Module:												
Vol/Sat:	0.10	0.37	0.03	0.03	0.37	0.03	0.07	0.32	0.32	0.02	0.26	0.26
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.023
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	406	833	71	56	1164	61	78	273	524	95	334	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	406	833	71	56	1164	61	78	273	524	95	334	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	406	833	71	56	1164	61	78	273	524	95	334	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	406	833	71	56	1164	61	78	273	524	95	334	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	406	833	71	56	1164	61	78	273	524	95	334	45
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.76	0.24
Final Sat.:	1600	3200	1600	1600	3041	159	1600	1600	1600	1600	2820	380
Capacity Analysis Module:												
Vol/Sat:	0.25	0.26	0.04	0.04	0.38	0.38	0.05	0.17	0.33	0.06	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.355
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	112	663	333	65	1049	184	182	681	55	761	1758	64	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	112	663	333	65	1049	184	182	681	55	761	1758	64	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	112	663	333	65	1049	184	182	681	55	761	1758	64	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	112	663	333	65	1049	184	182	681	55	761	1758	64	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	112	663	333	65	1049	184	182	681	55	761	1758	64	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4441	359	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.41	0.21	0.04	0.66	0.12	0.11	0.15	0.15	0.48	0.37	0.04	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.082
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	858	0	628	438	529	0	0	1414	860
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	858	0	628	438	529	0	0	1414	860
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	858	0	628	438	529	0	0	1414	860
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	858	0	628	438	529	0	0	1414	860
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	858	0	628	438	529	0	0	1414	860
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.30	0.00	0.39	0.15	0.11	0.00	0.00	0.29	0.54
Crit Moves:						****	****					****

APPENDIX B

ICU WORKSHEETS

CONCEPT 1
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.697
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	B

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	200	994	362	19	599	60	39	258	156	515	348	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	994	362	19	599	60	39	258	156	515	348	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	200	994	362	19	599	60	39	258	0	515	348	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	994	362	19	599	60	39	258	0	515	348	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	200	994	362	19	599	60	39	258	0	515	348	13
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.20	0.80	1.00	2.73	0.27	1.00	2.00	1.00	1.00	1.93	0.07
Final Sat.:	1600	3519	1281	1600	4363	437	1600	3200	1600	1600	3085	115
Capacity Analysis Module:												
Vol/Sat:	0.13	0.28	0.28	0.01	0.14	0.14	0.02	0.08	0.00	0.32	0.11	0.11
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.547
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	208	1338	105	11	964	194	0	0	0	251	35	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	1338	105	11	964	194	0	0	0	251	35	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	208	1338	105	11	964	194	0	0	0	251	35	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	1338	105	11	964	194	0	0	0	251	35	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	208	1338	105	11	964	194	0	0	0	251	35	45
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.85	0.15	1.00	2.00	1.00	0.00	0.00	0.00	1.76	0.24	1.00
Final Sat.:	2880	2967	233	1600	3200	1600	0	0	0	2808	392	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.45	0.45	0.01	0.30	0.12	0.00	0.00	0.00	0.09	0.09	0.03
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1155	33	0	1222	0	213	323	73	5	0	279
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1155	33	0	1222	0	213	323	73	5	0	279
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1155	33	0	1222	0	213	323	73	5	0	279
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1155	33	0	1222	0	213	323	73	5	0	279
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1155	33	0	1222	0	213	323	73	5	0	279
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.70	1.06	0.24	0.04	0.00	1.96
Final Sat.:	0	4667	133	0	3200	0	1119	1697	384	56	0	3144
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.25	0.00	0.38	0.00	0.19	0.19	0.19	0.09	0.00	0.09
Crit Moves:	****				****		****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	82	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	138	1127	0	0	395	593	0	0	0	254	0	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	138	1127	0	0	395	593	0	0	0	254	0	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	138	1127	0	0	395	0	0	0	0	254	0	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	138	1127	0	0	395	0	0	0	0	254	0	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	138	1127	0	0	395	0	0	0	0	254	0	25	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.91	0.00	0.09	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1457	0	143	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.35	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.16	0.00	0.17	
Crit Moves:		****										****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.702
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	139	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	379	147	42	605	0	883	6	146	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	379	147	42	605	0	883	6	146	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	379	147	42	605	0	883	6	146	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	379	147	42	605	0	883	6	146	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	379	147	42	605	0	883	6	146	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.44	0.56	1.00	1.00	0.00	1.71	0.01	0.28	0.00	0.00	0.00
Final Sat.:	0	2306	894	1600	1600	0	2730	19	451	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.03	0.38	0.00	0.32	0.32	0.32	0.00	0.00	0.00
Crit Moves:					****		****					

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.593
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1088	76	175	1084	0	0	0	0	192	0	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.87	0.13	0.28	1.72	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2991	209	445	2755	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.36	0.11	0.39	0.00	0.00	0.00	0.00	0.12	0.00	0.08
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.723
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1088	179	43	698	194	45	228	8	66	187	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1088	179	43	698	194	45	228	8	66	187	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1088	179	43	698	194	45	228	8	66	187	249
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.57	0.43	1.00	0.97	0.03	1.00	0.43	0.57
Final Sat.:	1600	2748	452	1600	2504	696	1600	1546	54	1600	686	914
Capacity Analysis Module:												
Vol/Sat:	0.02	0.40	0.40	0.03	0.28	0.28	0.03	0.15	0.15	0.04	0.27	0.27
Crit Moves:		****			****			****			****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.404
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	106	0	128	155	388	0	0	363	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	106	0	128	155	388	0	0	363	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	106	0	128	155	388	0	0	363	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	128	155	388	0	0	363	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	106	0	128	155	388	0	0	363	139
OvlAdjVol:												80
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.08	0.10	0.12	0.00	0.00	0.23	0.09
OvlAdjV/S:												0.05
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.719
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	89	257	3	16	173	230	238	276	118	2	492	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	257	3	16	173	230	238	276	118	2	492	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	257	3	16	173	230	238	276	118	2	492	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	257	3	16	173	230	238	276	118	2	492	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	257	3	16	173	230	238	276	118	2	492	55
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.25	0.74	0.01	0.08	0.92	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	408	1178	14	135	1465	1600	1600	1600	1600	1600	1439	161
Capacity Analysis Module:												
Vol/Sat:	0.06	0.22	0.22	0.01	0.12	0.14	0.15	0.17	0.07	0.00	0.34	0.34
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.730
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 1	1 0	1	0 1	0	1 0	1 0	0	1! 0	0	0 1	0 0	1
Volume Module:													
Base Vol:	3	622	295	108	1330	19	18	49	17	353	28	47	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	622	295	108	1330	19	18	49	17	353	28	47	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	622	295	108	1330	19	18	49	17	353	28	47	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	622	295	108	1330	19	18	49	17	353	28	47	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	622	295	108	1330	19	18	49	17	353	28	47	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.15	1.82	0.03	0.21	0.59	0.20	0.93	0.07	1.00	
Final Sat.:	15	3185	1600	237	2921	42	343	933	324	1482	118	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.20	0.18	0.07	0.46	0.46	0.01	0.05	0.05	0.22	0.24	0.03	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.589
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	176	1336	8	5	907	61	180	10	95	13	23	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	176	1336	8	5	907	61	180	10	95	13	23	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	176	1336	8	5	907	61	180	10	95	13	23	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	176	1336	8	5	907	61	180	10	95	13	23	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	176	1336	8	5	907	61	180	10	95	13	23	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.99	0.01	1.00	1.87	0.13	0.95	0.05	1.00	0.15	0.27	0.58
Final Sat.:	1600	3181	19	1600	2998	202	1516	84	1600	245	433	922
Capacity Analysis Module:												
Vol/Sat:	0.11	0.42	0.42	0.00	0.30	0.30	0.11	0.12	0.06	0.01	0.05	0.05
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.554
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	192	0	467	356	463	0	0	503	90	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	192	0	467	356	463	0	0	503	90	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	192	0	467	356	463	0	0	503	90	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	192	0	467	356	463	0	0	503	90	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	192	0	467	356	463	0	0	503	90	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	1.00	2.00	0.00	0.00	1.70	0.30	
Final Sat.:	0	0	0	1600	0	3200	1600	3200	0	0	2714	486	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.12	0.00	0.15	0.22	0.14	0.00	0.00	0.19	0.19	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.765
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	85	654	22	171	666	63	142	447	101	37	406	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	654	22	171	666	63	142	447	101	37	406	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	654	22	171	666	63	142	447	101	37	406	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	654	22	171	666	63	142	447	101	37	406	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	654	22	171	666	63	142	447	101	37	406	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.63	0.37	1.00	1.58	0.42
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2610	590	1600	2533	667
Capacity Analysis Module:												
Vol/Sat:	0.05	0.41	0.01	0.11	0.42	0.04	0.09	0.17	0.17	0.02	0.16	0.16
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	131	Level Of Service:	D

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	132	1116	47	89	1118	46	105	344	152	111	292	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	132	1116	47	89	1118	46	105	344	152	111	292	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	1116	47	89	1118	46	105	344	152	111	292	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	1116	47	89	1118	46	105	344	152	111	292	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	1116	47	89	1118	46	105	344	152	111	292	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.92	0.08	1.00	1.92	0.08	1.00	0.69	0.31	1.00	0.71	0.29
Final Sat.:	1600	3071	129	1600	3074	126	1600	1110	490	1600	1137	463
Capacity Analysis Module:												
Vol/Sat:	0.08	0.36	0.36	0.06	0.36	0.36	0.07	0.31	0.31	0.07	0.26	0.26
Crit Moves:	****					****		****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.660
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	77	0	358	0	0	0	0	808	150	142	1070	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	77	0	358	0	0	0	0	808	150	142	1070	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	77	0	358	0	0	0	0	808	150	142	1070	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	77	0	358	0	0	0	0	808	150	142	1070	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	77	0	358	0	0	0	0	808	150	142	1070	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.69	0.31	1.00	2.00	0.00	
Final Sat.:	283	0	1317	0	0	0	0	2699	501	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.00	0.27	0.00	0.00	0.00	0.00	0.30	0.30	0.09	0.33	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.779
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	84	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	153	0	433	402	628	0	0	704	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	153	0	433	402	628	0	0	704	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	153	0	433	402	628	0	0	704	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	153	0	433	402	628	0	0	704	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	153	0	433	402	628	0	0	704	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.71	0.29
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2737	463
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.27	0.25	0.20	0.00	0.00	0.26	0.26
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.391
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Street Name:	Monterey Rd							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Split Phase			Split Phase			Permitted			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1	
Volume Module:													
Base Vol:	350	0	142	0	0	0	0	661	329	101	520	332	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	350	0	142	0	0	0	0	661	329	101	520	332	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	350	0	142	0	0	0	0	661	329	101	520	332	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	350	0	142	0	0	0	0	661	329	101	520	332	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	350	0	142	0	0	0	0	661	329	101	520	332	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00	
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600	
Capacity Analysis Module:													
Vol/Sat:	0.12	0.00	0.09	0.00	0.00	0.00	0.00	0.21	0.21	0.06	0.16	0.21	
Crit Moves:	****							****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.892
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	133	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	191	549	39	145	564	74	116	874	181	34	1025	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	191	549	39	145	564	74	116	874	181	34	1025	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	191	549	39	145	564	74	116	874	181	34	1025	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	191	549	39	145	564	74	116	874	181	34	1025	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	191	549	39	145	564	74	116	874	181	34	1025	86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.66	0.34	1.00	1.85	0.15
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2651	549	1600	2952	248
Capacity Analysis Module:												
Vol/Sat:	0.12	0.34	0.02	0.09	0.35	0.05	0.07	0.33	0.33	0.02	0.35	0.35
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.125
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	572	1075	73	77	1335	64	105	365	441	87	338	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	572	1075	73	77	1335	64	105	365	441	87	338	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	572	1075	73	77	1335	64	105	365	441	87	338	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	572	1075	73	77	1335	64	105	365	441	87	338	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	572	1075	73	77	1335	64	105	365	441	87	338	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.71	0.29
Final Sat.:	1600	3200	1600	1600	3054	146	1600	1600	1600	1600	2731	469
Capacity Analysis Module:												
Vol/Sat:	0.36	0.34	0.05	0.05	0.44	0.44	0.07	0.23	0.28	0.05	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.390
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	73	1115	509	140	701	90	244	1374	39	498	712	90	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	73	1115	509	140	701	90	244	1374	39	498	712	90	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	73	1115	509	140	701	90	244	1374	39	498	712	90	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	73	1115	509	140	701	90	244	1374	39	498	712	90	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	73	1115	509	140	701	90	244	1374	39	498	712	90	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.92	0.08	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4668	132	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.70	0.32	0.09	0.44	0.06	0.15	0.29	0.29	0.31	0.15	0.06	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.282
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1	
Volume Module:													
Base Vol:	0	0	0	1238	0	557	661	1178	0	0	713	996	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	1238	0	557	661	1178	0	0	713	996	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	1238	0	557	661	1178	0	0	713	996	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	1238	0	557	661	1178	0	0	713	996	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	1238	0	557	661	1178	0	0	713	996	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.43	0.00	0.35	0.23	0.25	0.00	0.00	0.15	0.62	
Crit Moves:				****			****					****	

APPENDIX B

ICU WORKSHEETS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	229	859	346	11	375	42	34	248	160	465	355	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	229	859	346	11	375	42	34	248	160	465	355	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	229	859	346	11	375	42	34	248	0	465	355	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	859	346	11	375	42	34	248	0	465	355	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	229	859	346	11	375	42	34	248	0	465	355	10
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.14	0.86	1.00	2.70	0.30	1.00	2.00	1.00	1.00	1.95	0.05
Final Sat.:	1600	3422	1378	1600	4317	483	1600	3200	1600	1600	3112	88
Capacity Analysis Module:												
Vol/Sat:	0.14	0.25	0.25	0.01	0.09	0.09	0.02	0.08	0.00	0.29	0.11	0.11
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.415
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	217	1194	49	2	508	197	0	0	0	150	86	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	1194	49	2	508	197	0	0	0	150	86	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	1194	49	2	508	197	0	0	0	150	86	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	1194	49	2	508	197	0	0	0	150	86	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	1194	49	2	508	197	0	0	0	150	86	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.93	0.93	0.85
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.27	0.73	1.00
Final Sat.:	3502	3447	141	1805	3610	1615	0	0	0	2237	1283	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.35	0.35	0.00	0.14	0.12	0.00	0.00	0.00	0.07	0.07	0.04
Crit Moves:		****		****						****		
Green/Cycle:	0.26	0.84	0.84	0.00	0.58	0.58	0.00	0.00	0.00	0.16	0.16	0.16
Volume/Cap:	0.24	0.41	0.41	0.41	0.24	0.21	0.00	0.00	0.00	0.41	0.41	0.26
Delay/Veh:	29.6	2.2	2.2	98.8	10.2	10.1	0.0	0.0	0.0	38.1	38.1	37.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.6	2.2	2.2	98.8	10.2	10.1	0.0	0.0	0.0	38.1	38.1	37.2
LOS by Move:	C	A	A	F	B	B	A	A	A	D	D	D
HCM2kAvgQ:	3	5	5	0	4	3	0	0	0	4	4	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.462
Loss Time (sec):	0	Average Delay (sec/veh):	24.7
Optimal Cycle:	35	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	787	12	0	655	0	209	95	140	9	0	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	787	12	0	655	0	209	95	140	9	0	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	787	12	0	655	0	209	95	140	9	0	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	787	12	0	655	0	209	95	140	9	0	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	787	12	0	655	0	209	95	140	9	0	464
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.88	0.88	0.88	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.94	0.43	0.63	0.04	0.00	1.96
Final Sat.:	0	5098	78	0	3610	0	1582	719	1060	60	0	3178
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.15	0.00	0.18	0.00	0.13	0.13	0.13	0.15	0.00	0.15
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.39	0.39	0.00	0.39	0.00	0.29	0.29	0.29	0.32	0.00	0.32
Volume/Cap:	0.00	0.39	0.39	0.00	0.46	0.00	0.46	0.46	0.46	0.46	0.00	0.45
Delay/Veh:	0.0	22.0	22.0	0.0	22.8	0.0	29.7	29.7	29.7	27.3	0.0	27.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	22.0	22.0	0.0	22.8	0.0	29.7	29.7	29.7	27.3	0.0	27.2
LOS by Move:	A	C	C	A	C	A	C	C	C	C	A	C
HCM2kAvgQ:	0	6	6	0	8	0	6	6	6	6	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.297
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	0	0 0	1 0	1	0 0	0 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	141	653	0	0	305	1156	0	0	0	74	0	13	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	141	653	0	0	305	1156	0	0	0	74	0	13	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	141	653	0	0	305	0	0	0	0	74	0	13	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	141	653	0	0	305	0	0	0	0	74	0	13	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	141	653	0	0	305	0	0	0	0	74	0	13	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.85	0.00	0.15	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1264	0	222	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.18	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.06	0.00	0.06	
Crit Moves:	****				****					****			
Green/Cycle:	0.26	0.80	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.20	0.00	0.20	
Volume/Cap:	0.30	0.23	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.30	0.00	0.30	
Delay/Veh:	29.8	2.4	0.0	0.0	12.7	0.0	0.0	0.0	0.0	34.9	0.0	34.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	29.8	2.4	0.0	0.0	12.7	0.0	0.0	0.0	0.0	34.9	0.0	34.9	
LOS by Move:	C	A	A	A	B	A	A	A	A	C	A	C	
HCM2kAvgQ:	4	3	0	0	5	0	0	0	0	2	0	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.376
Loss Time (sec):	0	Average Delay (sec/veh):	22.6
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	319	145	28	348	0	474	4	71	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	319	145	28	348	0	474	4	71	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	319	145	28	348	0	474	4	71	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	319	145	28	348	0	474	4	71	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	319	145	28	348	0	474	4	71	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.38	0.63	1.00	1.00	0.00	1.76	0.01	0.23	0.00	0.00	0.00	
Final Sat.:	0	2365	1075	1805	1900	0	2854	21	369	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.13	0.13	0.02	0.18	0.00	0.17	0.19	0.19	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.26	0.26	0.36	0.62	0.00	0.38	0.38	0.38	0.00	0.00	0.00	
Volume/Cap:	0.00	0.51	0.51	0.04	0.29	0.00	0.44	0.51	0.51	0.00	0.00	0.00	
Delay/Veh:	0.0	31.8	31.8	20.9	8.8	0.0	23.5	24.4	24.4	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	31.8	31.8	20.9	8.8	0.0	23.5	24.4	24.4	0.0	0.0	0.0	
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A	
HCM2kAvgQ:	0	7	7	1	5	0	6	8	8	0	0	0	

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.513
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	937	61	168	969	0	0	0	0	154	0	115
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	937	61	168	969	0	0	0	0	154	0	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	937	61	168	969	0	0	0	0	154	0	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	61	168	969	0	0	0	0	154	0	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	937	61	168	969	0	0	0	0	154	0	115
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.88	0.12	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3004	196	473	2727	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.31	0.11	0.36	0.00	0.00	0.00	0.00	0.10	0.00	0.07
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.677
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	19	859	165	59	441	173	36	213	3	43	173	303
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	859	165	59	441	173	36	213	3	43	173	303
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	859	165	59	441	173	36	213	3	43	173	303
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	859	165	59	441	173	36	213	3	43	173	303
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	19	859	165	59	441	173	36	213	3	43	173	303
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	1.44	0.56	1.00	0.99	0.01	1.00	0.36	0.64
Final Sat.:	1600	2684	516	1600	2298	902	1600	1578	22	1600	582	1018
Capacity Analysis Module:												
Vol/Sat:	0.01	0.32	0.32	0.04	0.19	0.19	0.02	0.13	0.14	0.03	0.30	0.30
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.416
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	108	0	134	157	374	0	0	375	146
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	108	0	134	157	374	0	0	375	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	108	0	134	157	374	0	0	375	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	108	0	134	157	374	0	0	375	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	108	0	134	157	374	0	0	375	146
OvlAdjVol:												86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.08	0.10	0.12	0.00	0.00	0.23	0.09
OvlAdjV/S:												0.05
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	96	224	3	11	127	210	235	247	117	2	447	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	224	3	11	127	210	235	247	117	2	447	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	224	3	11	127	210	235	247	117	2	447	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	224	3	11	127	210	235	247	117	2	447	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	96	224	3	11	127	210	235	247	117	2	447	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.30	0.69	0.01	0.08	0.92	1.00	1.00	1.00	1.00	1.00	0.92	0.08
Final Sat.:	476	1110	15	128	1472	1600	1600	1600	1600	1600	1466	134
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.20	0.01	0.09	0.13	0.15	0.15	0.07	0.00	0.31	0.30
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.667
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1	
Volume Module:													
Base Vol:	3	523	267	67	1298	16	12	37	20	305	21	24	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	523	267	67	1298	16	12	37	20	305	21	24	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	523	267	67	1298	16	12	37	20	305	21	24	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	523	267	67	1298	16	12	37	20	305	21	24	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	523	267	67	1298	16	12	37	20	305	21	24	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.10	1.88	0.02	0.17	0.54	0.29	0.94	0.06	1.00	
Final Sat.:	18	3182	1600	155	3008	37	278	858	464	1497	103	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.16	0.17	0.04	0.43	0.43	0.01	0.04	0.04	0.19	0.20	0.02	
Crit Moves:	****				****			****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.476
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0	1!	0	0
Volume Module:													
Base Vol:	130	1128	6	3	646	39	131	6	67	9	15	36	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	130	1128	6	3	646	39	131	6	67	9	15	36	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	130	1128	6	3	646	39	131	6	67	9	15	36	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	130	1128	6	3	646	39	131	6	67	9	15	36	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	130	1128	6	3	646	39	131	6	67	9	15	36	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.96	0.04	1.00	0.15	0.25	0.60	
Final Sat.:	1600	3183	17	1600	3018	182	1530	70	1600	240	400	960	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.35	0.35	0.00	0.21	0.21	0.08	0.09	0.04	0.01	0.04	0.04	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	130	0	278	344	417	0	0	266	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	130	0	278	344	417	0	0	266	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	130	0	278	344	417	0	0	266	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	130	0	278	344	417	0	0	266	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	130	0	278	344	417	0	0	266	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.54	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	1.32	0.00	1.68	1.00	2.00	0.00	0.00	1.71	0.29
Final Sat.:	0	0	0	2214	0	2823	1030	3610	0	0	3021	511
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.10	0.33	0.12	0.00	0.00	0.09	0.09
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.23	0.77	0.77	0.00	0.00	0.77	0.77
Volume/Cap:	0.00	0.00	0.00	0.26	0.00	0.43	0.43	0.15	0.00	0.00	0.11	0.11
Delay/Veh:	0.0	0.0	0.0	31.8	0.0	33.4	4.3	3.0	0.0	0.0	2.9	2.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.8	0.0	33.4	4.3	3.0	0.0	0.0	2.9	2.9
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	5	4	2	0	0	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	0	Average Delay (sec/veh):	13.7
Optimal Cycle:	25	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	43	578	16	94	463	42	127	257	88	12	140	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	578	16	94	463	42	127	257	88	12	140	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	43	578	16	94	463	42	127	257	88	12	140	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	578	16	94	463	42	127	257	88	12	140	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	43	578	16	94	463	42	127	257	88	12	140	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.42	1.00	0.85	0.36	1.00	0.85	0.53	0.91	0.91	0.40	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.40	0.60
Final Sat.:	802	1900	1615	676	1900	1615	1000	2586	886	753	2413	1034
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.01	0.14	0.24	0.03	0.13	0.10	0.10	0.02	0.06	0.06
Crit Moves:		****					****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.08	0.43	0.01	0.20	0.35	0.04	0.43	0.34	0.34	0.05	0.20	0.20
Delay/Veh:	4.6	6.5	4.4	5.2	5.9	4.5	29.5	27.8	27.8	25.4	26.5	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.6	6.5	4.4	5.2	5.9	4.5	29.5	27.8	27.8	25.4	26.5	26.5
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	8	0	1	6	0	4	4	4	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.487
Loss Time (sec):	0	Average Delay (sec/veh):	21.6
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	23	716	17	89	627	18	58	187	45	45	138	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	716	17	89	627	18	58	187	45	45	138	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	716	17	89	627	18	58	187	45	45	138	211
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	716	17	89	627	18	58	187	45	45	138	211
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	716	17	89	627	18	58	187	45	45	138	211
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.97	0.95	0.91	0.91
Lanes:	1.00	1.95	0.05	1.00	1.94	0.06	1.00	0.81	0.19	1.00	0.40	0.60
Final Sat.:	1805	3514	83	1805	3495	100	1805	1487	358	1805	683	1045
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.20	0.05	0.18	0.18	0.03	0.13	0.13	0.02	0.20	0.20
Crit Moves:		****		****			****				****	
Green/Cycle:	0.03	0.42	0.42	0.10	0.48	0.48	0.40	0.40	0.40	0.08	0.41	0.41
Volume/Cap:	0.37	0.49	0.49	0.49	0.37	0.37	0.18	0.31	0.31	0.31	0.49	0.49
Delay/Veh:	50.9	21.5	21.5	44.5	16.3	16.3	19.9	20.8	20.8	44.7	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.9	21.5	21.5	44.5	16.3	16.3	19.9	20.8	20.8	44.7	22.0	22.0
LOS by Move:	D	C	C	D	B	B	B	C	C	D	C	C
HCM2kAvgQ:	1	9	9	3	7	7	1	5	5	2	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.461
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	154	0	138	0	0	0	0	832	112	104	710	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	0	138	0	0	0	0	832	112	104	710	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	0	138	0	0	0	0	832	112	104	710	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	0	138	0	0	0	0	832	112	104	710	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	0	138	0	0	0	0	832	112	104	710	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	1.00	0.79	1.00	1.00	1.00	1.00	0.93	0.93	0.22	0.95	1.00
Lanes:	0.53	0.00	0.47	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00
Final Sat.:	792	0	710	0	0	0	0	3125	421	417	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.27	0.27	0.25	0.20	0.00
Crit Moves:	****							****				
Green/Cycle:	0.42	0.00	0.42	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.58	0.00
Volume/Cap:	0.46	0.00	0.46	0.00	0.00	0.00	0.00	0.46	0.46	0.43	0.34	0.00
Delay/Veh:	21.3	0.0	21.3	0.0	0.0	0.0	0.0	12.3	12.3	13.1	11.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.3	0.0	21.3	0.0	0.0	0.0	0.0	12.3	12.3	13.1	11.2	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	7	0	7	0	0	0	0	9	9	2	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.499
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	78	0	259	258	617	0	0	561	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	78	0	259	258	617	0	0	561	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	78	0	259	258	617	0	0	561	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	78	0	259	258	617	0	0	561	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	78	0	259	258	617	0	0	561	126
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.63	0.37
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	2867	644
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.16	0.14	0.17	0.00	0.00	0.20	0.20
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.32	0.00	0.32	0.29	0.68	0.00	0.00	0.39	0.39
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.50	0.50	0.25	0.00	0.00	0.50	0.50
Delay/Veh:	0.0	0.0	0.0	23.6	0.0	28.2	30.5	6.3	0.0	0.0	23.3	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.6	0.0	28.2	30.5	6.3	0.0	0.0	23.3	23.3
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	7	7	4	0	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	0	Average Delay (sec/veh):	27.7
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	138	0	277	0	0	225	0	632	206	200	398	274
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	0	277	0	0	225	0	632	206	200	398	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	138	0	277	0	0	225	0	632	206	200	398	274
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	0	277	0	0	225	0	632	206	200	398	274
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	138	0	277	0	0	225	0	632	206	200	398	274
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.17	0.00	0.00	0.14	0.00	0.18	0.13	0.11	0.11	0.17
Crit Moves:			****			****		****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.23	0.00	0.29	0.29	0.19	0.48	0.48
Volume/Cap:	0.14	0.00	0.59	0.00	0.00	0.59	0.00	0.59	0.43	0.59	0.23	0.35
Delay/Veh:	26.4	0.0	32.6	0.0	0.0	36.9	0.0	31.1	29.2	40.1	15.2	16.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.4	0.0	32.6	0.0	0.0	36.9	0.0	31.1	29.2	40.1	15.2	16.5
LOS by Move:	C	A	C	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	8	0	0	7	0	9	5	6	4	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.546
Loss Time (sec): 0 Average Delay (sec/veh): 17.0
Optimal Cycle: 32 Level Of Service: B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	172	502	31	29	471	36	99	689	237	30	677	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	172	502	31	29	471	36	99	689	237	30	677	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	172	502	31	29	471	36	99	689	237	30	677	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	172	502	31	29	471	36	99	689	237	30	677	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	172	502	31	29	471	36	99	689	237	30	677	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	1.00	0.85	0.30	1.00	0.85	0.27	0.91	0.91	0.19	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.88	0.12
Final Sat.:	616	1900	1615	570	1900	1615	507	2583	888	359	3359	218
Capacity Analysis Module:												
Vol/Sat:	0.28	0.26	0.02	0.05	0.25	0.02	0.20	0.27	0.27	0.08	0.20	0.20
Crit Moves:	****							****				
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.55	0.52	0.04	0.10	0.48	0.04	0.40	0.55	0.55	0.17	0.41	0.41
Delay/Veh:	18.6	16.7	12.2	12.7	16.2	12.2	17.3	18.2	18.2	14.7	16.5	16.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.6	16.7	12.2	12.7	16.2	12.2	17.3	18.2	18.2	14.7	16.5	16.5
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	4	10	0	1	9	1	2	11	11	1	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.648
Loss Time (sec):	0	Average Delay (sec/veh):	21.8
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	299	543	53	45	796	48	61	248	403	83	333	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	299	543	53	45	796	48	61	248	403	83	333	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	299	543	53	45	796	48	61	248	403	83	333	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	299	543	53	45	796	48	61	248	403	83	333	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	299	543	53	45	796	48	61	248	403	83	333	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.42	0.86	0.86	0.25	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.00	1.00	1.00	1.79	0.21
Final Sat.:	1805	3610	1615	1805	3376	204	805	1637	1637	466	3171	381
Capacity Analysis Module:												
Vol/Sat:	0.17	0.15	0.03	0.02	0.24	0.24	0.08	0.15	0.25	0.18	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.62	0.53	0.53	0.45	0.36	0.36	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.53	0.28	0.06	0.10	0.65	0.65	0.20	0.40	0.65	0.47	0.28	0.28
Delay/Veh:	15.4	13.0	11.4	15.5	27.6	27.6	21.1	22.8	27.0	25.3	21.6	21.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.4	13.0	11.4	15.5	27.6	27.6	21.1	22.8	27.0	25.3	21.6	21.6
LOS by Move:	B	B	B	B	C	C	C	C	C	C	C	C
HCM2kAvgQ:	6	5	1	1	12	12	1	6	11	3	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.921
Loss Time (sec):	0	Average Delay (sec/veh):	33.1
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	124	678	226	37	1005	169	108	268	37	600	1328	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	124	678	226	37	1005	169	108	268	37	600	1328	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	124	678	226	37	1005	169	108	268	37	600	1328	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	678	226	37	1005	169	108	268	37	600	1328	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	678	226	37	1005	169	108	268	37	600	1328	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.14	1.00	0.85	0.30	1.00	0.85	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.64	0.36	1.00	3.00	1.00
Final Sat.:	270	1900	1615	569	1900	1615	1805	4475	618	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.46	0.36	0.14	0.07	0.53	0.10	0.06	0.06	0.06	0.33	0.26	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.08	0.07	0.07	0.36	0.35	0.35
Volume/Cap:	0.80	0.62	0.24	0.11	0.92	0.18	0.74	0.92	0.92	0.92	0.74	0.08
Delay/Veh:	41.7	15.2	10.7	9.9	31.7	10.2	63.3	76.6	76.6	49.1	30.5	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.7	15.2	10.7	9.9	31.7	10.2	63.3	76.6	76.6	49.1	30.5	22.1
LOS by Move:	D	B	B	A	C	B	E	E	E	D	C	C
HCM2kAvgQ:	5	14	3	1	32	2	5	6	6	22	14	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	0	Average Delay (sec/veh):	17.8
Optimal Cycle:	97	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	938	0	45	22	396	0	0	1386	862
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	938	0	45	22	396	0	0	1386	862
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	938	0	45	22	396	0	0	1386	862
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	938	0	45	22	396	0	0	1386	862
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	938	0	45	22	396	0	0	1386	862
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.27	0.00	0.03	0.01	0.08	0.00	0.00	0.27	0.53
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.33	0.00	0.33	0.01	0.67	0.00	0.00	0.66	0.66
Volume/Cap:	0.00	0.00	0.00	0.81	0.00	0.08	0.81	0.11	0.00	0.00	0.40	0.81
Delay/Veh:	0.0	0.0	0.0	34.8	0.0	23.0	141.3	6.0	0.0	0.0	7.9	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.8	0.0	23.0	141.3	6.0	0.0	0.0	7.9	17.0
LOS by Move:	A	A	A	C	A	C	F	A	A	A	A	B
HCM2kAvgQ:	0	0	0	16	0	1	1	2	0	0	7	21

Note: Queue reported is the number of cars per lane.

APPENDIX B

ICU WORKSHEETS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.964
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	86	545	673	53	748	62	39	463	399	585	312	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	545	673	53	748	62	39	463	399	585	312	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	86	545	673	53	748	62	39	463	0	585	312	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	545	673	53	748	62	39	463	0	585	312	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	86	545	673	53	748	62	39	463	0	585	312	27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.84	0.16
Final Sat.:	1600	3200	1600	1600	4433	367	1600	3200	1600	1600	2945	255
Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.42	0.03	0.17	0.17	0.02	0.14	0.00	0.37	0.11	0.11
Crit Moves:			****	****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.424
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	226	1014	97	11	647	216	0	0	0	182	42	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	226	1014	97	11	647	216	0	0	0	182	42	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	226	1014	97	11	647	216	0	0	0	182	42	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	1014	97	11	647	216	0	0	0	182	42	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	226	1014	97	11	647	216	0	0	0	182	42	38
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.83	0.17	1.00	2.00	1.00	0.00	0.00	0.00	1.63	0.38	1.00
Final Sat.:	2880	2921	279	1600	3200	1600	0	0	0	2600	600	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.35	0.35	0.01	0.20	0.14	0.00	0.00	0.00	0.07	0.07	0.02
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	Level Of Service:	A

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 2	1 0	0	0 2	0 0	0	1 0	1 0	0	0 1!	0 1
Volume Module:												
Base Vol:	0	787	18	0	836	0	271	338	175	8	0	276
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	787	18	0	836	0	271	338	175	8	0	276
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	787	18	0	836	0	271	338	175	8	0	276
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	787	18	0	836	0	271	338	175	8	0	276
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	787	18	0	836	0	271	338	175	8	0	276
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.93	0.07	0.00	2.00	0.00	0.69	0.86	0.45	0.06	0.00	1.94
Final Sat.:	0	4693	107	0	3200	0	1106	1380	714	90	0	3110
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.00	0.26	0.00	0.24	0.24	0.25	0.09	0.00	0.09
Crit Moves:	****				****				****			****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.470
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	176	964	0	0	284	602	0	0	0	247	0	23	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	964	0	0	284	602	0	0	0	247	0	23	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	964	0	0	284	0	0	0	0	247	0	23	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	964	0	0	284	0	0	0	0	247	0	23	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	964	0	0	284	0	0	0	0	247	0	23	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.91	0.00	0.09	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1464	0	136	
Capacity Analysis Module:													
Vol/Sat:	0.11	0.30	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.15	0.00	0.17	
Crit Moves:		****										****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.630
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	77	Level Of Service:	B

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	306	101	24	505	0	832	4	169	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	306	101	24	505	0	832	4	169	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	306	101	24	505	0	832	4	169	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	306	101	24	505	0	832	4	169	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	306	101	24	505	0	832	4	169	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.50	0.50	1.00	1.00	0.00	1.66	0.01	0.34	0.00	0.00	0.00
Final Sat.:	0	2406	794	1600	1600	0	2649	13	538	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.02	0.32	0.00	0.31	0.31	0.31	0.00	0.00	0.00
Crit Moves:					****		****					

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.471
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	836	76	187	858	0	0	0	0	110	0	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	836	76	187	858	0	0	0	0	110	0	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	836	76	187	858	0	0	0	0	110	0	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	836	76	187	858	0	0	0	0	110	0	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	836	76	187	858	0	0	0	0	110	0	118
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.83	0.17	0.36	1.64	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2933	267	573	2627	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.29	0.28	0.12	0.33	0.00	0.00	0.00	0.00	0.07	0.00	0.07
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.713
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	13	692	106	330	736	27	25	206	10	113	215	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	692	106	330	736	27	25	206	10	113	215	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	692	106	330	736	27	25	206	10	113	215	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	692	106	330	736	27	25	206	10	113	215	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	692	106	330	736	27	25	206	10	113	215	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.73	0.27	1.00	1.93	0.07	1.00	0.95	0.05	1.00	0.56	0.44
Final Sat.:	1600	2775	425	1600	3087	113	1600	1526	74	1600	889	711
Capacity Analysis Module:												
Vol/Sat:	0.01	0.25	0.25	0.21	0.24	0.24	0.02	0.13	0.14	0.07	0.24	0.24
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.425
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	173	0	169	145	531	0	0	366	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	0	169	145	531	0	0	366	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	173	0	169	145	531	0	0	366	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	173	0	169	145	531	0	0	366	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	173	0	169	145	531	0	0	366	89
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.11	0.09	0.17	0.00	0.00	0.23	0.06
OvlAdjV/S:												0.00
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.818
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	79	Level Of Service:	D

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	147	232	12	34	248	386	385	601	209	7	368	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	232	12	34	248	386	385	601	209	7	368	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	147	232	12	34	248	386	385	601	209	7	368	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	232	12	34	248	386	385	601	209	7	368	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	232	12	34	248	386	385	601	209	7	368	23
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.38	0.59	0.03	0.12	0.88	1.00	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	602	949	49	193	1407	1600	1600	1600	1600	1600	1506	94
Capacity Analysis Module:												
Vol/Sat:	0.09	0.24	0.24	0.02	0.18	0.24	0.24	0.38	0.13	0.00	0.24	0.24
Crit Moves:	****					****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.456
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	8	750	337	44	760	26	17	30	17	243	35	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	750	337	44	760	26	17	30	17	243	35	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	750	337	44	760	26	17	30	17	243	35	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	750	337	44	760	26	17	30	17	243	35	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	750	337	44	760	26	17	30	17	243	35	19
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.02	1.98	1.00	0.11	1.83	0.06	0.26	0.47	0.27	0.87	0.13	1.00
Final Sat.:	34	3166	1600	170	2930	100	425	750	425	1399	201	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.24	0.21	0.03	0.26	0.26	0.01	0.04	0.04	0.15	0.17	0.01
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.430
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	80	896	16	25	831	130	97	16	73	2	10	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	896	16	25	831	130	97	16	73	2	10	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	896	16	25	831	130	97	16	73	2	10	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	896	16	25	831	130	97	16	73	2	10	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	896	16	25	831	130	97	16	73	2	10	18
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.86	0.14	1.00	0.07	0.33	0.60
Final Sat.:	1600	3144	56	1600	2767	433	1373	227	1600	107	533	960
Capacity Analysis Module:												
Vol/Sat:	0.05	0.28	0.29	0.02	0.30	0.30	0.06	0.07	0.05	0.00	0.02	0.02
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.498
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	104	0	478	294	531	0	0	492	34	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	104	0	478	294	531	0	0	492	34	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	104	0	478	294	531	0	0	492	34	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	104	0	478	294	531	0	0	492	34	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	104	0	478	294	531	0	0	492	34	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	1.00	2.00	0.00	0.00	1.87	0.13	
Final Sat.:	0	0	0	1600	0	3200	1600	3200	0	0	2993	207	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.15	0.18	0.17	0.00	0.00	0.16	0.16	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.599
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	106	524	15	94	552	60	128	359	123	23	295	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	524	15	94	552	60	128	359	123	23	295	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	524	15	94	552	60	128	359	123	23	295	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	524	15	94	552	60	128	359	123	23	295	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	524	15	94	552	60	128	359	123	23	295	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.71	0.29
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2383	817	1600	2736	464
Capacity Analysis Module:												
Vol/Sat:	0.07	0.33	0.01	0.06	0.34	0.04	0.08	0.15	0.15	0.01	0.11	0.11
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.615
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	46	744	35	142	873	34	79	288	63	84	209	164
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	744	35	142	873	34	79	288	63	84	209	164
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	744	35	142	873	34	79	288	63	84	209	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	744	35	142	873	34	79	288	63	84	209	164
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	744	35	142	873	34	79	288	63	84	209	164
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.93	0.08	1.00	0.82	0.18	1.00	0.56	0.44
Final Sat.:	1600	3056	144	1600	3080	120	1600	1313	287	1600	897	703
Capacity Analysis Module:												
Vol/Sat:	0.03	0.24	0.24	0.09	0.28	0.28	0.05	0.22	0.22	0.05	0.23	0.23
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.650
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	73	0	351	0	0	0	0	787	154	146	1022	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	73	0	351	0	0	0	0	787	154	146	1022	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	73	0	351	0	0	0	0	787	154	146	1022	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	73	0	351	0	0	0	0	787	154	146	1022	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	73	0	351	0	0	0	0	787	154	146	1022	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.17	0.00	0.83	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00	
Final Sat.:	275	0	1325	0	0	0	0	2676	524	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.00	0.27	0.00	0.00	0.00	0.00	0.29	0.29	0.09	0.32	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.756
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	76	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	168	0	435	425	510	0	0	564	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	168	0	435	425	510	0	0	564	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	168	0	435	425	510	0	0	564	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	168	0	435	425	510	0	0	564	135
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	168	0	435	425	510	0	0	564	135
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.61	0.39
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2582	618
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.27	0.27	0.16	0.00	0.00	0.22	0.22
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.343
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	306	0	102	0	0	0	0	586	309	70	415	344
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	306	0	102	0	0	0	0	586	309	70	415	344
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	306	0	102	0	0	0	0	586	309	70	415	344
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	306	0	102	0	0	0	0	586	309	70	415	344
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	306	0	102	0	0	0	0	586	309	70	415	344
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.06	0.00	0.00	0.00	0.00	0.18	0.19	0.04	0.13	0.22
Crit Moves:	****								****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.804
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	217	476	33	106	498	72	104	763	191	26	878	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	476	33	106	498	72	104	763	191	26	878	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	476	33	106	498	72	104	763	191	26	878	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	476	33	106	498	72	104	763	191	26	878	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	476	33	106	498	72	104	763	191	26	878	56
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.60	0.40	1.00	1.88	0.12
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2559	641	1600	3008	192
Capacity Analysis Module:												
Vol/Sat:	0.14	0.30	0.02	0.07	0.31	0.05	0.07	0.30	0.30	0.02	0.29	0.29
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	109	Level Of Service:	D

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	397	636	52	71	985	57	81	342	332	71	334	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	397	636	52	71	985	57	81	342	332	71	334	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	397	636	52	71	985	57	81	342	332	71	334	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	397	636	52	71	985	57	81	342	332	71	334	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	397	636	52	71	985	57	81	342	332	71	334	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.01	0.99	1.00	1.74	0.26
Final Sat.:	1600	3200	1600	1600	3025	175	1600	1624	1576	1600	2791	409
Capacity Analysis Module:												
Vol/Sat:	0.25	0.20	0.03	0.04	0.33	0.33	0.05	0.21	0.21	0.04	0.12	0.12
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.147
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	59	1152	395	120	669	80	182	770	24	299	395	64	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	59	1152	395	120	669	80	182	770	24	299	395	64	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	59	1152	395	120	669	80	182	770	24	299	395	64	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	59	1152	395	120	669	80	182	770	24	299	395	64	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	59	1152	395	120	669	80	182	770	24	299	395	64	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.91	0.09	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4655	145	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.72	0.25	0.08	0.42	0.05	0.11	0.17	0.17	0.19	0.08	0.04	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.667
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	98	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	1283	0	38	40	1063	0	0	691	983
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1283	0	38	40	1063	0	0	691	983
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1283	0	38	40	1063	0	0	691	983
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1283	0	38	40	1063	0	0	691	983
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1283	0	38	40	1063	0	0	691	983
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.45	0.00	0.02	0.01	0.22	0.00	0.00	0.14	0.61
Crit Moves:				****				****				

APPENDIX B

ICU WORKSHEETS

CONCEPT 2
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.719
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	81	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	215	982	374	18	636	57	35	242	171	560	338	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	215	982	374	18	636	57	35	242	171	560	338	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	215	982	374	18	636	57	35	242	0	560	338	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	982	374	18	636	57	35	242	0	560	338	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	215	982	374	18	636	57	35	242	0	560	338	12
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.17	0.83	1.00	2.75	0.25	1.00	2.00	1.00	1.00	1.93	0.07
Final Sat.:	1600	3476	1324	1600	4405	395	1600	3200	1600	1600	3090	110
Capacity Analysis Module:												
Vol/Sat:	0.13	0.28	0.28	0.01	0.14	0.14	0.02	0.08	0.00	0.35	0.11	0.11
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.564
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	222	1426	49	1	862	142	0	0	0	263	64	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	222	1426	49	1	862	142	0	0	0	263	64	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	1426	49	1	862	142	0	0	0	263	64	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	1426	49	1	862	142	0	0	0	263	64	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	222	1426	49	1	862	142	0	0	0	263	64	60
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.93	0.07	1.00	2.00	1.00	0.00	0.00	0.00	1.61	0.39	1.00
Final Sat.:	2880	3094	106	1600	3200	1600	0	0	0	2574	626	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.46	0.46	0.00	0.27	0.09	0.00	0.00	0.00	0.10	0.10	0.04
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.616
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1041	17	0	1121	0	189	90	72	5	0	468
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1041	17	0	1121	0	189	90	72	5	0	468
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1041	17	0	1121	0	189	90	72	5	0	468
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1041	17	0	1121	0	189	90	72	5	0	468
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1041	17	0	1121	0	189	90	72	5	0	468
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	1.00	0.59	0.41	0.02	0.00	1.98
Final Sat.:	0	4723	77	0	3200	0	1600	944	656	34	0	3166
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.22	0.00	0.35	0.00	0.12	0.10	0.11	0.15	0.00	0.15
Crit Moves:	****				****		****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.370
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	138	752	0	0	346	1195	0	0	0	91	0	17	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	138	752	0	0	346	1195	0	0	0	91	0	17	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	138	752	0	0	346	0	0	0	0	91	0	17	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	138	752	0	0	346	0	0	0	0	91	0	17	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	138	752	0	0	346	0	0	0	0	91	0	17	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.84	0.00	0.16	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1348	0	252	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.24	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.06	0.00	0.07	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.435
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	408	141	23	412	0	482	3	82	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	408	141	23	412	0	482	3	82	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	408	141	23	412	0	482	3	82	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	408	141	23	412	0	482	3	82	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	408	141	23	412	0	482	3	82	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	1.70	0.01	0.29	0.00	0.00	0.00	
Final Sat.:	0	2378	822	1600	1600	0	2720	17	463	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.17	0.17	0.01	0.26	0.00	0.18	0.18	0.18	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1088	78	190	1093	0	0	0	0	191	0	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1088	78	190	1093	0	0	0	0	191	0	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1088	78	190	1093	0	0	0	0	191	0	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1088	78	190	1093	0	0	0	0	191	0	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1088	78	190	1093	0	0	0	0	191	0	130
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.87	0.13	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2986	214	474	2726	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.36	0.12	0.40	0.00	0.00	0.00	0.00	0.12	0.00	0.08
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.714
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	32	1067	167	40	708	194	50	237	9	67	190	245
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1067	167	40	708	194	50	237	9	67	190	245
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1067	167	40	708	194	50	237	9	67	190	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1067	167	40	708	194	50	237	9	67	190	245
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1067	167	40	708	194	50	237	9	67	190	245
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.73	0.27	1.00	1.57	0.43	1.00	0.96	0.04	1.00	0.44	0.56
Final Sat.:	1600	2767	433	1600	2512	688	1600	1541	59	1600	699	901
Capacity Analysis Module:												
Vol/Sat:	0.02	0.39	0.39	0.03	0.28	0.28	0.03	0.15	0.15	0.04	0.27	0.27
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.404
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Street Name:	Raymond Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1	
Volume Module:													
Base Vol:	0	0	0	105	0	128	154	383	0	0	365	139	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	105	0	128	154	383	0	0	365	139	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	105	0	128	154	383	0	0	365	139	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	105	0	128	154	383	0	0	365	139	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	105	0	128	154	383	0	0	365	139	
OvlAdjVol:												81	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.08	0.10	0.12	0.00	0.00	0.23	0.09	
OvlAdjV/S:												0.05	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.737
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	85	262	3	19	174	261	245	281	101	2	505	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	262	3	19	174	261	245	281	101	2	505	61
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	262	3	19	174	261	245	281	101	2	505	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	262	3	19	174	261	245	281	101	2	505	61
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	262	3	19	174	261	245	281	101	2	505	61
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.24	0.75	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.89	0.11
Final Sat.:	389	1198	14	158	1442	1600	1600	1600	1600	1600	1428	172
Capacity Analysis Module:												
Vol/Sat:	0.05	0.22	0.22	0.01	0.12	0.16	0.15	0.18	0.06	0.00	0.35	0.35
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 1	1 0	1	0 1	0	1 0	1 0	0	1! 0	0	0 1	0 0	1
Volume Module:													
Base Vol:	3	613	295	109	1337	19	18	50	17	354	28	47	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	613	295	109	1337	19	18	50	17	354	28	47	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	613	295	109	1337	19	18	50	17	354	28	47	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	613	295	109	1337	19	18	50	17	354	28	47	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	613	295	109	1337	19	18	50	17	354	28	47	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.15	1.82	0.03	0.21	0.59	0.20	0.93	0.07	1.00	
Final Sat.:	16	3184	1600	238	2920	42	339	941	320	1483	117	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.19	0.18	0.07	0.46	0.46	0.01	0.05	0.05	0.22	0.24	0.03	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0	
Volume Module:													
Base Vol:	173	1306	8	5	919	61	178	10	96	13	23	48	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	173	1306	8	5	919	61	178	10	96	13	23	48	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	173	1306	8	5	919	61	178	10	96	13	23	48	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	173	1306	8	5	919	61	178	10	96	13	23	48	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	173	1306	8	5	919	61	178	10	96	13	23	48	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.95	0.05	1.00	0.15	0.27	0.58	
Final Sat.:	1600	3181	19	1600	3001	199	1515	85	1600	248	438	914	
Capacity Analysis Module:													
Vol/Sat:	0.11	0.41	0.41	0.00	0.31	0.31	0.11	0.12	0.06	0.01	0.05	0.05	
Crit Moves:	****				****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.476
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	184	0	300	388	404	0	0	338	86	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	184	0	300	388	404	0	0	338	86	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	184	0	300	388	404	0	0	338	86	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	184	0	300	388	404	0	0	338	86	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	184	0	300	388	404	0	0	338	86	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.14	0.00	1.86	1.00	2.00	0.00	0.00	1.59	0.41	
Final Sat.:	0	0	0	1825	0	2975	1600	3200	0	0	2551	649	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.10	0.24	0.13	0.00	0.00	0.13	0.13	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.687
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	56	685	21	116	589	51	135	303	106	21	233	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	685	21	116	589	51	135	303	106	21	233	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	685	21	116	589	51	135	303	106	21	233	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	685	21	116	589	51	135	303	106	21	233	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	685	21	116	589	51	135	303	106	21	233	92
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.43	0.57
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2371	829	1600	2294	906
Capacity Analysis Module:												
Vol/Sat:	0.04	0.43	0.01	0.07	0.37	0.03	0.08	0.13	0.13	0.01	0.10	0.10
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.646
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	64	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	64	988	26	88	977	34	62	219	82	59	215	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	988	26	88	977	34	62	219	82	59	215	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	988	26	88	977	34	62	219	82	59	215	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	988	26	88	977	34	62	219	82	59	215	161
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	988	26	88	977	34	62	219	82	59	215	161
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.73	0.27	1.00	0.57	0.43
Final Sat.:	1600	3118	82	1600	3092	108	1600	1164	436	1600	915	685
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.32	0.06	0.32	0.32	0.04	0.19	0.19	0.04	0.23	0.24
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.555
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	161	0	127	0	0	0	0	888	119	96	747	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	161	0	127	0	0	0	0	888	119	96	747	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	161	0	127	0	0	0	0	888	119	96	747	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	161	0	127	0	0	0	0	888	119	96	747	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	161	0	127	0	0	0	0	888	119	96	747	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.56	0.00	0.44	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00	
Final Sat.:	894	0	706	0	0	0	0	2822	378	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.00	0.18	0.00	0.00	0.00	0.00	0.31	0.31	0.06	0.23	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.622
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	90	0	326	291	734	0	0	633	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	0	326	291	734	0	0	633	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	0	326	291	734	0	0	633	124
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	0	326	291	734	0	0	633	124
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	90	0	326	291	734	0	0	633	124
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.67	0.33
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2676	524
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.20	0.18	0.23	0.00	0.00	0.24	0.24
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.742
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	150	0	291	0	0	304	0	723	266	230	418	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	150	0	291	0	0	304	0	723	266	230	418	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	150	0	291	0	0	304	0	723	266	230	418	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	0	291	0	0	304	0	723	266	230	418	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	150	0	291	0	0	304	0	723	266	230	418	294
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.18	0.00	0.00	0.19	0.00	0.23	0.17	0.14	0.13	0.18
Crit Moves:			****			****		****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	151	596	41	53	594	43	107	827	198	36	762	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	151	596	41	53	594	43	107	827	198	36	762	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	151	596	41	53	594	43	107	827	198	36	762	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	596	41	53	594	43	107	827	198	36	762	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	151	596	41	53	594	43	107	827	198	36	762	67
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.61	0.39	1.00	1.84	0.16
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2582	618	1600	2941	259
Capacity Analysis Module:												
Vol/Sat:	0.09	0.37	0.03	0.03	0.37	0.03	0.07	0.32	0.32	0.02	0.26	0.26
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.034
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	403	841	69	55	1176	60	79	269	536	98	332	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	403	841	69	55	1176	60	79	269	536	98	332	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	403	841	69	55	1176	60	79	269	536	98	332	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	403	841	69	55	1176	60	79	269	536	98	332	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	403	841	69	55	1176	60	79	269	536	98	332	45
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.76	0.24
Final Sat.:	1600	3200	1600	1600	3045	155	1600	1600	1600	1600	2818	382
Capacity Analysis Module:												
Vol/Sat:	0.25	0.26	0.04	0.03	0.39	0.39	0.05	0.17	0.34	0.06	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.330
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	105	656	311	67	1045	188	190	671	53	737	1744	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	656	311	67	1045	188	190	671	53	737	1744	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	656	311	67	1045	188	190	671	53	737	1744	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	656	311	67	1045	188	190	671	53	737	1744	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	656	311	67	1045	188	190	671	53	737	1744	67
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4449	351	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.41	0.19	0.04	0.65	0.12	0.12	0.15	0.15	0.46	0.36	0.04
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.078
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	904	0	608	415	522	0	0	1398	887
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	904	0	608	415	522	0	0	1398	887
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	904	0	608	415	522	0	0	1398	887
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	904	0	608	415	522	0	0	1398	887
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	904	0	608	415	522	0	0	1398	887
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.31	0.00	0.38	0.14	0.11	0.00	0.00	0.29	0.55
Crit Moves:						****	****					****

APPENDIX B

ICU WORKSHEETS

CONCEPT 2
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.025
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	112	814	752	55	897	76	48	431	423	618	334	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	814	752	55	897	76	48	431	423	618	334	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	112	814	752	55	897	76	48	431	0	618	334	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	814	752	55	897	76	48	431	0	618	334	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	112	814	752	55	897	76	48	431	0	618	334	34
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.82	0.18
Final Sat.:	1600	3200	1600	1600	4425	375	1600	3200	1600	1600	2904	296
Capacity Analysis Module:												
Vol/Sat:	0.07	0.25	0.47	0.03	0.20	0.20	0.03	0.13	0.00	0.39	0.11	0.12
Crit Moves:			****	****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.548
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	50	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	234	1355	102	10	946	199	0	0	0	242	35	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	234	1355	102	10	946	199	0	0	0	242	35	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	234	1355	102	10	946	199	0	0	0	242	35	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	234	1355	102	10	946	199	0	0	0	242	35	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	234	1355	102	10	946	199	0	0	0	242	35	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.86	0.14	1.00	2.00	1.00	0.00	0.00	0.00	1.75	0.25	1.00
Final Sat.:	2880	2976	224	1600	3200	1600	0	0	0	2796	404	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.46	0.46	0.01	0.30	0.12	0.00	0.00	0.00	0.09	0.09	0.03
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.702
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	62	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	1196	33	0	1196	0	221	323	221	13	0	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1196	33	0	1196	0	221	323	221	13	0	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1196	33	0	1196	0	221	323	221	13	0	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1196	33	0	1196	0	221	323	221	13	0	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1196	33	0	1196	0	221	323	221	13	0	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.58	0.84	0.58	0.09	0.00	1.91
Final Sat.:	0	4671	129	0	3200	0	924	1351	924	146	0	3054
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.26	0.00	0.37	0.00	0.24	0.24	0.24	0.09	0.00	0.09
Crit Moves:	****				****		****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.512
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	176	1131	0	0	382	608	0	0	0	235	0	19	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	1131	0	0	382	608	0	0	0	235	0	19	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	1131	0	0	382	0	0	0	0	235	0	19	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	1131	0	0	382	0	0	0	0	235	0	19	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	1131	0	0	382	0	0	0	0	235	0	19	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.93	0.00	0.07	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1480	0	120	
Capacity Analysis Module:													
Vol/Sat:	0.11	0.35	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.15	0.00	0.16	
Crit Moves:		****										****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.697
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	142	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0 1	1 0	1	0 1	0 0	1	0 1!	0 0	0	0 0	0 0	
Volume Module:													
Base Vol:	0	418	132	29	585	0	888	5	167	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	418	132	29	585	0	888	5	167	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	418	132	29	585	0	888	5	167	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	418	132	29	585	0	888	5	167	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	418	132	29	585	0	888	5	167	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.52	0.48	1.00	1.00	0.00	1.68	0.01	0.32	0.00	0.00	0.00	
Final Sat.:	0	2432	768	1600	1600	0	2681	15	504	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.17	0.17	0.02	0.37	0.00	0.33	0.33	0.33	0.00	0.00	0.00	
Crit Moves:					****				****				

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.581
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	A

Street Name:	Pasadena Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1	
Volume Module:													
Base Vol:	0	1065	84	200	980	0	0	0	0	132	0	155	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	1065	84	200	980	0	0	0	0	132	0	155	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	1065	84	200	980	0	0	0	0	132	0	155	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	1065	84	200	980	0	0	0	0	132	0	155	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	1065	84	200	980	0	0	0	0	132	0	155	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.85	0.15	0.34	1.66	0.00	0.00	0.00	0.00	1.00	0.00	1.00	
Final Sat.:	0	2966	234	542	2658	0	0	0	0	1600	0	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.36	0.36	0.13	0.37	0.00	0.00	0.00	0.00	0.08	0.00	0.10	
Crit Moves:		****		****								****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.865
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	107	Level Of Service:	D

Street Name:	Fair Oaks Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0
Volume Module:													
Base Vol:	20	1039	101	325	1013	42	42	216	15	114	251	196	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	20	1039	101	325	1013	42	42	216	15	114	251	196	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	20	1039	101	325	1013	42	42	216	15	114	251	196	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	20	1039	101	325	1013	42	42	216	15	114	251	196	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	20	1039	101	325	1013	42	42	216	15	114	251	196	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.82	0.18	1.00	1.92	0.08	1.00	0.94	0.06	1.00	0.56	0.44	
Final Sat.:	1600	2916	284	1600	3073	127	1600	1496	104	1600	898	702	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.36	0.36	0.20	0.33	0.33	0.03	0.14	0.14	0.07	0.28	0.28	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.470
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	184	0	187	152	526	0	0	413	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	184	0	187	152	526	0	0	413	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	184	0	187	152	526	0	0	413	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	184	0	187	152	526	0	0	413	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	184	0	187	152	526	0	0	413	102
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.12	0.10	0.16	0.00	0.00	0.26	0.06
OvlAdjV/S:												0.00
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.857
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	101	Level Of Service:	D

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	154	264	15	41	279	402	391	644	211	9	397	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	264	15	41	279	402	391	644	211	9	397	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	264	15	41	279	402	391	644	211	9	397	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	264	15	41	279	402	391	644	211	9	397	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	264	15	41	279	402	391	644	211	9	397	27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.36	0.61	0.03	0.13	0.87	1.00	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	569	976	55	205	1395	1600	1600	1600	1600	1600	1498	102
Capacity Analysis Module:												
Vol/Sat:	0.10	0.27	0.27	0.03	0.20	0.25	0.24	0.40	0.13	0.01	0.26	0.27
Crit Moves:	****					****	****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.566
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	6	884	385	91	819	33	25	44	13	288	49	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	884	385	91	819	33	25	44	13	288	49	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	884	385	91	819	33	25	44	13	288	49	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	884	385	91	819	33	25	44	13	288	49	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	884	385	91	819	33	25	44	13	288	49	45
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.01	1.99	1.00	0.19	1.74	0.07	0.30	0.54	0.16	0.85	0.15	1.00
Final Sat.:	22	3178	1600	309	2779	112	488	859	254	1367	233	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.24	0.06	0.29	0.29	0.02	0.05	0.05	0.18	0.21	0.03
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.566
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	119	1194	23	31	1069	167	127	22	107	2	15	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	1194	23	31	1069	167	127	22	107	2	15	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	1194	23	31	1069	167	127	22	107	2	15	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	1194	23	31	1069	167	127	22	107	2	15	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	1194	23	31	1069	167	127	22	107	2	15	24
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.85	0.15	1.00	0.05	0.37	0.58
Final Sat.:	1600	3140	60	1600	2768	432	1364	236	1600	78	585	937
Capacity Analysis Module:												
Vol/Sat:	0.07	0.38	0.38	0.02	0.39	0.39	0.08	0.09	0.07	0.00	0.03	0.03
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	217	0	443	357	436	0	0	495	113	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	217	0	443	357	436	0	0	495	113	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	217	0	443	357	436	0	0	495	113	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	217	0	443	357	436	0	0	495	113	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	217	0	443	357	436	0	0	495	113	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	1.00	2.00	0.00	0.00	1.63	0.37	
Final Sat.:	0	0	0	1600	0	3200	1600	3200	0	0	2605	595	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.14	0.22	0.14	0.00	0.00	0.19	0.19	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.747
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	108	658	21	124	688	60	148	444	143	40	415	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	108	658	21	124	688	60	148	444	143	40	415	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	108	658	21	124	688	60	148	444	143	40	415	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	108	658	21	124	688	60	148	444	143	40	415	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	108	658	21	124	688	60	148	444	143	40	415	86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	0.49	1.00	1.66	0.34
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2420	780	1600	2651	549
Capacity Analysis Module:												
Vol/Sat:	0.07	0.41	0.01	0.08	0.43	0.04	0.09	0.18	0.18	0.03	0.16	0.16
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.795
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	111	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	119	1133	52	125	1145	52	95	343	111	101	292	134
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	1133	52	125	1145	52	95	343	111	101	292	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	1133	52	125	1145	52	95	343	111	101	292	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	1133	52	125	1145	52	95	343	111	101	292	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	1133	52	125	1145	52	95	343	111	101	292	134
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.91	0.09	1.00	0.76	0.24	1.00	0.69	0.31
Final Sat.:	1600	3060	140	1600	3061	139	1600	1209	391	1600	1097	503
Capacity Analysis Module:												
Vol/Sat:	0.07	0.37	0.37	0.08	0.37	0.37	0.06	0.28	0.28	0.06	0.27	0.27
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.643
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1	0	2	0	0
Volume Module:													
Base Vol:	74	0	334	0	0	0	0	816	153	136	1058	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	74	0	334	0	0	0	0	816	153	136	1058	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	74	0	334	0	0	0	0	816	153	136	1058	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	74	0	334	0	0	0	0	816	153	136	1058	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	74	0	334	0	0	0	0	816	153	136	1058	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.68	0.32	1.00	2.00	0.00	
Final Sat.:	290	0	1310	0	0	0	0	2695	505	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.00	0.26	0.00	0.00	0.00	0.00	0.30	0.30	0.09	0.33	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.772
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	81	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	122	0	434	405	622	0	0	696	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	122	0	434	405	622	0	0	696	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	122	0	434	405	622	0	0	696	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	122	0	434	405	622	0	0	696	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	122	0	434	405	622	0	0	696	95
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.76	0.24
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2816	384
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.27	0.25	0.19	0.00	0.00	0.25	0.25
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.368
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	325	0	96	0	0	0	0	676	311	70	536	314
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	325	0	96	0	0	0	0	676	311	70	536	314
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	325	0	96	0	0	0	0	676	311	70	536	314
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	325	0	96	0	0	0	0	676	311	70	536	314
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	325	0	96	0	0	0	0	676	311	70	536	314
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.06	0.00	0.00	0.00	0.00	0.21	0.19	0.04	0.17	0.20
Crit Moves:	****							****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.900
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	144	Level Of Service:	D

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	183	574	41	171	600	79	113	858	160	33	996	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	183	574	41	171	600	79	113	858	160	33	996	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	183	574	41	171	600	79	113	858	160	33	996	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	183	574	41	171	600	79	113	858	160	33	996	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	183	574	41	171	600	79	113	858	160	33	996	91
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.69	0.31	1.00	1.83	0.17
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2697	503	1600	2932	268
Capacity Analysis Module:												
Vol/Sat:	0.11	0.36	0.03	0.11	0.38	0.05	0.07	0.32	0.32	0.02	0.34	0.34
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.123
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	554	1079	68	70	1321	61	109	353	462	90	335	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	554	1079	68	70	1321	61	109	353	462	90	335	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	554	1079	68	70	1321	61	109	353	462	90	335	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	554	1079	68	70	1321	61	109	353	462	90	335	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	554	1079	68	70	1321	61	109	353	462	90	335	60
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.70	0.30
Final Sat.:	1600	3200	1600	1600	3059	141	1600	1600	1600	1600	2714	486
Capacity Analysis Module:												
Vol/Sat:	0.35	0.34	0.04	0.04	0.43	0.43	0.07	0.22	0.29	0.06	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.383
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1	
Volume Module:													
Base Vol:	75	1144	512	144	708	94	234	1297	36	480	707	90	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	75	1144	512	144	708	94	234	1297	36	480	707	90	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	75	1144	512	144	708	94	234	1297	36	480	707	90	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	75	1144	512	144	708	94	234	1297	36	480	707	90	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	75	1144	512	144	708	94	234	1297	36	480	707	90	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.92	0.08	1.00	3.00	1.00	
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4670	130	1600	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.72	0.32	0.09	0.44	0.06	0.15	0.28	0.28	0.30	0.15	0.06	
Crit Moves:		****		****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.285
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av							Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1	
Volume Module:													
Base Vol:	0	0	0	1259	0	546	632	1137	0	0	701	1006	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	1259	0	546	632	1137	0	0	701	1006	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	1259	0	546	632	1137	0	0	701	1006	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	1259	0	546	632	1137	0	0	701	1006	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	1259	0	546	632	1137	0	0	701	1006	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00	
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.44	0.00	0.34	0.22	0.24	0.00	0.00	0.15	0.63	
Crit Moves:				****			****					****	

APPENDIX B

ICU WORKSHEETS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	Level Of Service:	B

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	233	855	356	11	408	42	33	251	177	505	348	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	233	855	356	11	408	42	33	251	177	505	348	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	233	855	356	11	408	42	33	251	0	505	348	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	233	855	356	11	408	42	33	251	0	505	348	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	233	855	356	11	408	42	33	251	0	505	348	10
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.12	0.88	1.00	2.72	0.28	1.00	2.00	1.00	1.00	1.94	0.06
Final Sat.:	1600	3389	1411	1600	4352	448	1600	3200	1600	1600	3111	89
Capacity Analysis Module:												
Vol/Sat:	0.15	0.25	0.25	0.01	0.09	0.09	0.02	0.08	0.00	0.32	0.11	0.11
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.467
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	243	1204	49	1	521	191	0	0	0	155	85	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	243	1204	49	1	521	191	0	0	0	155	85	61
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	243	1204	49	1	521	191	0	0	0	155	85	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	243	1204	49	1	521	191	0	0	0	155	85	61
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	243	1204	49	1	521	191	0	0	0	155	85	61
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.29	0.71	1.00
Final Sat.:	2880	3075	125	1600	3200	1600	0	0	0	2067	1133	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.39	0.39	0.00	0.16	0.12	0.00	0.00	0.00	0.07	0.08	0.04
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.500
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2 1	0	0 0	2 0	0	0 1	0 1	0	0 0	1! 0	1
Volume Module:												
Base Vol:	0	810	12	0	672	0	221	95	139	8	0	465
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	810	12	0	672	0	221	95	139	8	0	465
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	810	12	0	672	0	221	95	139	8	0	465
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	810	12	0	672	0	221	95	139	8	0	465
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	810	12	0	672	0	221	95	139	8	0	465
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.96	0.04	0.00	2.00	0.00	0.97	0.42	0.61	0.03	0.00	1.97
Final Sat.:	0	4730	70	0	3200	0	1554	668	978	54	0	3146
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.00	0.21	0.00	0.14	0.14	0.14	0.15	0.00	0.15
Crit Moves:	****				****		****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.345
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	167	659	0	0	301	1173	0	0	0	73	0	11	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	167	659	0	0	301	1173	0	0	0	73	0	11	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	167	659	0	0	301	0	0	0	0	73	0	11	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	167	659	0	0	301	0	0	0	0	73	0	11	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	167	659	0	0	301	0	0	0	0	73	0	11	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1390	0	210	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.21	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.05	0.00	0.05	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.388
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	342	149	28	344	0	483	3	69	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	342	149	28	344	0	483	3	69	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	342	149	28	344	0	483	3	69	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	342	149	28	344	0	483	3	69	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	342	149	28	344	0	483	3	69	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.39	0.61	1.00	1.00	0.00	1.74	0.01	0.25	0.00	0.00	0.00	
Final Sat.:	0	2229	971	1600	1600	0	2785	17	398	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.15	0.15	0.02	0.22	0.00	0.17	0.17	0.17	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	942	62	170	956	0	0	0	0	154	0	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	942	62	170	956	0	0	0	0	154	0	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	942	62	170	956	0	0	0	0	154	0	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	942	62	170	956	0	0	0	0	154	0	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	942	62	170	956	0	0	0	0	154	0	118
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.88	0.12	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3002	198	483	2717	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.31	0.11	0.35	0.00	0.00	0.00	0.00	0.10	0.00	0.07
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.681
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	19	853	174	67	449	180	35	217	3	41	170	304
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	853	174	67	449	180	35	217	3	41	170	304
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	853	174	67	449	180	35	217	3	41	170	304
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	853	174	67	449	180	35	217	3	41	170	304
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	19	853	174	67	449	180	35	217	3	41	170	304
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.66	0.34	1.00	1.43	0.57	1.00	0.99	0.01	1.00	0.36	0.64
Final Sat.:	1600	2658	542	1600	2284	916	1600	1578	22	1600	574	1026
Capacity Analysis Module:												
Vol/Sat:	0.01	0.32	0.32	0.04	0.20	0.20	0.02	0.14	0.14	0.03	0.30	0.30
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.416
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	112	0	134	162	389	0	0	369	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	112	0	134	162	389	0	0	369	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	112	0	134	162	389	0	0	369	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	112	0	134	162	389	0	0	369	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	112	0	134	162	389	0	0	369	147
OvlAdjVol:												85
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.08	0.10	0.12	0.00	0.00	0.23	0.09
OvlAdjV/S:												0.05
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.675
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	91	219	3	12	129	238	250	254	108	2	462	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	219	3	12	129	238	250	254	108	2	462	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	91	219	3	12	129	238	250	254	108	2	462	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	219	3	12	129	238	250	254	108	2	462	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	91	219	3	12	129	238	250	254	108	2	462	43
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.29	0.70	0.01	0.09	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	465	1119	15	136	1464	1600	1600	1600	1600	1600	1464	136
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.20	0.01	0.09	0.15	0.16	0.16	0.07	0.00	0.32	0.32
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.676
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!	0
Volume Module:													
Base Vol:	3	524	269	71	1307	16	13	38	20	310	22	26	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	524	269	71	1307	16	13	38	20	310	22	26	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	524	269	71	1307	16	13	38	20	310	22	26	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	524	269	71	1307	16	13	38	20	310	22	26	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	524	269	71	1307	16	13	38	20	310	22	26	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.01	1.99	1.00	0.10	1.88	0.02	0.18	0.54	0.28	0.93	0.07	1.00	
Final Sat.:	18	3182	1600	163	3000	37	293	856	451	1494	106	1600	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.16	0.17	0.04	0.44	0.44	0.01	0.04	0.04	0.19	0.21	0.02	
Crit Moves:	****				****			****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.477
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0	
Volume Module:													
Base Vol:	130	1129	6	3	652	39	131	7	68	9	15	37	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	130	1129	6	3	652	39	131	7	68	9	15	37	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	130	1129	6	3	652	39	131	7	68	9	15	37	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	130	1129	6	3	652	39	131	7	68	9	15	37	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	130	1129	6	3	652	39	131	7	68	9	15	37	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.95	0.05	1.00	0.15	0.24	0.61	
Final Sat.:	1600	3183	17	1600	3019	181	1519	81	1600	236	393	970	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.35	0.35	0.00	0.22	0.22	0.08	0.09	0.04	0.01	0.04	0.04	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.413
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	140	0	262	359	408	0	0	280	57	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	140	0	262	359	408	0	0	280	57	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	140	0	262	359	408	0	0	280	57	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	140	0	262	359	408	0	0	280	57	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	140	0	262	359	408	0	0	280	57	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.04	0.00	1.96	1.00	2.00	0.00	0.00	1.66	0.34	
Final Sat.:	0	0	0	1672	0	3128	1600	3200	0	0	2659	541	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.08	0.22	0.13	0.00	0.00	0.11	0.11	
Crit Moves:				****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.564
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	48	580	16	81	462	42	129	250	99	14	162	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	48	580	16	81	462	42	129	250	99	14	162	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	48	580	16	81	462	42	129	250	99	14	162	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	580	16	81	462	42	129	250	99	14	162	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	48	580	16	81	462	42	129	250	99	14	162	62
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.43	0.57	1.00	1.45	0.55
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2292	908	1600	2314	886
Capacity Analysis Module:												
Vol/Sat:	0.03	0.36	0.01	0.05	0.29	0.03	0.08	0.11	0.11	0.01	0.07	0.07
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	Level Of Service:	A

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	29	758	19	91	632	22	53	175	41	42	155	196
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	758	19	91	632	22	53	175	41	42	155	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	758	19	91	632	22	53	175	41	42	155	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	758	19	91	632	22	53	175	41	42	155	196
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	758	19	91	632	22	53	175	41	42	155	196
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.81	0.19	1.00	0.44	0.56
Final Sat.:	1600	3122	78	1600	3092	108	1600	1296	304	1600	707	893
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.24	0.06	0.20	0.20	0.03	0.13	0.14	0.03	0.22	0.22
Crit Moves:		****		****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.538
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	152	0	132	0	0	0	0	830	115	105	714	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	152	0	132	0	0	0	0	830	115	105	714	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	152	0	132	0	0	0	0	830	115	105	714	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	152	0	132	0	0	0	0	830	115	105	714	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	152	0	132	0	0	0	0	830	115	105	714	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.54	0.00	0.46	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00	
Final Sat.:	856	0	744	0	0	0	0	2811	389	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.00	0.18	0.00	0.00	0.00	0.00	0.30	0.30	0.07	0.22	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.540
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Pasadena Av							Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	79	0	258	258	614	0	0	566	131	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	79	0	258	258	614	0	0	566	131	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	79	0	258	258	614	0	0	566	131	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	79	0	258	258	614	0	0	566	131	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	79	0	258	258	614	0	0	566	131	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.62	0.38	
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2599	601	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.16	0.16	0.19	0.00	0.00	0.22	0.22	
Crit Moves:						****	****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.639
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	142	0	282	0	0	225	0	627	208	202	400	280
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	142	0	282	0	0	225	0	627	208	202	400	280
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	142	0	282	0	0	225	0	627	208	202	400	280
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	0	282	0	0	225	0	627	208	202	400	280
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	142	0	282	0	0	225	0	627	208	202	400	280
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.18	0.00	0.00	0.14	0.00	0.20	0.13	0.13	0.13	0.17
Crit Moves:			****			****		****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.719
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	173	507	31	30	483	36	100	686	241	31	686	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	507	31	30	483	36	100	686	241	31	686	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	507	31	30	483	36	100	686	241	31	686	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	507	31	30	483	36	100	686	241	31	686	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	507	31	30	483	36	100	686	241	31	686	44
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.88	0.12
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2368	832	1600	3007	193
Capacity Analysis Module:												
Vol/Sat:	0.11	0.32	0.02	0.02	0.30	0.02	0.06	0.29	0.29	0.02	0.23	0.23
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.747
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	299	584	56	48	792	49	65	254	391	84	344	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	299	584	56	48	792	49	65	254	391	84	344	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	299	584	56	48	792	49	65	254	391	84	344	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	299	584	56	48	792	49	65	254	391	84	344	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	299	584	56	48	792	49	65	254	391	84	344	44
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.77	0.23
Final Sat.:	1600	3200	1600	1600	3014	186	1600	1600	1600	1600	2837	363
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.04	0.03	0.26	0.26	0.04	0.16	0.24	0.05	0.12	0.12
Crit Moves:	****				****				****	****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.152
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	118	679	218	37	1024	166	112	268	37	600	1282	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	118	679	218	37	1024	166	112	268	37	600	1282	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	118	679	218	37	1024	166	112	268	37	600	1282	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	118	679	218	37	1024	166	112	268	37	600	1282	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	118	679	218	37	1024	166	112	268	37	600	1282	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.64	0.36	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4218	582	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.42	0.14	0.02	0.64	0.10	0.07	0.06	0.06	0.38	0.27	0.03
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.901
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	938	0	31	16	395	0	0	1355	911
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	938	0	31	16	395	0	0	1355	911
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	938	0	31	16	395	0	0	1355	911
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	938	0	31	16	395	0	0	1355	911
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	938	0	31	16	395	0	0	1355	911
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.33	0.00	0.02	0.01	0.08	0.00	0.00	0.28	0.57
Crit Moves:				****			****					****

APPENDIX B

ICU WORKSHEETS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.963
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	92	604	679	56	798	70	44	475	409	568	319	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	604	679	56	798	70	44	475	409	568	319	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	92	604	679	56	798	70	44	475	0	568	319	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	604	679	56	798	70	44	475	0	568	319	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	92	604	679	56	798	70	44	475	0	568	319	29
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.76	0.24	1.00	2.00	1.00	1.00	1.83	0.17
Final Sat.:	1600	3200	1600	1600	4413	387	1600	3200	1600	1600	2933	267
Capacity Analysis Module:												
Vol/Sat:	0.06	0.19	0.42	0.04	0.18	0.18	0.03	0.15	0.00	0.36	0.11	0.11
Crit Moves:			****	****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.420
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	262	1025	98	10	620	224	0	0	0	162	40	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	262	1025	98	10	620	224	0	0	0	162	40	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1025	98	10	620	224	0	0	0	162	40	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1025	98	10	620	224	0	0	0	162	40	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	262	1025	98	10	620	224	0	0	0	162	40	32
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.83	0.17	1.00	2.00	1.00	0.00	0.00	0.00	1.60	0.40	1.00
Final Sat.:	2880	2921	279	1600	3200	1600	0	0	0	2566	634	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.35	0.35	0.01	0.19	0.14	0.00	0.00	0.00	0.06	0.06	0.02
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	796	16	0	789	0	315	340	320	13	0	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	796	16	0	789	0	315	340	320	13	0	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	796	16	0	789	0	315	340	320	13	0	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	796	16	0	789	0	315	340	320	13	0	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	796	16	0	789	0	315	340	320	13	0	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.94	0.06	0.00	2.00	0.00	0.65	0.70	0.66	0.09	0.00	1.91
Final Sat.:	0	4705	95	0	3200	0	1034	1116	1050	146	0	3054
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.00	0.25	0.00	0.30	0.30	0.30	0.09	0.00	0.09
Crit Moves:	****				****		****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.454
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	205	955	0	0	276	620	0	0	0	226	0	19	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	205	955	0	0	276	620	0	0	0	226	0	19	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	205	955	0	0	276	0	0	0	0	226	0	19	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	205	955	0	0	276	0	0	0	0	226	0	19	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	205	955	0	0	276	0	0	0	0	226	0	19	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.92	0.00	0.08	
Final Sat.:	1600	3200	0	0	1600	1600	0	0	0	1476	0	124	
Capacity Analysis Module:													
Vol/Sat:	0.13	0.30	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.14	0.00	0.15	
Crit Moves:	****				****							****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.629
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	79	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0 1	1 0	1	0 1	0 0	1	0 1!	0 0	0	0 0	0 0	
Volume Module:													
Base Vol:	0	324	110	19	481	0	834	5	212	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	324	110	19	481	0	834	5	212	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	324	110	19	481	0	834	5	212	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	324	110	19	481	0	834	5	212	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	324	110	19	481	0	834	5	212	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	1.59	0.01	0.40	0.00	0.00	0.00	
Final Sat.:	0	2389	811	1600	1600	0	2539	15	645	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.14	0.14	0.01	0.30	0.00	0.33	0.33	0.33	0.00	0.00	0.00	
Crit Moves:					****		****						

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.473
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	831	83	189	829	0	0	0	0	110	0	115
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	831	83	189	829	0	0	0	0	110	0	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	831	83	189	829	0	0	0	0	110	0	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	831	83	189	829	0	0	0	0	110	0	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	831	83	189	829	0	0	0	0	110	0	115
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.82	0.18	0.37	1.63	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2909	291	594	2606	0	0	0	0	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.29	0.29	0.12	0.32	0.00	0.00	0.00	0.00	0.07	0.00	0.07
Crit Moves:		****		****						****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.741
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	Level Of Service:	C

Street Name:	Fair Oaks Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0	
Volume Module:													
Base Vol:	12	701	104	350	718	26	27	214	9	113	213	193	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	12	701	104	350	718	26	27	214	9	113	213	193	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	12	701	104	350	718	26	27	214	9	113	213	193	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	12	701	104	350	718	26	27	214	9	113	213	193	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	12	701	104	350	718	26	27	214	9	113	213	193	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.74	0.26	1.00	1.93	0.07	1.00	0.96	0.04	1.00	0.52	0.48	
Final Sat.:	1600	2787	413	1600	3088	112	1600	1535	65	1600	839	761	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.25	0.25	0.22	0.23	0.23	0.02	0.14	0.14	0.07	0.25	0.25	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.445
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	186	0	179	154	549	0	0	379	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	186	0	179	154	549	0	0	379	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	186	0	179	154	549	0	0	379	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	186	0	179	154	549	0	0	379	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	186	0	179	154	549	0	0	379	96
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.11	0.10	0.17	0.00	0.00	0.24	0.06
OvlAdjV/S:												0.00
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.809
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	D

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	159	232	13	30	240	366	382	604	231	7	366	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	159	232	13	30	240	366	382	604	231	7	366	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	159	232	13	30	240	366	382	604	231	7	366	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	232	13	30	240	366	382	604	231	7	366	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	159	232	13	30	240	366	382	604	231	7	366	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.39	0.58	0.03	0.11	0.89	1.00	1.00	1.00	1.00	1.00	0.95	0.05
Final Sat.:	630	919	51	178	1422	1600	1600	1600	1600	1600	1513	87
Capacity Analysis Module:												
Vol/Sat:	0.10	0.25	0.25	0.02	0.17	0.23	0.24	0.38	0.14	0.00	0.24	0.24
Crit Moves:	****					****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.452
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1 0	1	0 1	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	8	736	336	44	770	26	16	31	17	244	35	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	736	336	44	770	26	16	31	17	244	35	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	736	336	44	770	26	16	31	17	244	35	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	736	336	44	770	26	16	31	17	244	35	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	736	336	44	770	26	16	31	17	244	35	19
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.02	1.98	1.00	0.10	1.84	0.06	0.25	0.48	0.27	0.87	0.13	1.00
Final Sat.:	34	3166	1600	168	2933	99	400	775	425	1399	201	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.23	0.21	0.03	0.26	0.26	0.01	0.04	0.04	0.15	0.17	0.01
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.424
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	80	902	15	24	813	129	97	15	71	2	10	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	902	15	24	813	129	97	15	71	2	10	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	902	15	24	813	129	97	15	71	2	10	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	902	15	24	813	129	97	15	71	2	10	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	902	15	24	813	129	97	15	71	2	10	18
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.97	0.03	1.00	1.73	0.27	0.87	0.13	1.00	0.07	0.33	0.60
Final Sat.:	1600	3148	52	1600	2762	438	1386	214	1600	107	533	960
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.29	0.02	0.29	0.29	0.06	0.07	0.04	0.00	0.02	0.02
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.495
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Orange Grove Bl							Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	0	0	0	150	0	450	297	468	0	0	482	58	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	150	0	450	297	468	0	0	482	58	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	150	0	450	297	468	0	0	482	58	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	150	0	450	297	468	0	0	482	58	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	150	0	450	297	468	0	0	482	58	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	1.00	2.00	0.00	0.00	1.79	0.21	
Final Sat.:	0	0	0	1600	0	3200	1600	3200	0	0	2856	344	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.14	0.19	0.15	0.00	0.00	0.17	0.17	
Crit Moves:						****	****					****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	107	516	14	75	556	54	137	357	153	26	299	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	107	516	14	75	556	54	137	357	153	26	299	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	516	14	75	556	54	137	357	153	26	299	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	516	14	75	556	54	137	357	153	26	299	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	516	14	75	556	54	137	357	153	26	299	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.40	0.60	1.00	1.72	0.28
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2240	960	1600	2749	451
Capacity Analysis Module:												
Vol/Sat:	0.07	0.32	0.01	0.05	0.35	0.03	0.09	0.16	0.16	0.02	0.11	0.11
Crit Moves:	****				****		****					****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.636
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	63	Level Of Service:	B

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	47	767	37	163	897	37	74	280	54	80	212	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	767	37	163	897	37	74	280	54	80	212	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	767	37	163	897	37	74	280	54	80	212	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	767	37	163	897	37	74	280	54	80	212	167
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	767	37	163	897	37	74	280	54	80	212	167
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.92	0.08	1.00	0.84	0.16	1.00	0.56	0.44
Final Sat.:	1600	3053	147	1600	3073	127	1600	1341	259	1600	895	705
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.25	0.10	0.29	0.29	0.05	0.21	0.21	0.05	0.24	0.24
Crit Moves:			****	****			****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.643
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Arroyo Verde Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	1! 0	0	0	0	0	0	0	0	0	1	1
Volume Module:													
Base Vol:	73	0	338	0	0	0	0	798	154	142	1043	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	73	0	338	0	0	0	0	798	154	142	1043	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	73	0	338	0	0	0	0	798	154	142	1043	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	73	0	338	0	0	0	0	798	154	142	1043	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	73	0	338	0	0	0	0	798	154	142	1043	0	
Saturation Flow Module:													
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.68	0.32	1.00	2.00	0.00	
Final Sat.:	284	0	1316	0	0	0	0	2682	518	1600	3200	0	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.00	0.26	0.00	0.00	0.00	0.00	0.30	0.30	0.09	0.33	0.00	
Crit Moves:			****					****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.740
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	128	0	439	402	533	0	0	590	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	128	0	439	402	533	0	0	590	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	128	0	439	402	533	0	0	590	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	128	0	439	402	533	0	0	590	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	128	0	439	402	533	0	0	590	97
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.72	0.28
Final Sat.:	0	0	0	2880	0	1600	1600	3200	0	0	2748	452
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.27	0.25	0.17	0.00	0.00	0.21	0.21
Crit Moves:						****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.316
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	274	0	60	0	0	0	0	620	276	44	474	298
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	274	0	60	0	0	0	0	620	276	44	474	298
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	274	0	60	0	0	0	0	620	276	44	474	298
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	274	0	60	0	0	0	0	620	276	44	474	298
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	274	0	60	0	0	0	0	620	276	44	474	298
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	0	1600	0	0	1600	0	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.00	0.04	0.00	0.00	0.00	0.00	0.19	0.17	0.03	0.15	0.19
Crit Moves:	****							****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.800
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	218	476	36	125	508	79	98	778	168	24	857	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	476	36	125	508	79	98	778	168	24	857	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	476	36	125	508	79	98	778	168	24	857	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	476	36	125	508	79	98	778	168	24	857	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	476	36	125	508	79	98	778	168	24	857	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.64	0.36	1.00	1.88	0.12
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	2632	568	1600	3010	190
Capacity Analysis Module:												
Vol/Sat:	0.14	0.30	0.02	0.08	0.32	0.05	0.06	0.30	0.30	0.02	0.28	0.28
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	107	Level Of Service:	D

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	368	651	52	74	996	56	88	364	340	75	340	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	368	651	52	74	996	56	88	364	340	75	340	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	368	651	52	74	996	56	88	364	340	75	340	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	368	651	52	74	996	56	88	364	340	75	340	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	368	651	52	74	996	56	88	364	340	75	340	55
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.03	0.97	1.00	1.72	0.28
Final Sat.:	1600	3200	1600	1600	3030	170	1600	1655	1545	1600	2754	446
Capacity Analysis Module:												
Vol/Sat:	0.23	0.20	0.03	0.05	0.33	0.33	0.06	0.22	0.22	0.05	0.12	0.12
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.159
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	54	1179	413	112	674	66	160	694	23	325	353	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1179	413	112	674	66	160	694	23	325	353	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	1179	413	112	674	66	160	694	23	325	353	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1179	413	112	674	66	160	694	23	325	353	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	1179	413	112	674	66	160	694	23	325	353	64
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.90	0.10	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	1600	4646	154	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.74	0.26	0.07	0.42	0.04	0.10	0.15	0.15	0.20	0.07	0.04
Crit Moves:		****		****				****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.666
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	97	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	1314	0	30	29	1009	0	0	683	979
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1314	0	30	29	1009	0	0	683	979
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1314	0	30	29	1009	0	0	683	979
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1314	0	30	29	1009	0	0	683	979
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1314	0	30	29	1009	0	0	683	979
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	2880	0	1600	2880	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.46	0.00	0.02	0.01	0.21	0.00	0.00	0.14	0.61
Crit Moves:				****				****				

APPENDIX B

HCM WORKSHEETS

EXISTING (YEAR 2011) CONDITION
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
Loss Time (sec):	0	Average Delay (sec/veh):	24.0
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	67	1299	166	54	990	122	99	228	82	396	330	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	1299	166	54	990	122	99	228	82	396	330	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	67	1299	166	54	990	122	99	228	0	396	330	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	1299	166	54	990	122	99	228	0	396	330	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	67	1299	166	54	990	122	99	228	0	396	330	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.93	0.93
Lanes:	1.00	2.66	0.34	1.00	2.67	0.33	1.00	2.00	1.00	1.00	1.74	0.26
Final Sat.:	1805	4521	578	1805	4544	560	1805	3610	1900	1805	3084	458
Capacity Analysis Module:												
Vol/Sat:	0.04	0.29	0.29	0.03	0.22	0.22	0.05	0.06	0.00	0.22	0.11	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.08	0.48	0.48	0.05	0.45	0.45	0.16	0.11	0.00	0.37	0.31	0.31
Volume/Cap:	0.48	0.60	0.60	0.60	0.48	0.48	0.34	0.60	0.00	0.60	0.34	0.34
Delay/Veh:	46.9	19.5	19.5	57.3	19.4	19.4	38.1	45.4	0.0	27.3	26.7	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.9	19.5	19.5	57.3	19.4	19.4	38.1	45.4	0.0	27.3	26.7	26.7
LOS by Move:	D	B	B	E	B	B	D	D	A	C	C	C
HCM2kAvgQ:	3	12	12	3	9	9	3	5	0	10	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 7.3 Worst Case Level Of Service: A[9.0]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	97	0	8	0	17	0	0	7	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	97	0	8	0	17	0	0	7	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	97	0	8	0	17	0	0	7	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	97	0	8	0	17	0	0	7	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	24	24	7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	997	873	1081	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	997	873	1081	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.10	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1003	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				9.0		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.479
Loss Time (sec):	0	Average Delay (sec/veh):	13.5
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	347	1312	62	1	705	154	0	0	0	246	80	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	347	1312	62	1	705	154	0	0	0	246	80	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	347	1312	62	1	705	154	0	0	0	246	80	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	347	1312	62	1	705	154	0	0	0	246	80	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	347	1312	62	1	705	154	0	0	0	246	80	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.90	0.90	0.85
Lanes:	2.00	1.91	0.09	1.00	2.00	1.00	0.00	0.00	0.00	1.51	0.49	1.00
Final Sat.:	3502	3424	162	1805	3610	1615	0	0	0	2582	840	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.38	0.38	0.00	0.20	0.10	0.00	0.00	0.00	0.10	0.10	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.27	0.80	0.80	0.00	0.53	0.53	0.00	0.00	0.00	0.20	0.20	0.20
Volume/Cap:	0.37	0.48	0.48	0.48	0.37	0.18	0.00	0.00	0.00	0.48	0.48	0.14
Delay/Veh:	29.8	3.4	3.4	166.4	13.8	12.2	0.0	0.0	0.0	36.0	36.0	33.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.8	3.4	3.4	166.4	13.8	12.2	0.0	0.0	0.0	36.0	36.0	33.2
LOS by Move:	C	A	A	F	B	B	A	A	A	D	D	C
HCM2kAvgQ:	5	7	7	0	7	2	0	0	0	5	5	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	21.9
Optimal Cycle:	40	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1064	17	0	948	0	193	90	132	9	0	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1064	17	0	948	0	193	90	132	9	0	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1064	17	0	948	0	193	90	132	9	0	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1064	17	0	948	0	193	90	132	9	0	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1064	17	0	948	0	193	90	132	9	0	464
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.88	0.88	0.88	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.93	0.43	0.64	0.04	0.00	1.96
Final Sat.:	0	5093	81	0	3610	0	1562	729	1069	60	0	3178
Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.21	0.00	0.26	0.00	0.12	0.12	0.12	0.15	0.00	0.15
Crit Moves:					****				****	****		
Green/Cycle:	0.00	0.49	0.49	0.00	0.49	0.00	0.23	0.23	0.23	0.28	0.00	0.28
Volume/Cap:	0.00	0.43	0.43	0.00	0.53	0.00	0.53	0.53	0.53	0.53	0.00	0.52
Delay/Veh:	0.0	16.5	16.5	0.0	17.9	0.0	34.5	34.5	34.5	31.2	0.0	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	16.5	16.5	0.0	17.9	0.0	34.5	34.5	34.5	31.2	0.0	31.1
LOS by Move:	A	B	B	A	B	A	C	C	C	C	A	C
HCM2kAvgQ:	0	8	8	0	11	0	6	6	6	7	0	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.279
Loss Time (sec):	0	Average Delay (sec/veh):	9.5
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	131	834	0	0	290	1175	0	0	0	57	0	15	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	131	834	0	0	290	1175	0	0	0	57	0	15	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	131	834	0	0	290	0	0	0	0	57	0	15	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	131	834	0	0	290	0	0	0	0	57	0	15	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	131	834	0	0	290	0	0	0	0	57	0	15	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	1.00	0.79	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.79	0.00	0.21	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1182	0	311	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.23	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.05	0.00	0.05	
Crit Moves:		****								****			
Green/Cycle:	0.54	0.89	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.11	0.00	0.11	
Volume/Cap:	0.14	0.26	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.44	0.00	0.44	
Delay/Veh:	11.7	0.8	0.0	0.0	25.1	0.0	0.0	0.0	0.0	43.4	0.0	43.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	11.7	0.8	0.0	0.0	25.1	0.0	0.0	0.0	0.0	43.4	0.0	43.4	
LOS by Move:	B	A	A	A	C	A	A	A	A	D	A	D	
HCM2kAvgQ:	2	2	0	0	7	0	0	0	0	3	0	3	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.378
Loss Time (sec):	0	Average Delay (sec/veh):	22.8
Optimal Cycle:	39	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	428	97	17	328	0	536	2	63	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	428	97	17	328	0	536	2	63	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	428	97	17	328	0	536	2	63	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	428	97	17	328	0	536	2	63	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	428	97	17	328	0	536	2	63	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.92	0.92	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.63	0.37	1.00	1.00	0.00	1.80	0.01	0.19	0.00	0.00	0.00
Final Sat.:	0	2861	649	1805	1900	0	2924	10	306	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.15	0.01	0.17	0.00	0.18	0.21	0.21	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.28	0.28	0.33	0.61	0.00	0.39	0.39	0.39	0.00	0.00	0.00
Volume/Cap:	0.00	0.53	0.53	0.03	0.28	0.00	0.47	0.53	0.53	0.00	0.00	0.00
Delay/Veh:	0.0	30.7	30.7	22.9	9.3	0.0	23.1	23.9	23.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	30.7	30.7	22.9	9.3	0.0	23.1	23.9	23.9	0.0	0.0	0.0
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	0	8	8	0	5	0	7	8	8	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[8.7]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	4	3	0	0		32	33				6	0		6		0	0		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	4	3	0	0		32	33				6	0		6		0	0		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	4	3	0	0		32	33				6	0		6		0	0		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	4	3	0	0		32	33				6	0		6		0	0		0	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5		6.2	xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0		3.3	xxxxx	xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	65	xxxx	xxxxx	xxxx	xxxx	xxxxx					60	60		49	xxxx	xxxx	xxxxx			
Potent Cap.:	1550	xxxx	xxxxx	xxxx	xxxx	xxxxx					952	835		1026	xxxx	xxxx	xxxxx			
Move Cap.:	1550	xxxx	xxxxx	xxxx	xxxx	xxxxx					950	833		1026	xxxx	xxxx	xxxxx			
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx					0.01	0.00		0.01	xxxx	xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx			
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*					*	*	*		*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	987	xxxxx		xxxx	xxxx	xxxxx			
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.0	xxxxx		xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.7	xxxxx		xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*	*	*	*					*	A	*		*	*	*			
ApproachDel:	xxxxxx			xxxxxx							8.7				xxxxxx					
ApproachLOS:	*			*							A				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[10.6]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	15	1	17	36	0	10	2	243	6	2	43	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	1	17	36	0	10	2	243	6	2	43	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	1	17	36	0	10	2	243	6	2	43	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	1	17	36	0	10	2	243	6	2	43	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	302	297	246	306	300	43	43	xxxx	xxxxx	249	xxxx	xxxxx
Potent Cap.:	654	618	798	650	616	1033	1579	xxxx	xxxxx	1328	xxxx	xxxxx
Move Cap.:	647	616	798	634	614	1033	1579	xxxx	xxxxx	1328	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.02	0.06	0.00	0.01	0.00	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	715	xxxxx	xxxx	692	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.3	xxxxx	xxxxx	10.6	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.3			10.6			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 16.8 Worst Case Level Of Service: E[45.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	446		0		87	0		0		0	0		34		0	0		124		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	446		0		87	0		0		0	0		34		0	0		124		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	446		0		0	0		0		0	0		34		0	0		124		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	446		0		0	0		0		0	0		34		0	0		124		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		892	xxxxx	xxxx		892	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		283	xxxxx	xxxx		283	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		206	xxxxx	xxxx		206	xxxxx						
Volume/Cap:	0.27	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.16	xxxx	xxxx		0.60	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		0.6	xxxxx	xxxx		3.4	xxxxx						
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		25.9	xxxxx	xxxxx		45.8	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		D	*	*		E	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			25.9			45.8										
ApproachLOS:	*			*			D			E										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.785
Loss Time (sec):	0	Average Delay (sec/veh):	19.0
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy							Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0			
Volume Module:													
Base Vol:	0	0	0	22	0	37	0	0	0	0	681	14	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	22	0	37	0	0	0	0	681	14	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	22	0	37	0	0	0	0	681	14	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	22	0	37	0	0	0	0	681	14	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	22	0	37	0	0	0	0	681	14	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98	0.02	
Final Sat.:	0	0	0	530	0	642	0	0	0	0	868	18	
Capacity Analysis Module:													
Vol/Sat:	xxxx	xxxx	xxxx	0.04	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	0.78	0.78	
Crit Moves:						****						****	
Delay/Veh:	0.0	0.0	0.0	9.4	0.0	8.2	0.0	0.0	0.0	0.0	19.9	19.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	9.4	0.0	8.2	0.0	0.0	0.0	0.0	19.9	19.9	
LOS by Move:	*	*	*	A	*	A	*	*	*	*	C	C	
ApproachDel:	xxxxxx			8.6			xxxxxx			19.9			
Delay Adj:	xxxxx			1.00			xxxxx			1.00			
ApprAdjDel:	xxxxxx			8.6			xxxxxx			19.9			
LOS by Appr:	*			A			*			C			
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	3.2	3.2	3.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[14.8]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	12	0	55	51	550	0	0	418	184								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	12	0	55	51	550	0	0	418	184								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	12	0	55	51	550	0	0	418	184								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	12	0	55	51	550	0	0	418	184								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1162	1162	510	602	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	218	197	567	985	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	209	186	567	985	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.00	0.10	0.05	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	434	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	14.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				14.8		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	6.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	12	1	2	1	1	4	5	237	8	3	64	1	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	12	1	2	1	1	4	5	237	8	3	64	1	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	12	1	2	1	1	4	5	237	8	3	64	1	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	12	1	2	1	1	4	5	237	8	3	64	1	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.80	0.07	0.13	0.17	0.17	0.67	0.02	0.95	0.03	0.04	0.94	0.01	
Final Sat.:	193	16	32	0	0	1	17	823	28	32	675	11	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.06	0.06	6.00	6.00	6.00	0.29	0.29	0.29	0.09	0.09	0.09	
Crit Moves:			****			****			****	****			
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.06	0.06	0.06	6.00	6.00	6.00	0.29	0.29	0.29	0.09	0.09	0.09	
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.0	3.0	3.0	1.4	1.4	1.4	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.0	3.0	3.0	1.4	1.4	1.4	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: B[14.3]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	65	0	185	0	0	0	53	240	0	0	447	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	0	185	0	0	0	53	240	0	0	447	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	0	185	0	0	0	53	240	0	0	447	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	65	0	185	0	0	0	53	240	0	0	447	62
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	824	855	120	xxxx	xxxx	xxxxx	509	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	346	298	937	xxxx	xxxx	xxxxx	1066	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	332	283	937	xxxx	xxxx	xxxxx	1066	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.20	0.00	0.20	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	636	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	1.9	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	14.3	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	A	*	*	*	*	*
ApproachDel:		14.3		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		B		*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[11.4]

Street Name:	Ave 57								ASP SB Exit 28B/Carlota Bl							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Yield Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0 0 0	0 0			0 0 0	1 0			1 0 0	0 0			0 0 0	0 1		
Volume Module:																
Base Vol:	0	0	0	0	357	8	1	0	0	0	0	60				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	357	8	1	0	0	0	0	60				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	0	0	0	357	8	1	0	0	0	0	60				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	0	0	0	0	357	8	1	0	0	0	0	60				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	xxxx	xxxxx	xxxxx	xxxx	6.2				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx	xxxxx	xxxx	3.3				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	361	xxxx	xxxxx	xxxx	xxxx	0				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	598	xxxx	xxxxx	xxxx	xxxx	1091				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	566	xxxx	xxxxx	xxxx	xxxx	1091				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	0.05				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	0.2				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.4	xxxx	xxxxx	xxxxx	xxxx	8.5				
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	A				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			11.4			8.5						
ApproachLOS:	*			*			B			A						

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.542
Loss Time (sec):	0	Average Delay (sec/veh):	13.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	78	1	49	104	28	83	10	305	312	3	337	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	78	1	49	104	28	83	10	305	312	3	337	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	78	1	49	104	28	83	10	305	312	3	337	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	1	49	104	28	83	10	305	312	3	337	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	78	1	49	104	28	83	10	305	312	3	337	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.61	0.01	0.38	0.48	0.13	0.39	0.03	0.97	1.00	0.02	1.92	0.06
Final Sat.:	313	4	197	265	71	211	18	563	657	9	1047	34
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.25	0.39	0.39	0.39	0.54	0.54	0.47	0.32	0.32	0.32
Crit Moves:		****		****			****			****		
Delay/Veh:	11.3	11.3	11.3	12.7	12.7	12.7	15.4	15.4	12.6	11.9	11.8	11.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.3	11.3	11.3	12.7	12.7	12.7	15.4	15.4	12.6	11.9	11.8	11.8
LOS by Move:	B	B	B	B	B	B	C	C	B	B	B	B
ApproachDel:	11.3			12.7			14.0			11.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.3			12.7			14.0			11.8		
LOS by Appr:	B			B			B			B		
AllWayAvgQ:	0.3	0.3	0.3	0.5	0.5	0.5	1.1	1.1	0.8	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.572
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	271	2	4		0	0	0		203	205	0		0	81	44			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	271	2	4		0	0	0		203	205	0		0	81	44			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	271	2	4		0	0	0		203	205	0		0	81	44			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	271	2	4		0	0	0		203	205	0		0	81	44			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	271	2	4		0	0	0		203	205	0		0	81	44			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.98	0.01	0.01		0.00	0.00	0.00		0.50	0.50	0.00		0.00	0.65	0.35			
Final Sat.:	627	5	9		0	0	0		355	358	0		0	444	241			
Capacity Analysis Module:																		
Vol/Sat:	0.43	0.43	0.43		xxxx	xxxx	xxxx		0.57	0.57	xxxx		xxxx	0.18	0.18			
Crit Moves:		****								****					****			
Delay/Veh:	12.0	12.0	12.0		0.0	0.0	0.0		13.9	13.9	0.0		0.0	9.0	9.0			
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	12.0	12.0	12.0		0.0	0.0	0.0		13.9	13.9	0.0		0.0	9.0	9.0			
LOS by Move:	B	B	B		*	*	*		B	B	*		*	A	A			
ApproachDel:	12.0				xxxxxx				13.9				9.0					
Delay Adj:	1.00				xxxxx				1.00				1.00					
ApprAdjDel:	12.0				xxxxxx				13.9				9.0					
LOS by Appr:	B				*				B				A					
AllWayAvgQ:	0.7	0.7	0.7		0.0	0.0	0.0		1.2	1.2	1.2		0.2	0.2	0.2			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.685
Loss Time (sec):	0	Average Delay (sec/veh):	16.0
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	8	25	44		82	63	114		179	241	11		41	240	108			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	8	25	44		82	63	114		179	241	11		41	240	108			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	8	25	44		82	63	114		179	241	11		41	240	108			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	8	25	44		82	63	114		179	241	11		41	240	108			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	8	25	44		82	63	114		179	241	11		41	240	108			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.10	0.32	0.57		0.32	0.24	0.44		0.42	0.56	0.03		0.11	0.62	0.28			
Final Sat.:	49	153	270		177	136	246		261	352	16		67	394	177			
Capacity Analysis Module:																		
Vol/Sat:	0.16	0.16	0.16		0.46	0.46	0.46		0.68	0.68	0.68		0.61	0.61	0.61			
Crit Moves:			****			****				****			****					
Delay/Veh:	10.2	10.2	10.2		13.2	13.2	13.2		18.9	18.9	18.9		15.8	15.8	15.8			
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	10.2	10.2	10.2		13.2	13.2	13.2		18.9	18.9	18.9		15.8	15.8	15.8			
LOS by Move:	B	B	B		B	B	B		C	C	C		C	C	C			
ApproachDel:	10.2				13.2				18.9				15.8					
Delay Adj:	1.00				1.00				1.00				1.00					
ApprAdjDel:	10.2				13.2				18.9				15.8					
LOS by Appr:	B				B				C				C					
AllWayAvgQ:	0.1	0.1	0.1		0.7	0.7	0.7		1.8	1.8	1.8		1.3	1.3	1.3			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.501
Loss Time (sec):	0	Average Delay (sec/veh):	11.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	133	3	73	9	7	24	7	208	148	60	263	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	3	73	9	7	24	7	208	148	60	263	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	3	73	9	7	24	7	208	148	60	263	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	3	73	9	7	24	7	208	148	60	263	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	3	73	9	7	24	7	208	148	60	263	3
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.30	0.70	0.23	0.17	0.60	0.02	0.57	0.41	0.18	0.81	0.01
Final Sat.:	507	178	411	123	96	329	14	415	295	126	551	6
Capacity Analysis Module:												
Vol/Sat:	0.26	0.02	0.18	0.07	0.07	0.07	0.50	0.50	0.50	0.48	0.48	0.48
Crit Moves:	****					****		****		****		
Delay/Veh:	11.5	9.1	9.1	9.1	9.1	9.1	12.3	12.3	12.3	12.4	12.4	12.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.5	9.1	9.1	9.1	9.1	9.1	12.3	12.3	12.3	12.4	12.4	12.4
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	10.6			9.1			12.3			12.4		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.6			9.1			12.3			12.4		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.3	0.1	0.1	0.1	0.1	0.1	0.9	0.9	0.9	0.8	0.8	0.8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 56.3 Worst Case Level Of Service: F[426.4]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	236	0	105	0	1423	0	0	819	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	236	0	105	0	1423	0	0	819	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	236	0	105	0	1423	0	0	819	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	236	0	105	0	1423	0	0	819	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1833	2242	712	1531	2242	410	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	48	43	380	110	43	597	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	40	43	380	110	43	597	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.15	0.00	0.18	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.6	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	110	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	20.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	610.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			426.4			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[10.5]

Street Name:	ASP NB on-ramp									Ave 26								
Approach:	North Bound					South Bound					East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	81	1078	0	0	0	0	865	80		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	81	1078	0	0	0	0	865	80		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	81	1078	0	0	0	0	865	80		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	81	1078	0	0	0	0	865	80		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	945	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	734	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	734	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx					xxxxxx					xxxxxx						
ApproachLOS:	*			*					*					*						

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	64	Critical Vol./Cap.(X):	0.582
Loss Time (sec):	0	Average Delay (sec/veh):	8.7
Optimal Cycle:	64	Level Of Service:	A

Street Name:	Figueroa St							ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Permitted			Protected			
Rights:	Include			Include			Include			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2	
Volume Module:													
Base Vol:	0	282	154	691	722	193	81	33	18	0	0	457	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	282	154	691	722	193	81	33	18	0	0	457	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	282	154	691	722	193	81	33	18	0	0	457	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	282	154	691	722	193	81	33	18	0	0	457	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	282	154	691	722	193	81	33	18	0	0	457	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.82	0.82	0.82	1.00	1.00	0.75	
Lanes:	0.00	1.29	0.71	2.00	0.79	0.21	0.61	0.25	0.14	0.00	0.00	2.00	
Final Sat.:	0	2211	1208	3502	1452	388	955	389	212	0	0	2842	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.13	0.13	0.20	0.50	0.50	0.08	0.08	0.08	0.00	0.00	0.16	
Crit Moves:					****			****		****			
Green/Cycle:	0.00	0.18	0.18	0.70	0.88	0.88	0.12	0.12	0.12	0.00	0.00	0.70	
Volume/Cap:	0.00	0.71	0.71	0.28	0.56	0.56	0.72	0.72	0.72	0.00	0.00	0.23	
Delay/Veh:	0.0	28.5	28.5	3.6	1.3	1.3	40.2	40.2	40.2	0.0	0.0	3.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	28.5	28.5	3.6	1.3	1.3	40.2	40.2	40.2	0.0	0.0	3.4	
LOS by Move:	A	C	C	A	A	A	D	D	D	A	A	A	
HCM2kAvgQ:	0	6	6	3	5	5	4	4	4	0	0	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.6]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	77	664	0	0	0	0	903	74		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	77	664	0	0	0	0	903	74		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	77	664	0	0	0	0	903	74		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	77	664	0	0	0	0	903	74		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					977	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					714	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					714	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.11	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[9.2]

Street Name:	ASP SB Exit 25								Casanova St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	25		8		4	109		0		0		0		0	21		0		6
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	25		8		4	109		0		0		0		0	21		0		6
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	25		8		4	109		0		0		0		0	21		0		6
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	25		8		4	109		0		0		0		0	21		0		6
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	6.4		6.5		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		xxxxx	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		33	xxxx		xxxxx		xxxx		xxxx		xxxxx	146		146		29
Potent Cap.:	xxxx	xxxx		xxxxx		1592	xxxx		xxxxx		xxxx		xxxx		xxxxx	851		749		1052
Move Cap.:	xxxx	xxxx		xxxxx		1592	xxxx		xxxxx		xxxx		xxxx		xxxxx	849		747		1052
Volume/Cap:	xxxx	xxxx		xxxx		0.00	xxxx		xxxx		xxxx		xxxx		xxxx	0.02		0.00		0.01
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx		7.3	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*	*		*		A	*		*		*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		887		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		0.1		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		7.3	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		9.2		xxxxx
Shared LOS:	*	*		*		A	*		*		*		*		*	*		A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							9.2		
ApproachLOS:	*					*					*							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.9]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	8	0	10	20	145	229	77	86	95								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	8	0	10	20	145	229	77	86	95								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	8	0	10	20	145	229	77	86	95								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	8	0	10	20	145	229	77	86	95								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	587	702	134	181	xxxx	xxxxx	374	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	475	365	921	1407	xxxx	xxxxx	1196	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	446	336	921	1407	xxxx	xxxxx	1196	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.01	0.01	xxxx	xxxx	0.06	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	8.2	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	625	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.9	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx				10.9		xxxxxx			xxxxxx										
ApproachLOS:	*				B		*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.467
Loss Time (sec):	0	Average Delay (sec/veh):	12.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	0	201	0	0	299	0	0	0	0	207	1	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	201	0	0	299	0	0	0	0	207	1	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	201	0	0	299	0	0	0	0	207	1	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	201	0	0	299	0	0	0	0	207	1	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	201	0	0	299	0	0	0	0	207	1	25	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	576	629	0	0	640	0	0	0	0	550	594	671	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.32	xxxx	xxxx	0.47	xxxx	xxxx	xxxx	xxxx	0.38	0.00	0.04	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	10.7	0.0	0.0	13.0	0.0	0.0	0.0	0.0	12.4	8.5	8.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.7	0.0	0.0	13.0	0.0	0.0	0.0	0.0	12.4	8.5	8.0	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		10.7			13.0			xxxxxx			11.9		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		10.7			13.0			xxxxxx			11.9		
LOS by Appr:		B			B			*			B		
AllWayAvgQ:	0.0	0.4	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.5	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1	0 1	0	0 1	0 1	0	
Volume Module:													
Base Vol:	0	110	162	369	310	0	0	0	1	54	1	93	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	110	162	369	310	0	0	0	1	54	1	93	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	110	162	369	310	0	0	0	1	54	1	93	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	110	162	369	310	0	0	0	1	54	1	93	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	110	162	369	310	0	0	0	1	54	1	93	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.73	0.27	1.00	
Final Sat.:	0	613	698	623	680	0	0	483	533	356	132	572	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.18	0.23	0.59	0.46	xxxx	xxxx	0.00	0.00	0.15	0.01	0.16	
Crit Moves:			****	****					****			****	
Delay/Veh:	0.0	9.6	9.1	16.2	12.1	0.0	0.0	0.0	8.8	10.4	10.4	9.6	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	9.6	9.1	16.2	12.1	0.0	0.0	0.0	8.8	10.4	10.4	9.6	
LOS by Move:	*	A	A	C	B	*	*	*	A	B	B	A	
ApproachDel:	9.3			14.4			8.8			9.9			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	9.3			14.4			8.8			9.9			
LOS by Appr:	A			B			A			A			
AllWayAvgQ:	0.0	0.2	0.3	1.3	0.8	0.0	0.0	0.0	0.0	0.1	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.614
Loss Time (sec):	0	Average Delay (sec/veh):	7.0
Optimal Cycle:	48	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1007	18	156	1068	0	0	0	0	79	0	181
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1007	18	156	1068	0	0	0	0	79	0	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1007	18	156	1068	0	0	0	0	79	0	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1007	18	156	1068	0	0	0	0	79	0	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1007	18	156	1068	0	0	0	0	79	0	181
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.95	0.64	0.64	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.96	0.04	0.25	1.75	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3536	63	311	2129	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.50	0.50	0.00	0.00	0.00	0.00	0.04	0.00	0.11
Crit Moves:					****							****
Green/Cycle:	0.00	0.82	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.18	0.00	0.18
Volume/Cap:	0.00	0.35	0.35	0.61	0.61	0.00	0.00	0.00	0.00	0.24	0.00	0.61
Delay/Veh:	0.0	2.4	2.4	3.9	3.9	0.0	0.0	0.0	0.0	35.3	0.0	41.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	2.4	2.4	3.9	3.9	0.0	0.0	0.0	0.0	35.3	0.0	41.4
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	4	4	8	8	0	0	0	0	2	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.493
Loss Time (sec):	0	Average Delay (sec/veh):	12.9
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	52	885	212	18	538	111	24	175	11	91	193	128
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	885	212	18	538	111	24	175	11	91	193	128
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	885	212	18	538	111	24	175	11	91	193	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	885	212	18	538	111	24	175	11	91	193	128
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	885	212	18	538	111	24	175	11	91	193	128
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	0.92	0.92	0.19	0.93	0.93	0.35	0.99	0.99	0.51	0.94	0.94
Lanes:	1.00	1.61	0.39	1.00	1.66	0.34	1.00	0.94	0.06	1.00	0.60	0.40
Final Sat.:	656	2828	677	361	2915	601	663	1772	111	961	1074	712
Capacity Analysis Module:												
Vol/Sat:	0.08	0.31	0.31	0.05	0.18	0.18	0.04	0.10	0.10	0.09	0.18	0.18
Crit Moves:		****									****	
Green/Cycle:	0.64	0.64	0.64	0.64	0.64	0.64	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.12	0.49	0.49	0.08	0.29	0.29	0.10	0.27	0.27	0.26	0.49	0.49
Delay/Veh:	7.4	9.9	9.9	7.2	8.2	8.2	21.1	22.6	22.6	22.7	25.2	25.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.4	9.9	9.9	7.2	8.2	8.2	21.1	22.6	22.6	22.7	25.2	25.2
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	9	9	0	5	5	1	4	4	2	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.224
Loss Time (sec):	0	Average Delay (sec/veh):	7.1
Optimal Cycle:	24	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	72	0	87	113	385	0	0	323	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	72	0	87	113	385	0	0	323	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	72	0	87	113	385	0	0	323	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	72	0	87	113	385	0	0	323	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	72	0	87	113	385	0	0	323	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.51	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	973	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.05	0.12	0.11	0.00	0.00	0.17	0.06
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.24	0.00	0.24	0.76	0.76	0.00	0.00	0.76	1.00
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.22	0.15	0.14	0.00	0.00	0.22	0.06
Delay/Veh:	0.0	0.0	0.0	29.5	0.0	30.8	3.4	3.3	0.0	0.0	3.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.5	0.0	30.8	3.4	3.3	0.0	0.0	3.6	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	2	1	2	0	0	3	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.442
Loss Time (sec):	0	Average Delay (sec/veh):	15.2
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	97	242	4	14	150	192	145	209	87	2	403	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	242	4	14	150	192	145	209	87	2	403	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	97	242	4	14	150	192	145	209	87	2	403	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	242	4	14	150	192	145	209	87	2	403	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	97	242	4	14	150	192	145	209	87	2	403	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.97	0.97	0.85	0.36	1.00	0.85	0.55	0.99	0.99
Lanes:	0.28	0.71	0.01	0.09	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	469	1171	19	157	1679	1615	684	1900	1615	1041	1710	165
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.09	0.09	0.12	0.21	0.11	0.05	0.00	0.24	0.24
Crit Moves:		****									****	
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.44	0.44	0.44	0.19	0.19	0.25	0.40	0.21	0.10	0.00	0.44	0.44
Delay/Veh:	18.3	18.3	18.3	15.7	15.7	16.3	14.6	12.4	11.6	10.9	14.6	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.3	18.3	18.3	15.7	15.7	16.3	14.6	12.4	11.6	10.9	14.6	14.6
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	7	7	7	3	3	4	3	3	1	0	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.763
Loss Time (sec):	0	Average Delay (sec/veh):	16.4
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	705	299	99	1261	18	19	47	17	343	28	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	705	299	99	1261	18	19	47	17	343	28	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	705	299	99	1261	18	19	47	17	343	28	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	705	299	99	1261	18	19	47	17	343	28	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	705	299	99	1261	18	19	47	17	343	28	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.78	0.78	0.78	0.88	0.88	0.88	0.65	0.65	0.85
Lanes:	0.01	1.99	1.00	0.14	1.83	0.03	0.23	0.57	0.20	0.92	0.08	1.00
Final Sat.:	15	3419	1615	214	2723	39	382	945	342	1145	93	1615
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.19	0.46	0.46	0.46	0.05	0.05	0.05	0.30	0.30	0.03
Crit Moves:					****						****	
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.34	0.34	0.30	0.76	0.76	0.76	0.13	0.13	0.13	0.76	0.76	0.08
Delay/Veh:	9.8	9.8	9.6	16.3	16.3	16.3	19.5	19.5	19.5	33.3	33.3	19.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.8	9.8	9.6	16.3	16.3	16.3	19.5	19.5	19.5	33.3	33.3	19.1
LOS by Move:	A	A	A	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	6	6	4	18	18	18	2	2	2	12	12	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.460
Loss Time (sec):	0	Average Delay (sec/veh):	8.4
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0	1!	0	0
Volume Module:													
Base Vol:	150	1200	7	4	787	50	153	8	81	11	19	42	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	150	1200	7	4	787	50	153	8	81	11	19	42	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	150	1200	7	4	787	50	153	8	81	11	19	42	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	150	1200	7	4	787	50	153	8	81	11	19	42	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	150	1200	7	4	787	50	153	8	81	11	19	42	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.29	0.95	0.95	0.19	0.94	0.94	0.68	0.68	0.85	0.89	0.89	0.89	
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.95	0.05	1.00	0.15	0.26	0.59	
Final Sat.:	557	3585	21	353	3364	214	1224	64	1615	257	444	982	
Capacity Analysis Module:													
Vol/Sat:	0.27	0.33	0.33	0.01	0.23	0.23	0.12	0.12	0.05	0.04	0.04	0.04	
Crit Moves:		****						****					
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27	
Volume/Cap:	0.37	0.46	0.46	0.02	0.32	0.32	0.46	0.46	0.18	0.16	0.16	0.16	
Delay/Veh:	5.6	5.7	5.7	3.8	4.9	4.9	31.3	31.3	28.1	27.9	27.9	27.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	5.6	5.7	5.7	3.8	4.9	4.9	31.3	31.3	28.1	27.9	27.9	27.9	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	2	8	8	0	5	5	5	5	2	2	2	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.415
Loss Time (sec):	0	Average Delay (sec/veh):	11.9
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	172	0	208	327	242	0	0	254	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	172	0	208	327	242	0	0	254	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	172	0	208	327	242	0	0	254	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	172	0	208	327	242	0	0	254	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	172	0	208	327	242	0	0	254	123
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.90	0.51	0.95	1.00	1.00	0.90	0.90
Lanes:	0.00	0.00	0.00	1.45	0.00	1.55	1.00	2.00	0.00	0.00	1.35	0.65
Final Sat.:	0	0	0	2477	0	2639	973	3610	0	0	2313	1120
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.08	0.34	0.07	0.00	0.00	0.11	0.11
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.19	0.00	0.19	0.81	0.81	0.00	0.00	0.81	0.81
Volume/Cap:	0.00	0.00	0.00	0.37	0.00	0.41	0.41	0.08	0.00	0.00	0.14	0.14
Delay/Veh:	0.0	0.0	0.0	35.5	0.0	35.9	3.1	1.9	0.0	0.0	2.0	2.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	35.5	0.0	35.9	3.1	1.9	0.0	0.0	2.0	2.0
LOS by Move:	A	A	A	D	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	4	3	1	0	0	1	1

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.440
Loss Time (sec):	0	Average Delay (sec/veh):	14.5
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	80	644	37	80	550	29	56	233	111	41	280	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	644	37	80	550	29	56	233	111	41	280	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	644	37	80	550	29	56	233	111	41	280	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	644	37	80	550	29	56	233	111	41	280	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	644	37	80	550	29	56	233	111	41	280	72
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.40	1.00	0.85	0.35	1.00	0.85	0.33	0.90	0.90	0.34	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.35	0.65	1.00	1.59	0.41
Final Sat.:	751	1900	1615	658	1900	1615	628	2327	1108	642	2783	716
Capacity Analysis Module:												
Vol/Sat:	0.11	0.34	0.02	0.12	0.29	0.02	0.09	0.10	0.10	0.06	0.10	0.10
Crit Moves:		****									****	
Green/Cycle:	0.77	0.77	0.77	0.77	0.77	0.77	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.14	0.44	0.03	0.16	0.38	0.02	0.39	0.44	0.44	0.28	0.44	0.44
Delay/Veh:	3.0	4.2	2.7	3.1	3.8	2.7	34.4	33.4	33.4	32.8	33.4	33.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.0	4.2	2.7	3.1	3.8	2.7	34.4	33.4	33.4	32.8	33.4	33.4
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	7	0	1	6	0	2	5	5	1	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.530
Loss Time (sec):	0	Average Delay (sec/veh):	21.7
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	77	904	14	74	742	63	72	150	51	25	221	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	904	14	74	742	63	72	150	51	25	221	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	904	14	74	742	63	72	150	51	25	221	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	904	14	74	742	63	72	150	51	25	221	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	904	14	74	742	63	72	150	51	25	221	127
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.94	0.94	0.95	0.96	0.96	0.95	0.95	0.95
Lanes:	1.00	1.97	0.03	1.00	1.84	0.16	1.00	0.75	0.25	1.00	0.64	0.36
Final Sat.:	1805	3547	55	1805	3289	279	1805	1364	464	1805	1141	655
Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.25	0.04	0.23	0.23	0.04	0.11	0.11	0.01	0.19	0.19
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.48	0.48	0.08	0.47	0.47	0.39	0.39	0.39	0.05	0.37	0.37
Volume/Cap:	0.48	0.53	0.53	0.53	0.48	0.48	0.23	0.28	0.28	0.28	0.53	0.53
Delay/Veh:	45.6	18.4	18.4	48.2	18.4	18.4	20.9	21.0	21.0	47.5	25.8	25.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.6	18.4	18.4	48.2	18.4	18.4	20.9	21.0	21.0	47.5	25.8	25.8
LOS by Move:	D	B	B	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	3	10	10	3	9	9	2	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.297
Loss Time (sec):	0	Average Delay (sec/veh):	10.5
Optimal Cycle:	20	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	113	0	58	0	0	0	0	522	119	74	517	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	0	58	0	0	0	0	522	119	74	517	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	0	58	0	0	0	0	522	119	74	517	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	0	58	0	0	0	0	522	119	74	517	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	113	0	58	0	0	0	0	522	119	74	517	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	1.00	0.79	1.00	1.00	1.00	1.00	0.92	0.92	0.34	0.95	1.00
Lanes:	0.66	0.00	0.34	0.00	0.00	0.00	0.00	1.63	0.37	1.00	2.00	0.00
Final Sat.:	986	0	506	0	0	0	0	2858	652	653	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.18	0.18	0.11	0.14	0.00
Crit Moves:	****							****				
Green/Cycle:	0.39	0.00	0.39	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.61	0.00
Volume/Cap:	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.30	0.30	0.18	0.23	0.00
Delay/Veh:	21.6	0.0	21.6	0.0	0.0	0.0	0.0	9.2	9.2	8.6	8.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.6	0.0	21.6	0.0	0.0	0.0	0.0	9.2	9.2	8.6	8.7	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	4	0	4	0	0	0	0	5	5	1	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.189
Loss Time (sec):	0	Average Delay (sec/veh):	3.2
Optimal Cycle:	23	Level Of Service:	A

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	66	490	0	0	503	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	66	490	0	0	503	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	66	490	0	0	503	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	66	490	0	0	503	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	66	490	0	0	503	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.94	0.94
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.85	0.15
Final Sat.:	0	0	0	3686	0	1900	1805	3610	0	0	3300	269
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.00	0.00	0.15	0.15
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.19	1.00	0.00	0.00	0.81	0.81
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.14	0.00	0.00	0.19	0.19
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0	2.2	2.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0	2.2	2.2
LOS by Move:	A	A	A	A	A	A	C	A	A	A	A	A
HCM2kAvgQ:	0	0	0	0	0	0	2	0	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.442
Loss Time (sec):	0	Average Delay (sec/veh):	21.5
Optimal Cycle:	33	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	60	0	289	0	0	3	0	457	62	243	482	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	0	289	0	0	3	0	457	62	243	482	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	60	0	289	0	0	3	0	457	62	243	482	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	0	289	0	0	3	0	457	62	243	482	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	0	289	0	0	3	0	457	62	243	482	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.18	0.00	0.00	0.00	0.00	0.13	0.04	0.13	0.13	0.00
Crit Moves:			****			****		****		****		
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.29	0.29	0.30	0.59	0.59
Volume/Cap:	0.04	0.00	0.44	0.00	0.00	0.45	0.00	0.44	0.13	0.44	0.23	0.00
Delay/Veh:	18.0	0.0	22.0	0.0	0.0	90.3	0.0	29.5	26.6	28.5	9.7	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.0	0.0	22.0	0.0	0.0	90.3	0.0	29.5	26.6	28.5	9.7	8.4
LOS by Move:	B	A	C	A	A	F	A	C	C	C	A	A
HCM2kAvgQ:	1	0	7	0	0	1	0	6	1	6	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.549
Loss Time (sec):	0	Average Delay (sec/veh):	17.1
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	125	655	50	33	625	18	58	500	204	57	484	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	655	50	33	625	18	58	500	204	57	484	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	655	50	33	625	18	58	500	204	57	484	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	655	50	33	625	18	58	500	204	57	484	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	655	50	33	625	18	58	500	204	57	484	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	1.00	0.85	0.27	1.00	0.85	0.31	0.91	0.91	0.21	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.42	0.58	1.00	1.79	0.21
Final Sat.:	551	1900	1615	516	1900	1615	580	2452	1001	402	3185	369
Capacity Analysis Module:												
Vol/Sat:	0.23	0.34	0.03	0.06	0.33	0.01	0.10	0.20	0.20	0.14	0.15	0.15
Crit Moves:		****						****				
Green/Cycle:	0.63	0.63	0.63	0.63	0.63	0.63	0.37	0.37	0.37	0.37	0.37	0.37
Volume/Cap:	0.36	0.55	0.05	0.10	0.52	0.02	0.27	0.55	0.55	0.38	0.41	0.41
Delay/Veh:	9.6	11.1	7.1	7.5	10.7	7.0	22.6	25.3	25.3	24.6	23.5	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	11.1	7.1	7.5	10.7	7.0	22.6	25.3	25.3	24.6	23.5	23.5
LOS by Move:	A	B	A	A	B	A	C	C	C	C	C	C
HCM2kAvgQ:	2	12	1	0	11	0	1	9	9	2	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.525
Loss Time (sec):	0	Average Delay (sec/veh):	18.3
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	199	733	44	64	871	55	83	205	258	65	273	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	199	733	44	64	871	55	83	205	258	65	273	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	199	733	44	64	871	55	83	205	258	65	273	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	199	733	44	64	871	55	83	205	258	65	273	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	199	733	44	64	871	55	83	205	258	65	273	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.40	0.87	0.87	0.30	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.61	0.39
Final Sat.:	1805	3610	1615	1805	3365	213	766	1654	1654	577	2822	682
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.03	0.04	0.26	0.26	0.11	0.12	0.16	0.11	0.10	0.10
Crit Moves:	****				****				****			
Green/Cycle:	0.70	0.60	0.60	0.60	0.49	0.49	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.36	0.34	0.05	0.12	0.53	0.53	0.36	0.42	0.53	0.38	0.33	0.33
Delay/Veh:	8.0	10.2	8.3	8.5	17.6	17.6	28.7	28.5	29.9	29.3	27.5	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.0	10.2	8.3	8.5	17.6	17.6	28.7	28.5	29.9	29.3	27.5	27.5
LOS by Move:	A	B	A	A	B	B	C	C	C	C	C	C
HCM2kAvgQ:	3	6	1	1	10	10	2	6	7	2	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.250
Loss Time (sec):	0	Average Delay (sec/veh):	90.1
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	95	742	253	73	1164	229	227	576	46	593	1535	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	742	253	73	1164	229	227	576	46	593	1535	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	742	253	73	1164	229	227	576	46	593	1535	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	742	253	73	1164	229	227	576	46	593	1535	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	742	253	73	1164	229	227	576	46	593	1535	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.06	1.00	0.85	0.23	1.00	0.85	0.95	0.90	0.90	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	3.00	1.00
Final Sat.:	119	1900	1615	433	1900	1615	1805	4750	379	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.80	0.39	0.16	0.17	0.61	0.14	0.13	0.12	0.12	0.33	0.30	0.05
Crit Moves:	****							****		****		
Green/Cycle:	0.64	0.64	0.64	0.64	0.64	0.64	0.11	0.10	0.10	0.26	0.25	0.25
Volume/Cap:	1.25	0.61	0.24	0.26	0.96	0.22	1.17	1.25	1.25	1.25	1.17	0.18
Delay/Veh:	202.6	11.5	7.8	8.3	33.3	7.7	163.2	173	173.4	165.8	123	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	202.6	11.5	7.8	8.3	33.3	7.7	163.2	173	173.4	165.8	123	29.5
LOS by Move:	F	B	A	A	C	A	F	F	F	F	F	C
HCM2kAvgQ:	7	14	3	1	39	3	14	15	15	35	31	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.735
Loss Time (sec):	0	Average Delay (sec/veh):	21.9
Optimal Cycle:	70	Level Of Service:	C

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	488	0	408	345	447	0	0	1252	620
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	488	0	408	345	447	0	0	1252	620
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	488	0	408	345	447	0	0	1252	620
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	488	0	408	345	447	0	0	1252	620
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	488	0	408	345	447	0	0	1252	620
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.25	0.10	0.09	0.00	0.00	0.24	0.38
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.13	0.66	0.00	0.00	0.52	0.52
Volume/Cap:	0.00	0.00	0.00	0.41	0.00	0.74	0.74	0.13	0.00	0.00	0.46	0.74
Delay/Veh:	0.0	0.0	0.0	25.2	0.0	33.9	47.6	6.5	0.0	0.0	15.2	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.2	0.0	33.9	47.6	6.5	0.0	0.0	15.2	21.9
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	C
HCM2kAvgQ:	0	0	0	6	0	12	7	2	0	0	9	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.630
Loss Time (sec):	0	Average Delay (sec/veh):	24.0
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	93	619	2	147	811	61	141	608	154	250	630	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	619	2	147	811	61	141	608	154	250	630	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	93	619	2	147	811	61	141	608	154	250	630	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	619	2	147	811	61	141	608	154	250	630	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	619	2	147	811	61	141	608	154	250	630	171
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	0.95	0.85	0.29	0.94	0.94	0.95	0.92	0.92	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.86	0.14	1.00	1.60	0.40	1.00	1.57	0.43
Final Sat.:	340	3610	1615	557	3322	250	1805	2793	707	1805	2748	746
Capacity Analysis Module:												
Vol/Sat:	0.27	0.17	0.00	0.26	0.24	0.24	0.08	0.22	0.22	0.14	0.23	0.23
Crit Moves:	****							****		****		
Green/Cycle:	0.43	0.43	0.43	0.43	0.43	0.43	0.14	0.35	0.35	0.42	0.42	0.42
Volume/Cap:	0.63	0.39	0.00	0.61	0.56	0.56	0.54	0.63	0.63	0.53	0.54	0.54
Delay/Veh:	30.5	19.5	16.0	26.2	21.6	21.6	42.1	28.4	28.4	22.4	22.1	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.5	19.5	16.0	26.2	21.6	21.6	42.1	28.4	28.4	22.4	22.1	22.1
LOS by Move:	C	B	B	C	C	C	D	C	C	C	C	C
HCM2kAvgQ:	3	7	0	5	11	11	5	11	11	6	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.510
Loss Time (sec):	0	Average Delay (sec/veh):	21.0
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	194	173	22	146	284	73	86	409	150	39	612	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	194	173	22	146	284	73	86	409	150	39	612	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	194	173	22	146	284	73	86	409	150	39	612	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	173	22	146	284	73	86	409	150	39	612	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	194	173	22	146	284	73	86	409	150	39	612	123
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.22	0.91	0.91	0.32	0.93	0.93
Lanes:	1.00	0.89	0.11	1.00	0.80	0.20	1.00	1.46	0.54	1.00	1.67	0.33
Final Sat.:	1805	1657	211	1805	1465	377	420	2535	930	599	2930	589
Capacity Analysis Module:												
Vol/Sat:	0.11	0.10	0.10	0.08	0.19	0.19	0.20	0.16	0.16	0.07	0.21	0.21
Crit Moves:	****				****						****	
Green/Cycle:	0.54	0.33	0.33	0.59	0.38	0.38	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.32	0.31	0.31	0.19	0.51	0.51	0.50	0.39	0.39	0.16	0.51	0.51
Delay/Veh:	12.7	25.1	25.1	9.6	24.5	24.5	24.2	21.0	21.0	19.0	22.4	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.7	25.1	25.1	9.6	24.5	24.5	24.2	21.0	21.0	19.0	22.4	22.4
LOS by Move:	B	C	C	A	C	C	C	C	C	B	C	C
HCM2kAvgQ:	3	4	4	2	9	9	3	6	6	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.503
Loss Time (sec):	0	Average Delay (sec/veh):	17.4
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	335	82	384	678	3	1	1	1	127	2	277	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	335	82	384	678	3	1	1	1	127	2	277	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	335	82	384	678	3	1	1	1	127	2	277	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	335	82	384	678	3	1	1	1	127	2	277	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	335	82	384	678	3	1	1	1	127	2	277	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.61	0.39	1.00	1.99	0.01	0.33	0.33	0.33	0.98	0.02	1.00	
Final Sat.:	1900	2815	689	1805	3592	16	585	585	585	1391	22	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.12	0.12	0.21	0.19	0.19	0.00	0.00	0.00	0.09	0.09	0.17	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.24	0.24	0.66	0.66	0.66	0.34	0.34	0.34	0.34	0.34	0.34	
Volume/Cap:	0.00	0.50	0.50	0.43	0.29	0.29	0.01	0.01	0.01	0.27	0.27	0.50	
Delay/Veh:	0.0	33.6	33.6	8.7	7.2	7.2	21.8	21.8	21.8	24.2	24.2	27.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	33.6	33.6	8.7	7.2	7.2	21.8	21.8	21.8	24.2	24.2	27.0	
LOS by Move:	A	C	C	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	6	6	6	5	5	0	0	0	3	3	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.658
Loss Time (sec):	0	Average Delay (sec/veh):	28.7
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Protected					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0			
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																		
Base Vol:	319	148	14		67	281	69		17	168	325		40	281	30			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	319	148	14		67	281	69		17	168	325		40	281	30			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	319	148	14		67	281	69		17	168	325		40	281	30			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	319	148	14		67	281	69		17	168	325		40	281	30			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	319	148	14		67	281	69		17	168	325		40	281	30			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.92	0.96	0.82		0.92	0.96	0.82		0.42	0.87	0.87		0.92	0.95	0.95			
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.34	0.66		1.00	0.90	0.10			
Final Sat.:	1742	1833	1558		1742	1833	1558		793	563	1089		1742	1632	174			
Capacity Analysis Module:																		
Vol/Sat:	0.18	0.08	0.01		0.04	0.15	0.04		0.02	0.30	0.30		0.02	0.17	0.17			
Crit Moves:	****					****				****			****					
Green/Cycle:	0.28	0.28	0.28		0.23	0.23	0.23		0.45	0.45	0.45		0.03	0.49	0.49			
Volume/Cap:	0.66	0.29	0.03		0.17	0.66	0.19		0.05	0.66	0.66		0.66	0.35	0.35			
Delay/Veh:	35.2	28.6	26.3		30.8	38.5	31.0		15.3	23.4	23.4		71.1	16.0	16.0			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	35.2	28.6	26.3		30.8	38.5	31.0		15.3	23.4	23.4		71.1	16.0	16.0			
LOS by Move:	D	C	C		C	D	C		B	C	C		E	B	B			
HCM2kAvgQ:	10	4	0		2	9	2		0	12	12		2	6	6			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.438
Loss Time (sec):	0	Average Delay (sec/veh):	16.1
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	22	407	122	60	744	14	17	67	14	199	97	34	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	22	407	122	60	744	14	17	67	14	199	97	34	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	22	407	122	60	744	14	17	67	14	199	97	34	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	22	407	122	60	744	14	17	67	14	199	97	34	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	22	407	122	60	744	14	17	67	14	199	97	34	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.92	0.92	0.36	0.95	0.95	0.92	0.92	0.92	0.76	0.76	0.76	
Lanes:	1.00	1.54	0.46	1.00	1.96	0.04	0.17	0.68	0.14	0.60	0.29	0.10	
Final Sat.:	471	2681	804	689	3533	66	302	1190	249	876	427	150	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.15	0.15	0.09	0.21	0.21	0.06	0.06	0.06	0.23	0.23	0.23	
Crit Moves:					****						****		
Green/Cycle:	0.48	0.48	0.48	0.48	0.48	0.48	0.52	0.52	0.52	0.52	0.52	0.52	
Volume/Cap:	0.10	0.32	0.32	0.18	0.44	0.44	0.11	0.11	0.11	0.44	0.44	0.44	
Delay/Veh:	14.3	16.0	16.0	15.0	17.2	17.2	12.3	12.3	12.3	15.4	15.4	15.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	14.3	16.0	16.0	15.0	17.2	17.2	12.3	12.3	12.3	15.4	15.4	15.4	
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B	
HCM2kAvgQ:	0	5	5	1	8	8	2	2	2	6	6	6	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.510
Loss Time (sec):	0	Average Delay (sec/veh):	15.1
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Monterey Rd							Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1	
Volume Module:													
Base Vol:	223	312	35	68	524	50	23	126	295	51	236	144	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	223	312	35	68	524	50	23	126	295	51	236	144	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	223	312	35	68	524	50	23	126	295	51	236	144	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	223	312	35	68	524	50	23	126	295	51	236	144	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	223	312	35	68	524	50	23	126	295	51	236	144	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.36	1.00	0.85	0.50	1.00	0.85	0.43	0.85	0.85	0.39	1.00	0.85	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Sat.:	682	1900	1615	949	1900	1615	811	1615	1615	746	1900	1615	
Capacity Analysis Module:													
Vol/Sat:	0.33	0.16	0.02	0.07	0.28	0.03	0.03	0.08	0.18	0.07	0.12	0.09	
Crit Moves:	****								****				
Green/Cycle:	0.64	0.64	0.64	0.64	0.64	0.64	0.36	0.36	0.36	0.36	0.36	0.36	
Volume/Cap:	0.51	0.26	0.03	0.11	0.43	0.05	0.08	0.22	0.51	0.19	0.35	0.25	
Delay/Veh:	10.5	7.8	6.6	7.0	9.1	6.6	21.3	22.4	25.7	22.4	23.8	22.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.5	7.8	6.6	7.0	9.1	6.6	21.3	22.4	25.7	22.4	23.8	22.8	
LOS by Move:	B	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	4	4	0	1	8	1	1	3	8	1	5	3	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	20.0
Optimal Cycle:	42	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	34	450	77	169	996	50	41	239	73	93	148	117	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	34	450	77	169	996	50	41	239	73	93	148	117	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	34	450	77	169	996	50	41	239	73	93	148	117	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	34	450	77	169	996	50	41	239	73	93	148	117	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	34	450	77	169	996	50	41	239	73	93	148	117	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.91	0.91	0.91	0.78	0.78	0.78	
Lanes:	1.00	1.71	0.29	1.00	1.90	0.10	0.12	0.68	0.21	0.26	0.41	0.33	
Final Sat.:	1805	3015	516	1805	3413	171	200	1166	356	383	609	482	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.15	0.15	0.09	0.29	0.29	0.21	0.21	0.21	0.24	0.24	0.24	
Crit Moves:					****						****		
Green/Cycle:	0.03	0.34	0.34	0.53	0.53	0.53	0.44	0.44	0.44	0.44	0.44	0.44	
Volume/Cap:	0.55	0.43	0.43	0.33	0.55	0.55	0.47	0.47	0.47	0.55	0.55	0.55	
Delay/Veh:	58.1	25.5	25.5	14.7	16.1	16.1	20.3	20.3	20.3	21.9	21.9	21.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	58.1	25.5	25.5	14.7	16.1	16.1	20.3	20.3	20.3	21.9	21.9	21.9	
LOS by Move:	E	C	C	B	B	B	C	C	C	C	C	C	
HCM2kAvgQ:	2	7	7	3	11	11	8	8	8	9	9	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.589
Loss Time (sec):	0	Average Delay (sec/veh):	11.3
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	10	424	140	291	1236	1	7	9	0	125	19	162	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	424	140	291	1236	1	7	9	0	125	19	162	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	424	140	291	1236	1	7	9	0	125	19	162	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	10	424	140	291	1236	1	7	9	0	125	19	162	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	10	424	140	291	1236	1	7	9	0	125	19	162	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.16	0.91	0.91	0.39	0.95	0.95	0.90	0.90	1.00	0.81	0.81	0.81	
Lanes:	1.00	1.50	0.50	1.00	2.00	0.00	0.44	0.56	0.00	0.41	0.06	0.53	
Final Sat.:	306	2613	863	747	3607	3	748	962	0	629	96	815	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.16	0.16	0.39	0.34	0.34	0.01	0.01	0.00	0.20	0.20	0.20	
Crit Moves:				****							****		
Green/Cycle:	0.66	0.66	0.66	0.66	0.66	0.66	0.34	0.34	0.00	0.34	0.34	0.34	
Volume/Cap:	0.05	0.25	0.25	0.59	0.52	0.52	0.03	0.03	0.00	0.59	0.59	0.59	
Delay/Veh:	6.0	6.9	6.9	11.2	8.9	8.9	22.1	22.1	0.0	29.1	29.1	29.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	6.0	6.9	6.9	11.2	8.9	8.9	22.1	22.1	0.0	29.1	29.1	29.1	
LOS by Move:	A	A	A	B	A	A	C	C	A	C	C	C	
HCM2kAvgQ:	0	4	4	6	10	10	0	0	0	8	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.637
Loss Time (sec):	0	Average Delay (sec/veh):	13.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	105	62	17	43	281	111	29	96	96	25	126	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	105	62	17	43	281	111	29	96	96	25	126	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	105	62	17	43	281	111	29	96	96	25	126	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	105	62	17	43	281	111	29	96	96	25	126	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	105	62	17	43	281	111	29	96	96	25	126	25	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.78	0.22	1.00	0.72	0.28	0.13	0.43	0.43	0.14	0.72	0.14	
Final Sat.:	504	435	119	548	441	174	78	257	257	80	402	80	
Capacity Analysis Module:													
Vol/Sat:	0.21	0.14	0.14	0.08	0.64	0.64	0.37	0.37	0.37	0.31	0.31	0.31	
Crit Moves:	****				****			****			****		
Delay/Veh:	11.0	9.7	9.7	9.6	17.2	17.2	11.6	11.6	11.6	11.2	11.2	11.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	11.0	9.7	9.7	9.6	17.2	17.2	11.6	11.6	11.6	11.2	11.2	11.2	
LOS by Move:	B	A	A	A	C	C	B	B	B	B	B	B	
ApproachDel:	10.4			16.4			11.6			11.2			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.4			16.4			11.6			11.2			
LOS by Appr:	B			C			B			B			
AllWayAvgQ:	0.2	0.1	0.1	0.1	1.5	1.5	0.5	0.5	0.5	0.4	0.4	0.4	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	22.7
Optimal Cycle:	40	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	96	364	90	371	742	20	53	246	323	65	60	99
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	364	90	371	742	20	53	246	323	65	60	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	364	90	371	742	20	53	246	323	65	60	99
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	364	90	371	742	20	53	246	323	65	60	99
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	96	364	90	371	742	20	53	246	323	65	60	99
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.68	1.00	0.85	0.44	1.00	0.85
Lanes:	1.00	1.60	0.40	1.00	1.95	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2808	694	1805	3502	94	1288	1900	1615	836	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.13	0.13	0.21	0.21	0.21	0.04	0.13	0.20	0.08	0.03	0.06
Crit Moves:		****		****					****			
Green/Cycle:	0.13	0.24	0.24	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
Volume/Cap:	0.42	0.54	0.54	0.48	0.42	0.42	0.11	0.35	0.54	0.21	0.08	0.16
Delay/Veh:	41.6	33.7	33.7	16.8	16.0	16.0	20.6	22.8	25.5	21.6	20.3	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.6	33.7	33.7	16.8	16.0	16.0	20.6	22.8	25.5	21.6	20.3	21.0
LOS by Move:	D	C	C	B	B	B	C	C	C	C	C	C
HCM2kAvgQ:	3	7	7	8	8	8	1	5	8	1	1	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	8.1
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	171	447	37	18	1032	203	54	43	73	82	87	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	171	447	37	18	1032	203	54	43	73	82	87	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	171	447	37	18	1032	203	54	43	73	82	87	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	447	37	18	1032	203	54	43	73	82	87	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	171	447	37	18	1032	203	54	43	73	82	87	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.20	0.94	0.94	0.46	0.93	0.93	0.62	0.91	0.91	0.44	0.88	0.88
Lanes:	1.00	1.85	0.15	1.00	1.67	0.33	1.00	0.37	0.63	1.00	2.39	0.61
Final Sat.:	378	3296	273	865	2942	579	1176	638	1083	829	4015	1015
Capacity Analysis Module:												
Vol/Sat:	0.45	0.14	0.14	0.02	0.35	0.35	0.05	0.07	0.07	0.10	0.02	0.02
Crit Moves:	****									****		
Green/Cycle:	0.82	0.82	0.82	0.82	0.82	0.82	0.18	0.18	0.18	0.18	0.18	0.18
Volume/Cap:	0.55	0.17	0.17	0.03	0.43	0.43	0.26	0.38	0.38	0.55	0.12	0.12
Delay/Veh:	5.1	1.9	1.9	1.7	2.6	2.6	36.0	36.9	36.9	41.8	34.5	34.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.1	1.9	1.9	1.7	2.6	2.6	36.0	36.9	36.9	41.8	34.5	34.5
LOS by Move:	A	A	A	A	A	A	D	D	D	D	C	C
HCM2kAvgQ:	3	2	2	0	6	6	2	3	3	3	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.641
Loss Time (sec):	0	Average Delay (sec/veh):	29.2
Optimal Cycle:	96	Level Of Service:	C

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	175	348	241	415	1132	35	9	699	115	219	488	189	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	175	348	241	415	1132	35	9	699	115	219	488	189	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	175	348	241	415	1132	35	9	699	115	219	488	189	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	175	348	241	415	1132	35	9	699	115	219	488	189	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	175	348	241	415	1132	35	9	699	115	219	488	189	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.93	0.93	0.95	0.91	0.91	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.72	0.28	1.00	1.44	0.56	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	3034	499	1805	2493	966	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.10	0.15	0.23	0.31	0.02	0.00	0.23	0.23	0.12	0.20	0.20	
Crit Moves:	****				****			****					
Green/Cycle:	0.34	0.21	0.21	0.54	0.41	0.41	0.30	0.30	0.30	0.16	0.45	0.45	
Volume/Cap:	0.57	0.45	0.70	0.58	0.76	0.05	0.09	0.76	0.76	0.76	0.44	0.44	
Delay/Veh:	27.4	34.8	43.0	15.7	27.6	17.7	27.1	34.9	34.9	51.6	19.0	19.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	27.4	34.8	43.0	15.7	27.6	17.7	27.1	34.9	34.9	51.6	19.0	19.0	
LOS by Move:	C	C	D	B	C	B	C	C	C	D	B	B	
HCM2kAvgQ:	5	5	8	9	17	1	0	14	14	8	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.368
Loss Time (sec):	0	Average Delay (sec/veh):	17.5
Optimal Cycle:	29	Level Of Service:	B

Street Name:	I-5 NB off-ramp									Ave 26								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Permitted					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1!	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	306	29	30		24	0	89		79	651	0		0	681	21			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	306	29	30		24	0	89		79	651	0		0	681	21			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	306	29	30		24	0	89		79	651	0		0	681	21			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	306	29	30		24	0	89		79	651	0		0	681	21			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	306	29	30		24	0	89		79	651	0		0	681	21			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.95	0.95	0.95		0.95	1.00	0.85		0.29	0.95	1.00		1.00	0.95	0.95			
Lanes:	1.72	0.14	0.14		1.00	0.00	1.00		1.00	2.00	0.00		0.00	1.94	0.06			
Final Sat.:	3101	246	255		1805	0	1615		554	3610	0		0	3486	108			
Capacity Analysis Module:																		
Vol/Sat:	0.10	0.12	0.12		0.01	0.00	0.06		0.14	0.18	0.00		0.00	0.20	0.20			
Crit Moves:			****				****							****				
Green/Cycle:	0.32	0.32	0.32		0.15	0.00	0.15		0.53	0.53	0.00		0.00	0.53	0.53			
Volume/Cap:	0.31	0.37	0.37		0.09	0.00	0.37		0.27	0.34	0.00		0.00	0.37	0.37			
Delay/Veh:	25.8	26.5	26.5		36.8	0.0	39.2		13.3	13.5	0.0		0.0	13.8	13.8			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	25.8	26.5	26.5		36.8	0.0	39.2		13.3	13.5	0.0		0.0	13.8	13.8			
LOS by Move:	C	C	C		D	A	D		B	B	A		A	B	B			
HCM2kAvgQ:	4	5	5		1	0	3		2	6	0		0	7	7			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.501
Loss Time (sec):	0	Average Delay (sec/veh):	12.0
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	90	250	67	111	335	104	54	834	76	68	1703	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	250	67	111	335	104	54	834	76	68	1703	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	250	67	111	335	104	54	834	76	68	1703	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	250	67	111	335	104	54	834	76	68	1703	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	250	67	111	335	104	54	834	76	68	1703	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	0.92	0.92	0.42	0.92	0.92	0.09	0.90	0.90	0.27	0.90	0.90
Lanes:	1.00	1.58	0.42	1.00	1.53	0.47	1.00	2.75	0.25	1.00	2.82	0.18
Final Sat.:	609	2757	739	798	2657	825	166	4694	428	521	4828	312
Capacity Analysis Module:												
Vol/Sat:	0.15	0.09	0.09	0.14	0.13	0.13	0.32	0.18	0.18	0.13	0.35	0.35
Crit Moves:	****										****	
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.50	0.31	0.31	0.47	0.43	0.43	0.46	0.25	0.25	0.19	0.50	0.50
Delay/Veh:	31.3	27.5	27.5	30.3	28.7	28.7	9.3	5.3	5.3	5.3	6.8	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.3	27.5	27.5	30.3	28.7	28.7	9.3	5.3	5.3	5.3	6.8	6.8
LOS by Move:	C	C	C	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	3	4	4	3	6	6	1	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.384
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	32	377	49	0	0	0	59	229	0	0	743	150
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	377	49	0	0	0	59	229	0	0	743	150
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	377	49	0	0	0	59	229	0	0	743	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	377	49	0	0	0	59	229	0	0	743	150
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	377	49	0	0	0	59	229	0	0	743	150
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.26	0.95	1.00	1.00	0.93	0.93
Lanes:	0.14	1.65	0.21	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.66	0.34
Final Sat.:	246	2893	376	0	0	0	494	3610	0	0	2928	591
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.00	0.00	0.00	0.12	0.06	0.00	0.00	0.25	0.25
Crit Moves:		****									****	
Green/Cycle:	0.34	0.34	0.34	0.00	0.00	0.00	0.66	0.66	0.00	0.00	0.66	0.66
Volume/Cap:	0.38	0.38	0.38	0.00	0.00	0.00	0.18	0.10	0.00	0.00	0.38	0.38
Delay/Veh:	25.3	25.3	25.3	0.0	0.0	0.0	6.8	6.2	0.0	0.0	7.8	7.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	25.3	25.3	0.0	0.0	0.0	6.8	6.2	0.0	0.0	7.8	7.8
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	6	6	6	0	0	0	1	1	0	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.261
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	19	Level Of Service:	B

Street Name:	I-5 SB ramps							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	0 1	0 1	1	0 0	1 1	0	1 0	2 0	0	
Volume Module:													
Base Vol:	0	0	0	49	143	227	0	218	119	149	633	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	49	143	227	0	218	119	149	633	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	49	143	227	0	218	119	149	633	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	49	143	227	0	218	119	149	633	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	49	143	227	0	218	119	149	633	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.90	0.90	0.52	0.95	1.00	
Lanes:	0.00	0.00	0.00	0.35	1.02	1.63	0.00	1.29	0.71	1.00	2.00	0.00	
Final Sat.:	0	0	0	572	1668	2648	0	2211	1207	981	3610	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.10	0.10	0.15	0.18	0.00	
Crit Moves:					****						****		
Green/Cycle:	0.00	0.00	0.00	0.33	0.33	0.33	0.00	0.67	0.67	0.67	0.67	0.00	
Volume/Cap:	0.00	0.00	0.00	0.26	0.26	0.26	0.00	0.15	0.15	0.23	0.26	0.00	
Delay/Veh:	0.0	0.0	0.0	24.8	24.8	24.8	0.0	6.0	6.0	6.5	6.6	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	24.8	24.8	24.8	0.0	6.0	6.0	6.5	6.6	0.0	
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A	
HCM2kAvgQ:	0	0	0	3	3	3	0	2	2	2	4	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 20.7 Worst Case Level Of Service: F[388.6]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			414	1115			0	80		2		0	1		0		150
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	0	0			414	1115			0	80		2		0	1		0		150
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	0	0			414	1115			0	80		2		0	1		0		150
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			414	1115			0	80		2		0	1		0		150
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			1943		1943	xxxxx		1387		1943		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			50		66	xxxxx		122		66		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			34		49	xxxxx		95		49		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.25	xxxx	xxxx			2.32		0.04	xxxx		0.01		0.00		0.14
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.0	xxxx	xxxxx			4.2		xxxx	xxxxx		xxxx		xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx			7.9	xxxx	xxxxx			382.7		xxxx	xxxxx		xxxxx		xxxx		8.5
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			35		xxxx	xxxxx		xxxx		959		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3.0		xxxx	xxxxx		xxxxx		0.3		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			394.2		xxxx	xxxxx		xxxxx		9.1		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					388.6					8.8				
ApproachLOS:	*					*					F					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.506
Loss Time (sec):	0	Average Delay (sec/veh):	21.4
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	31	230	257	381	392	12	101	241	73	109	109	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	31	230	257	381	392	12	101	241	73	109	109	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	31	230	257	381	392	12	101	241	73	109	109	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	230	257	381	392	12	101	241	73	109	109	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	230	257	381	392	12	101	241	73	109	109	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	1.00	0.85	0.46	0.92	0.92	0.41	0.87	0.87
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.54	0.47	1.00	1.00	1.00
Final Sat.:	1805	1662	1662	1805	1900	1615	877	2674	810	778	1649	1649
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.15	0.21	0.21	0.01	0.12	0.09	0.09	0.14	0.07	0.09
Crit Moves:			****	****						****		
Green/Cycle:	0.06	0.31	0.31	0.67	0.67	0.67	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.31	0.45	0.51	0.43	0.31	0.01	0.42	0.33	0.33	0.51	0.24	0.32
Delay/Veh:	47.1	28.3	28.9	8.4	7.1	5.6	30.7	28.9	28.9	32.3	28.1	29.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.1	28.3	28.9	8.4	7.1	5.6	30.7	28.9	28.9	32.3	28.1	29.0
LOS by Move:	D	C	C	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	6	7	6	5	0	3	4	4	4	3	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.501
Loss Time (sec):	0	Average Delay (sec/veh):	16.4
Optimal Cycle:	29	Level Of Service:	B

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	5	331	52	158	286	395	105	141	5	44	746	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	331	52	158	286	395	105	141	5	44	746	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	331	52	158	286	395	105	141	5	44	746	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	331	52	158	286	395	105	141	5	44	746	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	331	52	158	286	395	105	141	5	44	746	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.46	0.98	0.98	0.38	1.00	0.85	0.22	0.95	0.95	0.88	0.88	0.88
Lanes:	1.00	0.86	0.14	1.00	1.00	1.00	1.00	1.93	0.07	0.10	1.75	0.15
Final Sat.:	881	1609	253	726	1900	1615	426	3469	123	172	2908	249
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.21	0.22	0.15	0.24	0.25	0.04	0.04	0.26	0.26	0.26
Crit Moves:						****					****	
Green/Cycle:	0.49	0.49	0.49	0.49	0.49	0.49	0.51	0.51	0.51	0.51	0.51	0.51
Volume/Cap:	0.01	0.42	0.42	0.45	0.31	0.50	0.48	0.08	0.08	0.50	0.50	0.50
Delay/Veh:	13.2	16.8	16.8	17.6	15.6	17.9	17.5	12.4	12.4	16.3	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.2	16.8	16.8	17.6	15.6	17.9	17.5	12.4	12.4	16.3	16.3	16.3
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	0	8	8	4	5	8	3	1	1	9	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.726
Loss Time (sec):	0	Average Delay (sec/veh):	18.7
Optimal Cycle:	52	Level Of Service:	B

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	116	259	25	213	497	388	26	419	178	66	1080	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	116	259	25	213	497	388	26	419	178	66	1080	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	116	259	25	213	497	388	26	419	178	66	1080	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	259	25	213	497	388	26	419	178	66	1080	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	259	25	213	497	388	26	419	178	66	1080	101
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.94	0.94	0.51	0.89	0.89	0.79	0.79	0.79	0.83	0.83	0.83
Lanes:	1.00	1.82	0.18	1.00	1.12	0.88	0.08	1.35	0.57	0.11	1.73	0.16
Final Sat.:	352	3249	314	968	1894	1479	125	2018	857	167	2725	255
Capacity Analysis Module:												
Vol/Sat:	0.33	0.08	0.08	0.22	0.26	0.26	0.21	0.21	0.21	0.40	0.40	0.40
Crit Moves:	****										****	
Green/Cycle:	0.45	0.45	0.45	0.45	0.45	0.45	0.55	0.55	0.55	0.55	0.55	0.55
Volume/Cap:	0.73	0.18	0.18	0.48	0.58	0.58	0.38	0.38	0.38	0.73	0.73	0.73
Delay/Veh:	37.5	16.3	16.3	20.0	20.8	20.8	13.1	13.1	13.1	18.6	18.6	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.5	16.3	16.3	20.0	20.8	20.8	13.1	13.1	13.1	18.6	18.6	18.6
LOS by Move:	D	B	B	B	C	C	B	B	B	B	B	B
HCM2kAvgQ:	5	3	3	5	11	11	6	6	6	16	16	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 52.2 Worst Case Level Of Service: F[468.3]

Street Name:	Ave 21									Main St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	127		1	135				0	508		0		2	1585		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	2	127		1	135				0	508		0		2	1585		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	2	127		1	135				0	508		0		2	1585		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	2	127		1	135				0	508		0		2	1585		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	254	1843		2097	793				xxxx	xxxx		xxxxx		508	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	752	48		53	336				xxxx	xxxx		xxxxx		1067	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	752	47		53	336				xxxx	xxxx		xxxxx		1067	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.00	2.68		0.02	0.40				xxxx	xxxx		xxxx		0.00	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	13.5		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	9.8	944.0		xxxx	xxxxx				xxxxx	xxxx		xxxxx		8.4	xxxx		xxxxx	
LOS by Move:	*	*	A	F		*	*				*	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	323				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.0				xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	24.0				xxxxx	xxxx		xxxxx		8.4	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	C				*	*		*		A	*		*	
ApproachDel:	9.8			468.3							xxxxxx					xxxxxx				
ApproachLOS:	A			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.825
Loss Time (sec):	0	Average Delay (sec/veh):	837.1
Optimal Cycle:	131	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1676	241	362	0	0	851	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1676	241	362	0	0	851	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1676	241	362	0	0	851	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1676	241	362	0	0	851	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1676	241	362	0	0	851	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.20	1.80	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2122	3187	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.59	0.11	0.11	0.00	0.00	0.24	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.00	0.00	0.29	0.29
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	4.28	0.83	0.83	0.00	0.00	0.83	0.01
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1527	49.6	49.6	0.0	0.0	38.9	25.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1527	49.6	49.6	0.0	0.0	38.9	25.6
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	119	9	9	0	0	15	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	11	204	5	83	1395	59	54	172	79	98	260	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	204	5	83	1395	59	54	172	79	98	260	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	204	5	83	1395	59	54	172	79	98	260	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	204	5	83	1395	59	54	172	79	98	260	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	204	5	83	1395	59	54	172	79	98	260	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.13	0.95	0.95	0.60	0.94	0.94	0.73	0.73	0.73	0.71	0.71	0.71
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.35	1.13	0.52	0.49	1.31	0.19
Final Sat.:	252	3511	86	1138	3442	146	493	1569	721	666	1766	258
Capacity Analysis Module:												
Vol/Sat:	0.04	0.06	0.06	0.07	0.41	0.41	0.11	0.11	0.11	0.15	0.15	0.15
Crit Moves:					****						****	
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	0.06	0.08	0.08	0.10	0.55	0.55	0.41	0.41	0.41	0.55	0.55	0.55
Delay/Veh:	3.8	3.8	3.8	3.9	6.2	6.2	30.6	30.6	30.6	32.5	32.5	32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.8	3.8	3.8	3.9	6.2	6.2	30.6	30.6	30.6	32.5	32.5	32.5
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	11	11	4	4	4	6	6	6

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

EXISTING CONDITION – YEAR 2011
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.691
Loss Time (sec):	0	Average Delay (sec/veh):	24.7
Optimal Cycle:	74	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	51	1237	442	127	1285	135	114	392	240	316	213	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	1237	442	127	1285	135	114	392	240	316	213	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	51	1237	442	127	1285	135	114	392	0	316	213	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	1237	442	127	1285	135	114	392	0	316	213	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	51	1237	442	127	1285	135	114	392	0	316	213	72
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.91	0.91
Lanes:	1.00	2.21	0.79	1.00	2.71	0.29	1.00	2.00	1.00	1.00	1.49	0.51
Final Sat.:	1805	3671	1312	1805	4627	486	1805	3610	1900	1805	2596	877
Capacity Analysis Module:												
Vol/Sat:	0.03	0.34	0.34	0.07	0.28	0.28	0.06	0.11	0.00	0.18	0.08	0.08
Crit Moves:		****		****				****		****		
Green/Cycle:	0.05	0.49	0.49	0.10	0.54	0.54	0.18	0.16	0.00	0.25	0.23	0.23
Volume/Cap:	0.52	0.69	0.69	0.69	0.52	0.52	0.35	0.69	0.00	0.69	0.35	0.35
Delay/Veh:	50.8	20.7	20.7	54.1	15.1	15.1	36.7	43.5	0.0	38.3	32.4	32.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.8	20.7	20.7	54.1	15.1	15.1	36.7	43.5	0.0	38.3	32.4	32.4
LOS by Move:	D	C	C	D	B	B	D	D	A	D	C	C
HCM2kAvgQ:	2	15	15	5	10	10	3	7	0	10	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 8.8 Worst Case Level Of Service: A[9.6]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0			218	0			8	0	13			0	0	10			0
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			218	0			8	0	13			0	0	10			0
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			218	0			8	0	13			0	0	10			0
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			218	0			8	0	13			0	0	10			0
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			23	23			10	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			998	874			1077	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			998	874			1077	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.22	0.00			0.01	xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	1001	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.9	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	9.6	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	A	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					9.6		xxxxxx					xxxxxx					xxxxxx		
ApproachLOS:	*					A							*					*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.439
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	228	1166	91	9	828	198	0	0	0	237	39	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	228	1166	91	9	828	198	0	0	0	237	39	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	228	1166	91	9	828	198	0	0	0	237	39	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	1166	91	9	828	198	0	0	0	237	39	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	228	1166	91	9	828	198	0	0	0	237	39	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.89	0.89	0.85
Lanes:	2.00	1.86	0.14	1.00	2.00	1.00	0.00	0.00	0.00	1.72	0.28	1.00
Final Sat.:	3502	3312	258	1805	3610	1615	0	0	0	2896	477	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.35	0.35	0.00	0.23	0.12	0.00	0.00	0.00	0.08	0.08	0.02
Crit Moves:		****		****						****		
Green/Cycle:	0.18	0.80	0.80	0.01	0.63	0.63	0.00	0.00	0.00	0.19	0.19	0.19
Volume/Cap:	0.36	0.44	0.44	0.44	0.36	0.19	0.00	0.00	0.00	0.44	0.44	0.13
Delay/Veh:	36.3	3.1	3.1	63.4	8.8	7.7	0.0	0.0	0.0	36.5	36.5	34.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.3	3.1	3.1	63.4	8.8	7.7	0.0	0.0	0.0	36.5	36.5	34.1
LOS by Move:	D	A	A	E	A	A	A	A	A	D	D	C
HCM2kAvgQ:	3	6	6	1	6	3	0	0	0	4	4	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.613
Loss Time (sec):	0	Average Delay (sec/veh):	22.4
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	994	28	0	1072	0	217	328	221	13	0	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	994	28	0	1072	0	217	328	221	13	0	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	994	28	0	1072	0	217	328	221	13	0	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	994	28	0	1072	0	217	328	221	13	0	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	994	28	0	1072	0	217	328	221	13	0	271
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.90	0.90	0.90	0.85	1.00	0.85
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.57	0.86	0.58	0.09	0.00	1.91
Final Sat.:	0	5024	142	0	3610	0	965	1458	982	142	0	3107
Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.20	0.00	0.30	0.00	0.22	0.22	0.22	0.09	0.00	0.09
Crit Moves:					****				****	****		
Green/Cycle:	0.00	0.48	0.48	0.00	0.48	0.00	0.37	0.37	0.37	0.15	0.00	0.15
Volume/Cap:	0.00	0.41	0.41	0.00	0.61	0.00	0.61	0.61	0.61	0.61	0.00	0.59
Delay/Veh:	0.0	16.7	16.7	0.0	19.6	0.0	26.8	26.8	26.8	42.3	0.0	41.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	16.7	16.7	0.0	19.6	0.0	26.8	26.8	26.8	42.3	0.0	41.5
LOS by Move:	A	B	B	A	B	A	C	C	C	D	A	D
HCM2kAvgQ:	0	7	7	0	13	0	11	11	11	5	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.442
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	119	1225	0	0	323	572	0	0	0	129	0	19	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	119	1225	0	0	323	572	0	0	0	129	0	19	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	119	1225	0	0	323	0	0	0	0	129	0	19	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	119	1225	0	0	323	0	0	0	0	129	0	19	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	119	1225	0	0	323	0	0	0	0	129	0	19	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.76	1.00	0.76	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1254	0	185	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.34	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.10	0.00	0.10	
Crit Moves:		****								****			
Green/Cycle:	0.55	0.83	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.17	0.00	0.17	
Volume/Cap:	0.12	0.41	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.61	0.00	0.61	
Delay/Veh:	10.7	2.2	0.0	0.0	33.5	0.0	0.0	0.0	0.0	43.3	0.0	43.3	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.7	2.2	0.0	0.0	33.5	0.0	0.0	0.0	0.0	43.3	0.0	43.3	
LOS by Move:	B	A	A	A	C	A	A	A	A	D	A	D	
HCM2kAvgQ:	2	5	0	0	9	0	0	0	0	5	0	5	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.635
Loss Time (sec):	0	Average Delay (sec/veh):	24.7
Optimal Cycle:	82	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	404	80	13	437	0	938	3	184	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	404	80	13	437	0	938	3	184	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	404	80	13	437	0	938	3	184	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	404	80	13	437	0	938	3	184	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	404	80	13	437	0	938	3	184	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.93	0.93	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.67	0.33	1.00	1.00	0.00	1.71	0.00	0.28	0.00	0.00	0.00	
Final Sat.:	0	2939	582	1805	1900	0	2781	7	455	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.14	0.14	0.01	0.23	0.00	0.34	0.40	0.40	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.18	0.18	0.30	0.48	0.00	0.52	0.52	0.52	0.00	0.00	0.00	
Volume/Cap:	0.00	0.77	0.77	0.02	0.48	0.00	0.64	0.77	0.77	0.00	0.00	0.00	
Delay/Veh:	0.0	45.0	45.0	24.8	18.2	0.0	17.9	21.6	21.6	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	45.0	45.0	24.8	18.2	0.0	17.9	21.6	21.6	0.0	0.0	0.0	
LOS by Move:	A	D	D	C	B	A	B	C	C	A	A	A	
HCM2kAvgQ:	0	9	9	0	9	0	13	18	18	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[8.7]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	1	0	0	0		34		40			5		0		9	0		0		0
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	1	0	0	0		34		40			5		0		9	0		0		0
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	1	0	0	0		34		40			5		0		9	0		0		0
Reduct Vol:	0	0	0	0		0		0			0		0		0	0		0		0
FinalVolume:	1	0	0	0		34		40			5		0		9	0		0		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4		6.5		6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5		4.0		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	74	xxxx	xxxxx	xxxx	xxxx	xxxxx					56		56		54	xxxx	xxxx	xxxxx		
Potent Cap.:	1538	xxxx	xxxxx	xxxx	xxxx	xxxxx					957		839		1019	xxxx	xxxx	xxxxx		
Move Cap.:	1538	xxxx	xxxxx	xxxx	xxxx	xxxxx					956		838		1019	xxxx	xxxx	xxxxx		
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx					0.01		0.00		0.01	xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx		xxxx		xxxxx	xxxx	xxxx	xxxxx		
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		xxxx		xxxxx	xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*	*	*	*					*		*		*	*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx		996		xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		0.0		xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		8.7		xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*					*		A		*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx							8.7					xxxxxx				
ApproachLOS:	*			*							A					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[10.7]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	9	1	1	21	2	6	3	116	16	6	171	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	1	1	21	2	6	3	116	16	6	171	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	1	1	21	2	6	3	116	16	6	171	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	1	1	21	2	6	3	116	16	6	171	6
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	320	319	124	317	324	174	177	xxxx	xxxxx	132	xxxx	xxxxx
Potent Cap.:	637	601	932	640	597	875	1411	xxxx	xxxxx	1466	xxxx	xxxxx
Move Cap.:	628	597	932	635	593	875	1411	xxxx	xxxxx	1466	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.00	0.03	0.00	0.01	0.00	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	644	xxxxx	xxxx	670	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.7	xxxxx	xxxxx	10.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	10.7			10.6			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 33.4 Worst Case Level Of Service: F[199.9]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	673		0		301	0		0		0	0		24		0	0		96		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
Initial Bse:	673		0		301	0		0		0	0		24		0	0		96		0
User Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Volume:	673		0		0	0		0		0	0		24		0	0		96		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	673		0		0	0		0		0	0		24		0	0		96		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		1346	xxxxx	xxxx		1346	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		153	xxxxx	xxxx		153	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		90	xxxxx	xxxx		90	xxxxx						
Volume/Cap:	0.41	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.27	xxxx	xxxx		1.07	xxxx						
Level Of Service Module:																				
2Way95thQ:	2.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		1.0	xxxxx	xxxx		6.4	xxxxx						
Control Del:	8.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		59.0	xxxxx	xxxxx		200	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		F	*	*		F	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			59.0			199.9										
ApproachLOS:	*			*			F			F										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.555
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	La Riba Wy									Ave 66								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			23	0			16	0	0	0			0	453			52
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Initial Bse:	0	0	0			23	0			16	0	0	0			0	453			52
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Volume:	0	0	0			23	0			16	0	0	0			0	453			52
Reduct Vol:	0	0	0			0	0			0	0	0	0			0	0			0
Reduced Vol:	0	0	0			23	0			16	0	0	0			0	453			52
PCE Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
MLF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
FinalVolume:	0	0	0			23	0			16	0	0	0			0	453			52
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Lanes:	0.00	0.00	0.00			1.00	0.00			1.00	0.00	0.00	0.00			0.00	0.90			0.10
Final Sat.:	0	0	0			561	0			689	0	0	0			0	816			94
Capacity Analysis Module:																				
Vol/Sat:	xxxx	xxxx	xxxx			0.04	xxxx			0.02	xxxx	xxxx	xxxx			xxxx	0.56			0.56
Crit Moves:						****														****
Delay/Veh:	0.0	0.0	0.0			8.9	0.0			7.6	0.0	0.0	0.0			0.0	11.7			11.7
Delay Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
AdjDel/Veh:	0.0	0.0	0.0			8.9	0.0			7.6	0.0	0.0	0.0			0.0	11.7			11.7
LOS by Move:	*	*	*			A	*			A	*	*	*			*	B			B
ApproachDel:	xxxxxx					8.4					xxxxxx					11.7				
Delay Adj:	xxxxx					1.00					xxxxx					1.00				
ApprAdjDel:	xxxxxx					8.4					xxxxxx					11.7				
LOS by Appr:	*					A					*					B				
AllWayAvgQ:	0.0	0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0			1.2	1.2			1.2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: C[16.4]

Street Name:	ASP NB Exit 29									Ave 60							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	37	0	87	51	438	0	0	388	129								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	37	0	87	51	438	0	0	388	129								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	37	0	87	51	438	0	0	388	129								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	37	0	87	51	438	0	0	388	129								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	993	993	453	517	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	275	248	611	1059	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	265	236	611	1059	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.14	0.00	0.14	0.05	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	439	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	16.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				16.4		xxxxxx				xxxxxx									
ApproachLOS:	*				C		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	17.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	10	1	2	4	2	11	13	144	15	6	136	2	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	1	2	4	2	11	13	144	15	6	136	2	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	1	2	4	2	11	13	144	15	6	136	2	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	10	1	2	4	2	11	13	144	15	6	136	2	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.77	0.08	0.15	0.23	0.12	0.65	0.07	0.84	0.09	0.04	0.95	0.01	
Final Sat.:	176	18	35	0	0	1	66	728	76	35	802	12	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.06	0.06	17.00	17.00	17.00	0.20	0.20	0.20	0.17	0.17	0.17	
Crit Moves:		****		****					****		****		
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.06	0.06	0.06	17.00	17.00	17.00	0.20	0.20	0.20	0.17	0.17	0.17	
Delay/Veh:	1.2	1.2	1.2	xxxxx	xxxx	xxxxx	2.1	2.1	2.1	1.9	1.9	1.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.2	1.2	1.2	xxxxx	xxxx	xxxxx	2.1	2.1	2.1	1.9	1.9	1.9	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 8.0 Worst Case Level Of Service: C[18.1]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	128	0	317	0	0	0	40	235	0	0	279	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	0	317	0	0	0	40	235	0	0	279	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	128	0	317	0	0	0	40	235	0	0	279	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	128	0	317	0	0	0	40	235	0	0	279	49
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	619	643	118	xxxx	xxxx	xxxxx	328	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	456	394	940	xxxx	xxxx	xxxxx	1243	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	444	381	940	xxxx	xxxx	xxxxx	1243	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.29	0.00	0.34	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	712	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.4	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	*	*	*
ApproachDel:		18.1		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C		*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 6.1 Worst Case Level Of Service: B[10.5]

Street Name:	Ave 57											ASP SB Exit 28B/Carlota Bl											
Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		123	4				4	0	0			0	0	0		244
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0	0		123	4				4	0	0			0	0	0		244
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	0	0		123	4				4	0	0			0	0	0		244
Reduct Vol:	0	0	0	0		0	0				0	0	0			0	0	0		0
FinalVolume:	0	0	0	0		123	4				4	0	0			0	0	0		244
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx				7.1	xxxx	xxxxx	xxxxx		xxxx				6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx				3.5	xxxx	xxxxx	xxxxx		xxxx				3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx				125	xxxx	xxxxx	xxxx		xxxx				0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx				854	xxxx	xxxxx	xxxx		xxxx				1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx				663	xxxx	xxxxx	xxxx		xxxx				1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx	xxxx				0.01	xxxx	xxxx	xxxx		xxxx				0.22
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx				0.0	xxxx	xxxxx	xxxx		xxxx				0.9
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx				10.5	xxxx	xxxxx	xxxxx		xxxx				9.2
LOS by Move:	*	*	*	*		*	*				B	*	*	*		*				A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx				xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx				xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx				xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Shared LOS:	*	*	*	*		*	*				*	*	*	*		*	*			
ApproachDel:	xxxxxx			xxxxxx							10.5					9.2				
ApproachLOS:	*			*							B					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.518
Loss Time (sec):	0	Average Delay (sec/veh):	14.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	139	10	38	46	11	148	12	206	306	9	531	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	10	38	46	11	148	12	206	306	9	531	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	10	38	46	11	148	12	206	306	9	531	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	10	38	46	11	148	12	206	306	9	531	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	10	38	46	11	148	12	206	306	9	531	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.75	0.05	0.20	0.22	0.05	0.73	0.06	0.94	1.00	0.03	1.91	0.06
Final Sat.:	364	26	99	117	28	377	29	500	592	17	1029	33
Capacity Analysis Module:												
Vol/Sat:	0.38	0.38	0.38	0.39	0.39	0.39	0.41	0.41	0.52	0.52	0.52	0.51
Crit Moves:		****		****					****	****		
Delay/Veh:	13.6	13.6	13.6	13.0	13.0	13.0	13.7	13.7	14.4	15.7	15.6	15.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.6	13.6	13.6	13.0	13.0	13.0	13.7	13.7	14.4	15.7	15.6	15.5
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	C
ApproachDel:	13.6			13.0			14.1			15.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.6			13.0			14.1			15.6		
LOS by Appr:	B			B			B			C		
AllWayAvgQ:	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.9	1.0	0.9	0.9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.668
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	449	2	7		0	0	0		98	148	0		0	113	52					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	449	2	7		0	0	0		98	148	0		0	113	52					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	449	2	7		0	0	0		98	148	0		0	113	52					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	449	2	7		0	0	0		98	148	0		0	113	52					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	449	2	7		0	0	0		98	148	0		0	113	52					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	0.98	0.01	0.01		0.00	0.00	0.00		0.40	0.60	0.00		0.00	0.68	0.32					
Final Sat.:	672	3	10		0	0	0		250	378	0		0	435	200					
Capacity Analysis Module:																				
Vol/Sat:	0.67	0.67	0.67		xxxx	xxxx	xxxx		0.39	0.39	xxxx		xxxx	0.26	0.26					
Crit Moves:			****							****				****						
Delay/Veh:	17.2	17.2	17.2		0.0	0.0	0.0		11.6	11.6	0.0		0.0	10.0	10.0					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	17.2	17.2	17.2		0.0	0.0	0.0		11.6	11.6	0.0		0.0	10.0	10.0					
LOS by Move:	C	C	C		*	*	*		B	B	*		*	A	A					
ApproachDel:	17.2				xxxxxx				11.6				10.0							
Delay Adj:	1.00				xxxxx				1.00				1.00							
ApprAdjDel:	17.2				xxxxxx				11.6				10.0							
LOS by Appr:	C				*				B				A							
AllWayAvgQ:	1.7	1.7	1.7		0.0	0.0	0.0		0.6	0.6	0.6		0.3	0.3	0.3					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.579
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	4	31	31	45	29	104	111	168	12	49	298	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	31	31	45	29	104	111	168	12	49	298	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	31	31	45	29	104	111	168	12	49	298	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	31	31	45	29	104	111	168	12	49	298	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	31	31	45	29	104	111	168	12	49	298	69
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.47	0.47	0.25	0.16	0.59	0.38	0.58	0.04	0.12	0.72	0.16
Final Sat.:	34	261	261	154	99	356	257	388	28	85	514	119
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.29	0.29	0.29	0.43	0.43	0.43	0.58	0.58	0.58
Crit Moves:		****		****				****			****	
Delay/Veh:	9.2	9.2	9.2	10.3	10.3	10.3	11.7	11.7	11.7	13.9	13.9	13.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.2	9.2	9.2	10.3	10.3	10.3	11.7	11.7	11.7	13.9	13.9	13.9
LOS by Move:	A	A	A	B	B	B	B	B	B	B	B	B
ApproachDel:		9.2			10.3			11.7			13.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.2			10.3			11.7			13.9	
LOS by Appr:		A			B			B			B	
AllWayAvgQ:	0.1	0.1	0.1	0.3	0.3	0.3	0.7	0.7	0.7	1.2	1.2	1.2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.394
Loss Time (sec):	0	Average Delay (sec/veh):	10.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	228	4	83	6	3	9	9	131	111	39	120	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	228	4	83	6	3	9	9	131	111	39	120	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	228	4	83	6	3	9	9	131	111	39	120	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	4	83	6	3	9	9	131	111	39	120	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	228	4	83	6	3	9	9	131	111	39	120	9
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.47	0.53	0.33	0.17	0.50	0.04	0.52	0.44	0.23	0.72	0.05
Final Sat.:	578	317	353	208	104	312	26	379	321	156	479	36
Capacity Analysis Module:												
Vol/Sat:	0.39	0.01	0.23	0.03	0.03	0.03	0.35	0.35	0.35	0.25	0.25	0.25
Crit Moves:	****			****				****			****	
Delay/Veh:	12.4	8.6	8.6	8.4	8.4	8.4	10.1	10.1	10.1	9.7	9.7	9.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.4	8.6	8.6	8.4	8.4	8.4	10.1	10.1	10.1	9.7	9.7	9.7
LOS by Move:	B	A	A	A	A	A	B	B	B	A	A	A
ApproachDel:	11.3			8.4			10.1			9.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.3			8.4			10.1			9.7		
LOS by Appr:	B			A			B			A		
AllWayAvgQ:	0.6	0.1	0.1	0.0	0.0	0.0	0.5	0.5	0.5	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 21.2 Worst Case Level Of Service: F[159.0]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	167	0	133	0	987	0	0	966	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	167	0	133	0	987	0	0	966	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	167	0	133	0	987	0	0	966	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	167	0	133	0	987	0	0	966	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1470	1953	494	1460	1953	483	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	90	65	527	122	65	535	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	68	65	527	122	65	535	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	1.37	0.00	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	122	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	11.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	274.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			159.0			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[12.2]

Street Name:	ASP NB on-ramp																							
Street Name:	ASP NB on-ramp												Ave 26											
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Yield Sign						Yield Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	0	0	0		0	1	2	0	0		0	0	1	1	0	
Volume Module:																								
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0	112	742	0	0	0	1008	148					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0	112	742	0	0	0	1008	148					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0	112	742	0	0	0	1008	148					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	0	112	742	0	0	0	1008	148					
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1156	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	612	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	612	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.18	xxxx	xxxx	xxxx	xxxx	xxxx						
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*						
ApproachDel:	xxxxxx			xxxxxx						xxxxxx						xxxxxx								
ApproachLOS:	*			*						*						*								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	120	Critical Vol./Cap.(X):	0.391
Loss Time (sec):	0	Average Delay (sec/veh):	23.4
Optimal Cycle:	31	Level Of Service:	C

Street Name:	Figueroa St							ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Permitted			Protected			
Rights:	Include			Include			Include			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 1	0 1	0	2	0 0	1 0	0	0 1!	0 0	0	0 0	0 2	
Volume Module:													
Base Vol:	2	619	45	357	380	158	106	17	16	0	0	394	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	619	45	357	380	158	106	17	16	0	0	394	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	619	45	357	380	158	106	17	16	0	0	394	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	619	45	357	380	158	106	17	16	0	0	394	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	619	45	357	380	158	106	17	16	0	0	394	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.90	0.90	0.90	0.92	0.96	0.96	0.78	0.78	0.78	1.00	1.00	0.75	
Lanes:	0.01	1.86	0.13	2.00	0.71	0.29	0.76	0.12	0.12	0.00	0.00	2.00	
Final Sat.:	10	3169	230	3502	1283	533	1136	182	172	0	0	2842	
Capacity Analysis Module:													
Vol/Sat:	0.20	0.20	0.20	0.10	0.30	0.30	0.09	0.09	0.09	0.00	0.00	0.14	
Crit Moves:		****		****				****		****			
Green/Cycle:	0.50	0.50	0.50	0.26	0.76	0.76	0.24	0.24	0.24	0.00	0.00	0.26	
Volume/Cap:	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.00	0.00	0.53	
Delay/Veh:	18.8	18.8	18.8	36.8	5.1	5.1	39.0	39.0	39.0	0.0	0.0	38.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	18.8	18.8	18.8	36.8	5.1	5.1	39.0	39.0	39.0	0.0	0.0	38.8	
LOS by Move:	B	B	B	D	A	A	D	D	D	A	A	D	
HCM2kAvgQ:	8	8	8	6	7	7	5	5	5	0	0	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[9.8]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	28	315	0	0	0	0	793	83		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	28	315	0	0	0	0	793	83		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	28	315	0	0	0	0	793	83		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	28	315	0	0	0	0	793	83		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					876	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					779	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					779	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.04	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					A	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					A	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.1]

Street Name:	ASP SB Exit 25						Casanova St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	72	7	5	86	0	0	0	0	5	0	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	72	7	5	86	0	0	0	0	5	0	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	72	7	5	86	0	0	0	0	5	0	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	72	7	5	86	0	0	0	0	5	0	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	79	xxxx	xxxxx	xxxx	xxxx	xxxxx	172	172	76
Potent Cap.:	xxxx	xxxx	xxxxx	1532	xxxx	xxxxx	xxxx	xxxx	xxxxx	823	725	991
Move Cap.:	xxxx	xxxx	xxxxx	1532	xxxx	xxxxx	xxxx	xxxx	xxxxx	821	723	991
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.01
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	898	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.1		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.4]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0			2	0			2	3	96			55	14	91			20
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			2	0			2	3	96			55	14	91			20
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			2	0			2	3	96			55	14	91			20
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			2	0			2	3	96			55	14	91			20
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			259	286			101	111	xxxx	xxxxx			151	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			735	627			960	1492	xxxx	xxxxx			1442	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			728	619			960	1492	xxxx	xxxxx			1442	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.00	0.00			0.00	0.00	xxxx	xxxx			0.01	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			0.0	xxxx	xxxxx			0.0	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			7.4	xxxx	xxxxx			7.5	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*	*			A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	828	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.0	xxxxx			0.0	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	9.4	xxxxx			7.4	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	A	*			A	*	*			*	*	*		
ApproachDel:	xxxxxx						9.4				xxxxxx					xxxxxx				
ApproachLOS:	*						A				*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.651
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	2	463	0	0	88	1	0	0	0	110	5	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	463	0	0	88	1	0	0	0	110	5	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	463	0	0	88	1	0	0	0	110	5	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	463	0	0	88	1	0	0	0	110	5	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	463	0	0	88	1	0	0	0	110	5	25	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	643	712	0	0	632	7	0	0	0	536	575	648	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.65	xxxx	xxxx	0.14	0.14	xxxx	xxxx	xxxx	0.21	0.01	0.04	
Crit Moves:		****			****					****			
Delay/Veh:	8.2	16.3	0.0	0.0	9.3	9.3	0.0	0.0	0.0	10.5	8.6	8.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.2	16.3	0.0	0.0	9.3	9.3	0.0	0.0	0.0	10.5	8.6	8.0	
LOS by Move:	A	C	*	*	A	A	*	*	*	B	A	A	
ApproachDel:		16.3			9.3			xxxxxx			10.0		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		16.3			9.3			xxxxxx			10.0		
LOS by Appr:		C			A			*			B		
AllWayAvgQ:	0.0	1.7	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.585
Loss Time (sec):	0	Average Delay (sec/veh):	11.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	424	68	79	141	0	0	4	1	20	0	55	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	424	68	79	141	0	0	4	1	20	0	55	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	424	68	79	141	0	0	4	1	20	0	55	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	424	68	79	141	0	0	4	1	20	0	55	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	424	68	79	141	0	0	4	1	20	0	55	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.60	0.40	0.53	0.47	1.00	
Final Sat.:	0	725	837	628	689	0	0	857	220	279	244	609	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.58	0.08	0.13	0.20	xxxx	xxxx	0.00	0.00	0.07	0.00	0.09	
Crit Moves:		****			****			****				****	
Delay/Veh:	0.0	14.2	7.3	9.1	9.1	0.0	0.0	8.8	8.6	9.3	9.3	8.6	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	14.2	7.3	9.1	9.1	0.0	0.0	8.8	8.6	9.3	9.3	8.6	
LOS by Move:	*	B	A	A	A	*	*	A	A	A	A	A	
ApproachDel:		13.2			9.1			8.8			8.8		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		13.2			9.1			8.8			8.8		
LOS by Appr:		B			A			A			A		
AllWayAvgQ:	0.0	1.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.554
Loss Time (sec):	0	Average Delay (sec/veh):	6.8
Optimal Cycle:	42	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0 0	1 0	0 0	1
Volume Module:												
Base Vol:	0	987	17	158	892	0	0	0	0	39	0	182
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	987	17	158	892	0	0	0	0	39	0	182
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	987	17	158	892	0	0	0	0	39	0	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	987	17	158	892	0	0	0	0	39	0	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	987	17	158	892	0	0	0	0	39	0	182
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.95	0.63	0.63	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.97	0.03	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3540	61	358	2021	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.44	0.44	0.00	0.00	0.00	0.00	0.02	0.00	0.11
Crit Moves:					****							****
Green/Cycle:	0.00	0.80	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Volume/Cap:	0.00	0.35	0.35	0.55	0.55	0.00	0.00	0.00	0.00	0.11	0.00	0.55
Delay/Veh:	0.0	2.9	2.9	4.1	4.1	0.0	0.0	0.0	0.0	32.6	0.0	37.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	2.9	2.9	4.1	4.1	0.0	0.0	0.0	0.0	32.6	0.0	37.8
LOS by Move:	A	A	A	A	A	A	A	A	A	C	A	D
HCM2kAvgQ:	0	5	5	7	7	0	0	0	0	1	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	0	Average Delay (sec/veh):	12.1
Optimal Cycle:	30	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	30	754	174	166	839	19	12	147	16	166	198	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	754	174	166	839	19	12	147	16	166	198	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	754	174	166	839	19	12	147	16	166	198	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	754	174	166	839	19	12	147	16	166	198	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	754	174	166	839	19	12	147	16	166	198	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.92	0.92	0.25	0.95	0.95	0.37	0.99	0.99	0.52	0.96	0.96
Lanes:	1.00	1.63	0.38	1.00	1.96	0.04	1.00	0.90	0.10	1.00	0.73	0.27
Final Sat.:	520	2851	658	479	3518	80	708	1688	184	980	1327	496
Capacity Analysis Module:												
Vol/Sat:	0.06	0.26	0.26	0.35	0.24	0.24	0.02	0.09	0.09	0.17	0.15	0.15
Crit Moves:				****						****		
Green/Cycle:	0.67	0.67	0.67	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.09	0.39	0.39	0.52	0.36	0.36	0.05	0.27	0.27	0.52	0.45	0.45
Delay/Veh:	5.8	7.4	7.4	9.7	7.2	7.2	23.0	24.9	24.9	28.6	27.1	27.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.8	7.4	7.4	9.7	7.2	7.2	23.0	24.9	24.9	28.6	27.1	27.1
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	7	7	3	6	6	0	4	4	5	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.255
Loss Time (sec):	0	Average Delay (sec/veh):	9.5
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	112	0	128	100	422	0	0	333	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	112	0	128	100	422	0	0	333	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	112	0	128	100	422	0	0	333	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	112	0	128	100	422	0	0	333	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	112	0	128	100	422	0	0	333	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.49	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	926	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.11	0.12	0.00	0.00	0.18	0.04
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.69	0.69	0.00	0.00	0.69	1.00
Volume/Cap:	0.00	0.00	0.00	0.10	0.00	0.25	0.16	0.17	0.00	0.00	0.25	0.04
Delay/Veh:	0.0	0.0	0.0	24.5	0.0	26.0	5.6	5.5	0.0	0.0	6.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.5	0.0	26.0	5.6	5.5	0.0	0.0	6.0	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	1	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.559
Loss Time (sec):	0	Average Delay (sec/veh):	15.8
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	86	229	12	35	283	237	309	474	185	10	271	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	229	12	35	283	237	309	474	185	10	271	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	86	229	12	35	283	237	309	474	185	10	271	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	229	12	35	283	237	309	474	185	10	271	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	86	229	12	35	283	237	309	474	185	10	271	29
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	0.75	0.75	0.94	0.94	0.85	0.49	1.00	0.85	0.37	0.99	0.99
Lanes:	0.26	0.70	0.04	0.11	0.89	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	377	1003	53	197	1591	1615	936	1900	1615	698	1691	181
Capacity Analysis Module:												
Vol/Sat:	0.23	0.23	0.23	0.18	0.18	0.15	0.33	0.25	0.11	0.01	0.16	0.16
Crit Moves:		****					****					
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.56	0.56	0.56	0.44	0.44	0.36	0.56	0.42	0.19	0.02	0.27	0.27
Delay/Veh:	23.9	23.9	23.9	21.7	21.7	20.8	13.8	11.4	9.5	8.5	10.1	10.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.9	23.9	23.9	21.7	21.7	20.8	13.8	11.4	9.5	8.5	10.1	10.1
LOS by Move:	C	C	C	C	C	C	B	B	A	A	B	B
HCM2kAvgQ:	8	8	8	7	7	5	6	8	3	0	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	0	Average Delay (sec/veh):	15.0
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	6	983	393	88	754	32	27	44	12	284	51	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	983	393	88	754	32	27	44	12	284	51	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	983	393	88	754	32	27	44	12	284	51	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	983	393	88	754	32	27	44	12	284	51	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	983	393	88	754	32	27	44	12	284	51	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.68	0.68	0.68	0.85	0.85	0.85	0.69	0.69	0.85
Lanes:	0.01	1.99	1.00	0.20	1.73	0.07	0.33	0.53	0.14	0.85	0.15	1.00
Final Sat.:	21	3412	1615	260	2226	94	525	856	233	1110	199	1615
Capacity Analysis Module:												
Vol/Sat:	0.29	0.29	0.24	0.34	0.34	0.34	0.05	0.05	0.05	0.26	0.26	0.03
Crit Moves:					****						****	
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.43	0.43	0.43	0.43	0.43	0.43
Volume/Cap:	0.51	0.51	0.43	0.59	0.59	0.59	0.12	0.12	0.12	0.59	0.59	0.07
Delay/Veh:	13.2	13.2	12.6	14.7	14.7	14.7	17.2	17.2	17.2	23.5	23.5	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.2	13.2	12.6	14.7	14.7	14.7	17.2	17.2	17.2	23.5	23.5	16.8
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	10	10	7	10	10	10	2	2	2	9	9	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Existing Condition (Year 2011) -PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.405
Loss Time (sec): 0 Average Delay (sec/veh): 6.5
Optimal Cycle: 24 Level Of Service: A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	99	1028	19	28	969	150	111	19	91	2	13	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	1028	19	28	969	150	111	19	91	2	13	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	1028	19	28	969	150	111	19	91	2	13	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	1028	19	28	969	150	111	19	91	2	13	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	1028	19	28	969	150	111	19	91	2	13	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.22	0.95	0.95	0.24	0.93	0.93	0.77	0.77	0.85	0.91	0.91	0.91
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.85	0.15	1.00	0.06	0.36	0.58
Final Sat.:	418	3535	65	455	3063	474	1248	214	1615	96	626	1012
Capacity Analysis Module:												
Vol/Sat:	0.24	0.29	0.29	0.06	0.32	0.32	0.09	0.09	0.06	0.02	0.02	0.02
Crit Moves:					****			****				
Green/Cycle:	0.78	0.78	0.78	0.78	0.78	0.78	0.22	0.22	0.22	0.22	0.22	0.22
Volume/Cap:	0.30	0.37	0.37	0.08	0.41	0.41	0.41	0.41	0.26	0.09	0.09	0.09
Delay/Veh:	3.7	3.5	3.5	2.7	3.6	3.6	34.3	34.3	32.7	31.2	31.2	31.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.7	3.5	3.5	2.7	3.6	3.6	34.3	34.3	32.7	31.2	31.2	31.2
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	5	5	0	6	6	4	4	2	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	0	Average Delay (sec/veh):	13.3
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	237	0	292	273	296	0	0	309	131
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	237	0	292	273	296	0	0	309	131
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	237	0	292	273	296	0	0	309	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	237	0	292	273	296	0	0	309	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	237	0	292	273	296	0	0	309	131
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.90	0.47	0.95	1.00	1.00	0.91	0.91
Lanes:	0.00	0.00	0.00	1.45	0.00	1.55	1.00	2.00	0.00	0.00	1.40	0.60
Final Sat.:	0	0	0	2468	0	2645	888	3610	0	0	2422	1027
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.11	0.31	0.08	0.00	0.00	0.13	0.13
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.74	0.74	0.00	0.00	0.74	0.74
Volume/Cap:	0.00	0.00	0.00	0.36	0.00	0.42	0.42	0.11	0.00	0.00	0.17	0.17
Delay/Veh:	0.0	0.0	0.0	30.1	0.0	30.7	5.5	3.8	0.0	0.0	4.0	4.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.1	0.0	30.7	5.5	3.8	0.0	0.0	4.0	4.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	5	4	1	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.472
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	109	627	36	95	620	27	65	356	135	63	322	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	627	36	95	620	27	65	356	135	63	322	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	627	36	95	620	27	65	356	135	63	322	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	627	36	95	620	27	65	356	135	63	322	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	627	36	95	620	27	65	356	135	63	322	63
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	1.00	0.85	0.33	1.00	0.85	0.37	0.91	0.91	0.29	0.93	0.93
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.45	0.55	1.00	1.67	0.33
Final Sat.:	626	1900	1615	618	1900	1615	701	2510	952	543	2945	576
Capacity Analysis Module:												
Vol/Sat:	0.17	0.33	0.02	0.15	0.33	0.02	0.09	0.14	0.14	0.12	0.11	0.11
Crit Moves:		****						****				
Green/Cycle:	0.70	0.70	0.70	0.70	0.70	0.70	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.25	0.47	0.03	0.22	0.47	0.02	0.31	0.47	0.47	0.39	0.36	0.36
Delay/Veh:	5.8	7.0	4.6	5.6	7.0	4.6	27.8	28.8	28.8	29.2	27.7	27.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.8	7.0	4.6	5.6	7.0	4.6	27.8	28.8	28.8	29.2	27.7	27.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	9	0	1	9	0	2	7	7	2	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.585
Loss Time (sec):	0	Average Delay (sec/veh):	22.8
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	84	812	22	108	1007	75	118	249	82	44	210	98
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	812	22	108	1007	75	118	249	82	44	210	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	84	812	22	108	1007	75	118	249	82	44	210	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	812	22	108	1007	75	118	249	82	44	210	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	812	22	108	1007	75	118	249	82	44	210	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.94	0.94	0.95	0.96	0.96	0.95	0.95	0.95
Lanes:	1.00	1.95	0.05	1.00	1.86	0.14	1.00	0.75	0.25	1.00	0.68	0.32
Final Sat.:	1805	3501	95	1805	3325	248	1805	1376	453	1805	1234	576
Capacity Analysis Module:												
Vol/Sat:	0.05	0.23	0.23	0.06	0.30	0.30	0.07	0.18	0.18	0.02	0.17	0.17
Crit Moves:	****				****		****				****	
Green/Cycle:	0.08	0.47	0.47	0.12	0.52	0.52	0.35	0.35	0.35	0.05	0.29	0.29
Volume/Cap:	0.59	0.49	0.49	0.49	0.59	0.59	0.39	0.51	0.51	0.51	0.59	0.59
Delay/Veh:	50.5	18.2	18.2	42.7	17.2	17.2	24.3	26.1	26.1	51.5	32.0	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.5	18.2	18.2	42.7	17.2	17.2	24.3	26.1	26.1	51.5	32.0	32.0
LOS by Move:	D	B	B	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	3	9	9	4	12	12	3	8	8	2	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.393
Loss Time (sec):	0	Average Delay (sec/veh):	15.6
Optimal Cycle:	24	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	115	0	191	0	0	0	0	576	112	30	611	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	0	191	0	0	0	0	576	112	30	611	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	115	0	191	0	0	0	0	576	112	30	611	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	115	0	191	0	0	0	0	576	112	30	611	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	115	0	191	0	0	0	0	576	112	30	611	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.81	1.00	0.81	1.00	1.00	1.00	1.00	0.93	0.93	0.29	0.95	1.00
Lanes:	0.38	0.00	0.62	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00
Final Sat.:	582	0	966	0	0	0	0	2949	573	542	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.20	0.20	0.06	0.17	0.00
Crit Moves:	****							****				
Green/Cycle:	0.50	0.00	0.50	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.50	0.00
Volume/Cap:	0.39	0.00	0.39	0.00	0.00	0.00	0.00	0.39	0.39	0.11	0.34	0.00
Delay/Veh:	15.7	0.0	15.7	0.0	0.0	0.0	0.0	15.9	15.9	13.6	15.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.7	0.0	15.7	0.0	0.0	0.0	0.0	15.9	15.9	13.6	15.3	0.0
LOS by Move:	B	A	B	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	6	0	6	0	0	0	0	7	7	1	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.166
Loss Time (sec):	0	Average Delay (sec/veh):	3.8
Optimal Cycle:	22	Level Of Service:	A

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	78	519	0	0	415	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	78	519	0	0	415	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	78	519	0	0	415	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	78	519	0	0	415	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	78	519	0	0	415	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.95	0.95	1.00	1.00	0.94	0.94
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.89	0.11
Final Sat.:	0	0	0	3686	0	1900	1805	3610	0	0	3376	203
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.00	0.00	0.12	0.12
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.00	0.00	0.00	0.74	0.74
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.14	0.00	0.00	0.17	0.17
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	28.8	0.0	0.0	0.0	3.9	3.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	28.8	0.0	0.0	0.0	3.9	3.9
LOS by Move:	A	A	A	A	A	A	C	A	A	A	A	A
HCM2kAvgQ:	0	0	0	0	0	0	2	0	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.398
Loss Time (sec):	0	Average Delay (sec/veh):	20.3
Optimal Cycle:	31	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	47	0	258	0	0	0	0	514	43	173	393	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	0	258	0	0	0	0	514	43	173	393	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	0	258	0	0	0	0	514	43	173	393	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	0	258	0	0	0	0	514	43	173	393	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	0	258	0	0	0	0	514	43	173	393	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1900	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.16	0.00	0.00	0.00	0.00	0.14	0.03	0.10	0.11	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.36	0.36	0.24	0.60	0.60
Volume/Cap:	0.03	0.00	0.40	0.00	0.00	0.00	0.00	0.40	0.07	0.40	0.18	0.00
Delay/Veh:	18.2	0.0	21.7	0.0	0.0	0.0	0.0	24.2	21.2	32.5	9.1	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.2	0.0	21.7	0.0	0.0	0.0	0.0	24.2	21.2	32.5	9.1	8.1
LOS by Move:	B	A	C	A	A	A	A	C	C	C	A	A
HCM2kAvgQ:	0	0	6	0	0	0	0	6	1	5	3	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.556
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	174	642	53	106	654	36	63	555	182	43	542	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	174	642	53	106	654	36	63	555	182	43	542	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	174	642	53	106	654	36	63	555	182	43	542	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	642	53	106	654	36	63	555	182	43	542	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	174	642	53	106	654	36	63	555	182	43	542	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	1.00	0.85	0.27	1.00	0.85	0.28	0.91	0.91	0.20	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	0.49	1.00	1.81	0.19
Final Sat.:	506	1900	1615	520	1900	1615	523	2618	858	384	3214	344
Capacity Analysis Module:												
Vol/Sat:	0.34	0.34	0.03	0.20	0.34	0.02	0.12	0.21	0.21	0.11	0.17	0.17
Crit Moves:					****			****				
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.56	0.55	0.05	0.33	0.56	0.04	0.32	0.56	0.56	0.29	0.44	0.44
Delay/Veh:	13.3	11.5	7.5	9.7	11.7	7.4	22.7	24.8	24.8	22.7	23.3	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.3	11.5	7.5	9.7	11.7	7.4	22.7	24.8	24.8	22.7	23.3	23.3
LOS by Move:	B	B	A	A	B	A	C	C	C	C	C	C
HCM2kAvgQ:	4	11	1	2	12	0	2	10	10	1	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.570
Loss Time (sec):	0	Average Delay (sec/veh):	18.4
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	206	701	39	98	1074	55	94	269	205	51	211	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	206	701	39	98	1074	55	94	269	205	51	211	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	206	701	39	98	1074	55	94	269	205	51	211	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	206	701	39	98	1074	55	94	269	205	51	211	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	206	701	39	98	1074	55	94	269	205	51	211	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.42	0.89	0.89	0.24	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.14	0.87	1.00	1.52	0.48
Final Sat.:	1805	3610	1615	1805	3409	175	799	1916	1460	460	2652	829
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.02	0.05	0.32	0.32	0.12	0.14	0.14	0.11	0.08	0.08
Crit Moves:	****				****			****				
Green/Cycle:	0.75	0.59	0.59	0.72	0.55	0.55	0.25	0.25	0.25	0.25	0.25	0.25
Volume/Cap:	0.40	0.33	0.04	0.15	0.57	0.57	0.48	0.57	0.57	0.45	0.32	0.32
Delay/Veh:	8.2	10.6	8.7	4.6	15.0	15.0	34.0	34.0	34.0	34.7	31.1	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	10.6	8.7	4.6	15.0	15.0	34.0	34.0	34.0	34.7	31.1	31.1
LOS by Move:	A	B	A	A	B	B	C	C	C	C	C	C
HCM2kAvgQ:	3	6	0	1	12	12	3	7	7	2	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.382
Loss Time (sec):	0	Average Delay (sec/veh):	91.6
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	58	1252	362	153	832	110	310	1107	34	365	536	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	1252	362	153	832	110	310	1107	34	365	536	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	58	1252	362	153	832	110	310	1107	34	365	536	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	1252	362	153	832	110	310	1107	34	365	536	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	58	1252	362	153	832	110	310	1107	34	365	536	96
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.26	1.00	0.85	0.08	1.00	0.85	0.95	0.91	0.91	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.91	0.09	1.00	3.00	1.00
Final Sat.:	499	1900	1615	160	1900	1615	1805	5010	154	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.66	0.22	0.96	0.44	0.07	0.17	0.22	0.22	0.20	0.10	0.06
Crit Moves:				****				****		****		
Green/Cycle:	0.69	0.69	0.69	0.69	0.69	0.69	0.19	0.16	0.16	0.15	0.12	0.12
Volume/Cap:	0.17	0.95	0.32	1.38	0.63	0.10	0.90	1.38	1.38	1.38	0.90	0.52
Delay/Veh:	5.5	28.2	6.2	233.6	9.3	5.1	64.5	222	221.6	236.6	60.1	44.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.5	28.2	6.2	233.6	9.3	5.1	64.5	222	221.6	236.6	60.1	44.2
LOS by Move:	A	C	A	F	A	A	E	F	F	F	E	D
HCM2kAvgQ:	1	40	4	12	14	1	13	29	29	26	9	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.676
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	825	0	437	423	1030	0	0	530	460
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	825	0	437	423	1030	0	0	530	460
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	825	0	437	423	1030	0	0	530	460
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	825	0	437	423	1030	0	0	530	460
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	825	0	437	423	1030	0	0	530	460
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.00	0.27	0.12	0.20	0.00	0.00	0.10	0.28
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.40	0.00	0.40	0.18	0.60	0.00	0.00	0.42	0.42
Volume/Cap:	0.00	0.00	0.00	0.59	0.00	0.68	0.68	0.33	0.00	0.00	0.24	0.68
Delay/Veh:	0.0	0.0	0.0	24.2	0.0	27.5	41.3	10.1	0.0	0.0	18.7	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.2	0.0	27.5	41.3	10.1	0.0	0.0	18.7	26.1
LOS by Move:	A	A	A	C	A	C	D	B	A	A	B	C
HCM2kAvgQ:	0	0	0	11	0	12	7	6	0	0	4	12

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	0	Average Delay (sec/veh):	22.6
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	151	584	3	139	577	54	101	699	92	232	600	217
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	151	584	3	139	577	54	101	699	92	232	600	217
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	151	584	3	139	577	54	101	699	92	232	600	217
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	584	3	139	577	54	101	699	92	232	600	217
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	151	584	3	139	577	54	101	699	92	232	600	217
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	0.95	0.85	0.32	0.94	0.94	0.95	0.93	0.93	0.95	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	1.83	0.17	1.00	1.77	0.23	1.00	1.47	0.53
Final Sat.:	549	3610	1615	599	3258	305	1805	3136	413	1805	2545	920
Capacity Analysis Module:												
Vol/Sat:	0.27	0.16	0.00	0.23	0.18	0.18	0.06	0.22	0.22	0.13	0.24	0.24
Crit Moves:	****							****		****		
Green/Cycle:	0.44	0.44	0.44	0.44	0.44	0.44	0.11	0.36	0.36	0.45	0.45	0.45
Volume/Cap:	0.63	0.37	0.00	0.53	0.40	0.40	0.52	0.63	0.63	0.52	0.52	0.52
Delay/Veh:	26.8	18.9	15.8	22.5	19.3	19.3	44.7	27.7	27.7	20.5	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.8	18.9	15.8	22.5	19.3	19.3	44.7	27.7	27.7	20.5	19.9	19.9
LOS by Move:	C	B	B	C	B	B	D	C	C	C	B	B
HCM2kAvgQ:	5	6	0	4	7	7	4	11	11	6	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.672
Loss Time (sec):	0	Average Delay (sec/veh):	22.9
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	333	352	56	261	253	75	106	652	192	31	769	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	333	352	56	261	253	75	106	652	192	31	769	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	333	352	56	261	253	75	106	652	192	31	769	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	333	352	56	261	253	75	106	652	192	31	769	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	333	352	56	261	253	75	106	652	192	31	769	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.18	0.92	0.92	0.20	0.93	0.93
Lanes:	1.00	0.86	0.14	1.00	0.77	0.23	1.00	1.55	0.45	1.00	1.70	0.30
Final Sat.:	1805	1605	255	1805	1416	420	344	2694	793	386	3000	531
Capacity Analysis Module:												
Vol/Sat:	0.18	0.22	0.22	0.14	0.18	0.18	0.31	0.24	0.24	0.08	0.26	0.26
Crit Moves:		****		****			****					
Green/Cycle:	0.54	0.33	0.33	0.48	0.27	0.27	0.46	0.46	0.46	0.46	0.46	0.46
Volume/Cap:	0.55	0.67	0.67	0.51	0.67	0.67	0.67	0.53	0.53	0.18	0.56	0.56
Delay/Veh:	16.0	32.1	32.1	17.9	36.4	36.4	31.9	19.6	19.6	16.4	20.1	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	32.1	32.1	17.9	36.4	36.4	31.9	19.6	19.6	16.4	20.1	20.1
LOS by Move:	B	C	C	B	D	D	C	B	B	B	C	C
HCM2kAvgQ:	7	12	12	6	10	10	4	10	10	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	17.9
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	5	604	146	285	528	5	3	4	6	150	3	263	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	5	604	146	285	528	5	3	4	6	150	3	263	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	5	604	146	285	528	5	3	4	6	150	3	263	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	5	604	146	285	528	5	3	4	6	150	3	263	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	5	604	146	285	528	5	3	4	6	150	3	263	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.91	0.91	0.91	0.73	0.73	0.85	
Lanes:	1.00	1.61	0.39	1.00	1.98	0.02	0.23	0.31	0.46	0.98	0.02	1.00	
Final Sat.:	1805	2823	682	1805	3573	34	397	529	794	1360	27	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.21	0.21	0.16	0.15	0.15	0.01	0.01	0.01	0.11	0.11	0.16	
Crit Moves:		****		****								****	
Green/Cycle:	0.01	0.40	0.40	0.70	0.68	0.68	0.30	0.30	0.30	0.30	0.30	0.30	
Volume/Cap:	0.22	0.53	0.53	0.41	0.22	0.22	0.02	0.02	0.02	0.36	0.36	0.53	
Delay/Veh:	53.5	23.3	23.3	8.3	6.0	6.0	24.4	24.4	24.4	27.7	27.7	30.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	53.5	23.3	23.3	8.3	6.0	6.0	24.4	24.4	24.4	27.7	27.7	30.0	
LOS by Move:	D	C	C	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	9	9	4	3	3	0	0	0	4	4	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.510
Loss Time (sec):	0	Average Delay (sec/veh):	24.4
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Permitted						Protected					
Rights:		Include						Include						Include						Include				
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Y+R:	4.0	4.0	4.0				4.0	4.0	4.0				4.0	4.0	4.0				4.0	4.0	4.0			
Lanes:	1	0	1	0	1		1	0	1	0	1		1	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	292	233	59				89	150	46				80	205	219				16	187	39			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	292	233	59				89	150	46				80	205	219				16	187	39			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Volume:	292	233	59				89	150	46				80	205	219				16	187	39			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	292	233	59				89	150	46				80	205	219				16	187	39			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
FinalVolume:	292	233	59				89	150	46				80	205	219				16	187	39			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.92	0.96	0.82				0.92	0.96	0.82				0.50	0.89	0.89				0.92	0.94	0.94			
Lanes:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	0.48	0.52				1.00	0.83	0.17			
Final Sat.:	1742	1833	1558				1742	1833	1558				959	817	873				1742	1478	308			
Capacity Analysis Module:																								
Vol/Sat:	0.17	0.13	0.04				0.05	0.08	0.03				0.08	0.25	0.25				0.01	0.13	0.13			
Crit Moves:	****							****						****					****					
Green/Cycle:	0.33	0.33	0.33				0.16	0.16	0.16				0.49	0.49	0.49				0.02	0.51	0.51			
Volume/Cap:	0.51	0.39	0.12				0.32	0.51	0.18				0.17	0.51	0.51				0.51	0.25	0.25			
Delay/Veh:	27.8	26.2	23.5				37.8	39.9	36.7				14.2	17.7	17.7				62.0	13.9	13.9			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	27.8	26.2	23.5				37.8	39.9	36.7				14.2	17.7	17.7				62.0	13.9	13.9			
LOS by Move:	C	C	C				D	D	D				B	B	B				E	B	B			
HCM2kAvgQ:	8	6	1				3	5	1				1	9	9				1	4	4			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.472
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	58	701	164	92	649	31	34	64	21	172	62	94	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	58	701	164	92	649	31	34	64	21	172	62	94	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	58	701	164	92	649	31	34	64	21	172	62	94	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	58	701	164	92	649	31	34	64	21	172	62	94	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	58	701	164	92	649	31	34	64	21	172	62	94	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.30	0.92	0.92	0.22	0.94	0.94	0.85	0.85	0.85	0.77	0.77	0.77	
Lanes:	1.00	1.62	0.38	1.00	1.91	0.09	0.28	0.54	0.18	0.52	0.19	0.29	
Final Sat.:	568	2844	665	426	3421	163	461	869	285	763	275	417	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.25	0.25	0.22	0.19	0.19	0.07	0.07	0.07	0.23	0.23	0.23	
Crit Moves:		****									****		
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.48	0.48	0.48	0.48	0.48	0.48	
Volume/Cap:	0.20	0.47	0.47	0.41	0.36	0.36	0.15	0.15	0.15	0.47	0.47	0.47	
Delay/Veh:	13.0	15.3	15.3	15.8	14.2	14.2	14.8	14.8	14.8	18.1	18.1	18.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	13.0	15.3	15.3	15.8	14.2	14.2	14.8	14.8	14.8	18.1	18.1	18.1	
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B	
HCM2kAvgQ:	1	9	9	2	6	6	2	2	2	7	7	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.354
Loss Time (sec):	0	Average Delay (sec/veh):	14.5
Optimal Cycle:	22	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	189	400	42	74	257	54	121	259	223	26	108	70
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	189	400	42	74	257	54	121	259	223	26	108	70
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	189	400	42	74	257	54	121	259	223	26	108	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	189	400	42	74	257	54	121	259	223	26	108	70
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	189	400	42	74	257	54	121	259	223	26	108	70
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.53	1.00	0.85	0.42	1.00	0.85	0.61	0.88	0.88	0.38	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.07	0.93	1.00	1.00	1.00
Final Sat.:	999	1900	1615	806	1900	1615	1165	1806	1555	713	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.19	0.21	0.03	0.09	0.14	0.03	0.10	0.14	0.14	0.04	0.06	0.04
Crit Moves:		****						****				
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.32	0.35	0.04	0.15	0.23	0.06	0.26	0.35	0.35	0.09	0.14	0.11
Delay/Veh:	10.4	10.6	8.4	9.2	9.6	8.5	20.0	20.8	20.8	18.5	18.8	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.4	10.6	8.4	9.2	9.6	8.5	20.0	20.8	20.8	18.5	18.8	18.6
LOS by Move:	B	B	A	A	A	A	C	C	C	B	B	B
HCM2kAvgQ:	3	6	1	1	4	1	3	5	5	1	2	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	0	Average Delay (sec/veh):	23.2
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	60	681	92	159	618	36	39	154	41	115	237	173	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	60	681	92	159	618	36	39	154	41	115	237	173	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	60	681	92	159	618	36	39	154	41	115	237	173	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	60	681	92	159	618	36	39	154	41	115	237	173	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	60	681	92	159	618	36	39	154	41	115	237	173	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.86	0.86	0.86	0.84	0.84	0.84	
Lanes:	1.00	1.76	0.24	1.00	1.89	0.11	0.17	0.66	0.17	0.22	0.45	0.33	
Final Sat.:	1805	3123	422	1805	3384	197	274	1080	288	351	723	528	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.22	0.22	0.09	0.18	0.18	0.14	0.14	0.14	0.33	0.33	0.33	
Crit Moves:		****		****							****		
Green/Cycle:	0.07	0.34	0.34	0.41	0.41	0.41	0.52	0.52	0.52	0.52	0.52	0.52	
Volume/Cap:	0.45	0.63	0.63	0.49	0.45	0.45	0.28	0.28	0.28	0.63	0.63	0.63	
Delay/Veh:	46.7	28.6	28.6	22.5	21.6	21.6	13.8	13.8	13.8	19.0	19.0	19.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	46.7	28.6	28.6	22.5	21.6	21.6	13.8	13.8	13.8	19.0	19.0	19.0	
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B	
HCM2kAvgQ:	2	11	11	4	8	8	4	4	4	12	12	12	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.547
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	9	667	91	169	483	1	8	5	0	86	34	253	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	667	91	169	483	1	8	5	0	86	34	253	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	667	91	169	483	1	8	5	0	86	34	253	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	667	91	169	483	1	8	5	0	86	34	253	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	667	91	169	483	1	8	5	0	86	34	253	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.42	0.93	0.93	0.28	0.95	0.95	0.86	0.86	1.00	0.84	0.84	0.84	
Lanes:	1.00	1.76	0.24	1.00	1.99	0.01	0.62	0.38	0.00	0.23	0.09	0.68	
Final Sat.:	789	3119	426	538	3603	7	1008	630	0	370	146	1088	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.21	0.21	0.31	0.13	0.13	0.01	0.01	0.00	0.23	0.23	0.23	
Crit Moves:				****							****		
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.43	0.43	0.00	0.43	0.43	0.43	
Volume/Cap:	0.02	0.37	0.37	0.55	0.23	0.23	0.02	0.02	0.00	0.55	0.55	0.55	
Delay/Veh:	9.2	11.6	11.6	15.2	10.5	10.5	16.7	16.7	0.0	22.5	22.5	22.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	9.2	11.6	11.6	15.2	10.5	10.5	16.7	16.7	0.0	22.5	22.5	22.5	
LOS by Move:	A	B	B	B	B	B	B	B	A	C	C	C	
HCM2kAvgQ:	0	7	7	4	4	4	0	0	0	9	9	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.350
Loss Time (sec):	0	Average Delay (sec/veh):	9.9
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	118	142	23	11	89	45	69	75	101	11	53	14	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	118	142	23	11	89	45	69	75	101	11	53	14	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	118	142	23	11	89	45	69	75	101	11	53	14	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	118	142	23	11	89	45	69	75	101	11	53	14	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	118	142	23	11	89	45	69	75	101	11	53	14	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.86	0.14	1.00	0.66	0.34	0.28	0.31	0.41	0.14	0.68	0.18	
Final Sat.:	582	554	90	557	419	212	197	214	288	90	433	114	
Capacity Analysis Module:													
Vol/Sat:	0.20	0.26	0.26	0.02	0.21	0.21	0.35	0.35	0.35	0.12	0.12	0.12	
Crit Moves:		****			****		****			****			
Delay/Veh:	10.1	9.8	9.8	9.0	9.5	9.5	10.3	10.3	10.3	8.9	8.9	8.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.1	9.8	9.8	9.0	9.5	9.5	10.3	10.3	10.3	8.9	8.9	8.9	
LOS by Move:	B	A	A	A	A	A	B	B	B	A	A	A	
ApproachDel:	9.9			9.4			10.3			8.9			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	9.9			9.4			10.3			8.9			
LOS by Appr:	A			A			B			A			
AllWayAvgQ:	0.2	0.3	0.3	0.0	0.2	0.2	0.5	0.5	0.5	0.1	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.388
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	30	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	145	513	70	166	466	35	35	73	137	72	118	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	145	513	70	166	466	35	35	73	137	72	118	213
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	145	513	70	166	466	35	35	73	137	72	118	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	513	70	166	466	35	35	73	137	72	118	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	145	513	70	166	466	35	35	73	137	72	118	213
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.59	1.00	0.85	0.65	1.00	0.85
Lanes:	1.00	1.76	0.24	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3119	426	1805	3324	250	1112	1900	1615	1237	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.16	0.16	0.09	0.14	0.14	0.03	0.04	0.08	0.06	0.06	0.13
Crit Moves:		****		****								****
Green/Cycle:	0.24	0.42	0.42	0.42	0.42	0.42	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.33	0.39	0.39	0.33	0.33	0.33	0.09	0.11	0.25	0.17	0.18	0.39
Delay/Veh:	31.8	20.1	20.1	19.7	19.7	19.7	22.6	22.8	24.1	23.3	23.4	25.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.8	20.1	20.1	19.7	19.7	19.7	22.6	22.8	24.1	23.3	23.4	25.6
LOS by Move:	C	C	C	B	B	B	C	C	C	C	C	C
HCM2kAvgQ:	4	7	7	4	5	5	1	2	3	2	3	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.323
Loss Time (sec):	0	Average Delay (sec/veh):	6.5
Optimal Cycle:	21	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	194	648	31	16	467	199	61	20	64	46	34	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	194	648	31	16	467	199	61	20	64	46	34	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	194	648	31	16	467	199	61	20	64	46	34	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	648	31	16	467	199	61	20	64	46	34	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	194	648	31	16	467	199	61	20	64	46	34	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.37	0.94	0.94	0.37	0.91	0.91	0.69	0.89	0.89	0.49	0.86	0.86
Lanes:	1.00	1.91	0.09	1.00	1.40	0.60	1.00	0.24	0.76	1.00	2.00	1.00
Final Sat.:	711	3421	164	701	2417	1030	1305	401	1283	931	3278	1639
Capacity Analysis Module:												
Vol/Sat:	0.27	0.19	0.19	0.02	0.19	0.19	0.05	0.05	0.05	0.05	0.01	0.01
Crit Moves:	****							****				
Green/Cycle:	0.85	0.85	0.85	0.85	0.85	0.85	0.15	0.15	0.15	0.15	0.15	0.15
Volume/Cap:	0.32	0.22	0.22	0.03	0.23	0.23	0.30	0.32	0.32	0.32	0.07	0.07
Delay/Veh:	2.0	1.5	1.5	1.2	1.5	1.5	38.3	38.3	38.3	38.9	36.2	36.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	2.0	1.5	1.5	1.2	1.5	1.5	38.3	38.3	38.3	38.9	36.2	36.2
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	2	2	2	3	3	2	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.599
Loss Time (sec):	0	Average Delay (sec/veh):	28.2
Optimal Cycle:	58	Level Of Service:	C

Street Name:	Figueroa St						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	226	561	234	278	529	61	53	445	83	270	715	196
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	226	561	234	278	529	61	53	445	83	270	715	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	226	561	234	278	529	61	53	445	83	270	715	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	561	234	278	529	61	53	445	83	270	715	196
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	226	561	234	278	529	61	53	445	83	270	715	196
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.69	0.31	1.00	1.57	0.43
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2969	554	1805	2743	752
Capacity Analysis Module:												
Vol/Sat:	0.13	0.16	0.14	0.15	0.15	0.04	0.03	0.15	0.15	0.15	0.26	0.26
Crit Moves:		****		****			****				****	
Green/Cycle:	0.49	0.26	0.26	0.51	0.27	0.27	0.25	0.25	0.25	0.25	0.44	0.44
Volume/Cap:	0.42	0.61	0.57	0.51	0.53	0.14	0.32	0.61	0.61	0.61	0.59	0.59
Delay/Veh:	16.3	34.0	34.3	16.7	31.4	27.5	30.4	34.7	34.7	35.9	21.7	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.3	34.0	34.3	16.7	31.4	27.5	30.4	34.7	34.7	35.9	21.7	21.7
LOS by Move:	B	C	C	B	C	C	C	C	C	D	C	C
HCM2kAvgQ:	5	9	7	6	8	1	2	8	8	8	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.409
Loss Time (sec):	0	Average Delay (sec/veh):	15.8
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	254	13	13	19	0	131	55	641	0	0	856	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	254	13	13	19	0	131	55	641	0	0	856	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	254	13	13	19	0	131	55	641	0	0	856	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	254	13	13	19	0	131	55	641	0	0	856	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	254	13	13	19	0	131	55	641	0	0	856	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.25	0.95	1.00	1.00	0.95	0.95
Lanes:	1.84	0.08	0.08	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	3304	153	153	1805	0	1615	469	3610	0	0	3521	78
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.01	0.00	0.08	0.12	0.18	0.00	0.00	0.24	0.24
Crit Moves:		****				****					****	
Green/Cycle:	0.21	0.21	0.21	0.20	0.00	0.20	0.59	0.59	0.00	0.00	0.59	0.59
Volume/Cap:	0.37	0.41	0.41	0.05	0.00	0.41	0.20	0.30	0.00	0.00	0.41	0.41
Delay/Veh:	34.4	34.7	34.7	32.5	0.0	35.8	9.7	10.1	0.0	0.0	11.0	11.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	34.7	34.7	32.5	0.0	35.8	9.7	10.1	0.0	0.0	11.0	11.0
LOS by Move:	C	C	C	C	A	D	A	B	A	A	B	B
HCM2kAvgQ:	4	4	4	0	0	4	1	5	0	0	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.456
Loss Time (sec):	0	Average Delay (sec/veh):	13.8
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	129	383	103	127	196	68	85	1276	105	50	749	121
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	383	103	127	196	68	85	1276	105	50	749	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	129	383	103	127	196	68	85	1276	105	50	749	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	383	103	127	196	68	85	1276	105	50	749	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	383	103	127	196	68	85	1276	105	50	749	121
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.51	0.92	0.92	0.36	0.91	0.91	0.27	0.90	0.90	0.13	0.89	0.89
Lanes:	1.00	1.58	0.42	1.00	1.48	0.52	1.00	2.77	0.23	1.00	2.58	0.42
Final Sat.:	973	2754	741	680	2576	894	507	4740	390	255	4372	706
Capacity Analysis Module:												
Vol/Sat:	0.13	0.14	0.14	0.19	0.08	0.08	0.17	0.27	0.27	0.20	0.17	0.17
Crit Moves:				****				****				
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.32	0.34	0.34	0.46	0.19	0.19	0.28	0.46	0.46	0.33	0.29	0.29
Delay/Veh:	20.6	20.4	20.4	22.6	18.9	18.9	10.6	11.6	11.6	11.7	10.2	10.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.6	20.4	20.4	22.6	18.9	18.9	10.6	11.6	11.6	11.7	10.2	10.2
LOS by Move:	C	C	C	C	B	B	B	B	B	B	B	B
HCM2kAvgQ:	3	5	5	3	3	3	2	9	9	1	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.421
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	25	Level Of Service:	B

****

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	26	499	93	0	0	0	235	582	0	0	262	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	499	93	0	0	0	235	582	0	0	262	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	499	93	0	0	0	235	582	0	0	262	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	499	93	0	0	0	235	582	0	0	262	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	499	93	0	0	0	235	582	0	0	262	72
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.51	0.95	1.00	1.00	0.92	0.92
Lanes:	0.08	1.62	0.30	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.57	0.43
Final Sat.:	148	2834	528	0	0	0	960	3610	0	0	2741	753
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.00	0.00	0.00	0.24	0.16	0.00	0.00	0.10	0.10
Crit Moves:		****					****					
Green/Cycle:	0.42	0.42	0.42	0.00	0.00	0.00	0.58	0.58	0.00	0.00	0.58	0.58
Volume/Cap:	0.42	0.42	0.42	0.00	0.00	0.00	0.42	0.28	0.00	0.00	0.16	0.16
Delay/Veh:	20.7	20.7	20.7	0.0	0.0	0.0	12.1	10.5	0.0	0.0	9.7	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.7	20.7	20.7	0.0	0.0	0.0	12.1	10.5	0.0	0.0	9.7	9.7
LOS by Move:	C	C	C	A	A	A	B	B	A	A	A	A
HCM2kAvgQ:	7	7	7	0	0	0	4	5	0	0	2	2

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.322
Loss Time (sec):	0	Average Delay (sec/veh):	13.3
Optimal Cycle:	21	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	1 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	180	241	104	0	627	69	52	243	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	180	241	104	0	627	69	52	243	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	180	241	104	0	627	69	52	243	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	180	241	104	0	627	69	52	243	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	180	241	104	0	627	69	52	243	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.94	0.94	0.32	0.95	1.00
Lanes:	0.00	0.00	0.00	0.86	1.14	1.00	0.00	1.80	0.20	1.00	2.00	0.00
Final Sat.:	0	0	0	1421	1902	1662	0	3203	353	602	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.13	0.06	0.00	0.20	0.20	0.09	0.07	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.00	0.00	0.39	0.39	0.39	0.00	0.61	0.61	0.61	0.61	0.00
Volume/Cap:	0.00	0.00	0.00	0.32	0.32	0.16	0.00	0.32	0.32	0.14	0.11	0.00
Delay/Veh:	0.0	0.0	0.0	21.2	21.2	19.7	0.0	9.7	9.7	8.6	8.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.2	21.2	19.7	0.0	9.7	9.7	8.6	8.3	0.0
LOS by Move:	A	A	A	C	C	B	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	5	5	2	0	5	5	1	2	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 56.4 Worst Case Level Of Service: F[99.3]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			119	140			0	404		0		0	684		0		20
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00
Initial Bse:	0	0	0			119	140			0	404		0		0	684		0		20
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00
PHF Volume:	0	0	0			119	140			0	404		0		0	684		0		20
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			119	140			0	404		0		0	684		0		20
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			378		378	xxxxx		308		378		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			583		557	xxxxx		648		557		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			541		516	xxxxx		612		516		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.07	xxxx	xxxx			0.75		0.00	xxxx		1.12		0.00		0.02
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.2	xxxx	xxxxx			1.7		xxxx	xxxxx		xxxx		xxxx		0.0
Control Del:	xxxxx	xxxx	xxxxx			7.4	xxxx	xxxxx			15.6		xxxx	xxxxx		xxxxx		xxxx		8.3
LOS by Move:	*	*	*			A	*	*			C		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			541		xxxx	xxxxx		xxxx		616		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			1.7		xxxx	xxxxx		xxxxx		21.7		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			15.6		xxxx	xxxxx		xxxxx		101		xxxxx
Shared LOS:	*	*	*			*	*	*			C		*	*		*		F		*
ApproachDel:	xxxxxx					xxxxxx					15.6					99.3				
ApproachLOS:	*					*					C					F				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.490
Loss Time (sec):	0	Average Delay (sec/veh):	20.0
Optimal Cycle:	36	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	47	433	195	141	346	21	15	88	30	282	309	239
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	433	195	141	346	21	15	88	30	282	309	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	433	195	141	346	21	15	88	30	282	309	239
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	433	195	141	346	21	15	88	30	282	309	239
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	433	195	141	346	21	15	88	30	282	309	239
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	1.00	0.85	0.35	0.91	0.91	0.65	0.89	0.89
Lanes:	1.00	1.38	0.62	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.13	0.87
Final Sat.:	1805	2372	1068	1805	1900	1615	661	2590	883	1227	1903	1472
Capacity Analysis Module:												
Vol/Sat:	0.03	0.18	0.18	0.08	0.18	0.01	0.02	0.03	0.03	0.23	0.16	0.16
Crit Moves:		****		****						****		
Green/Cycle:	0.07	0.37	0.37	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	0.39	0.49	0.49	0.33	0.39	0.03	0.05	0.07	0.07	0.49	0.35	0.35
Delay/Veh:	46.8	24.4	24.4	17.1	17.8	14.5	14.5	14.6	14.6	19.0	17.0	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.8	24.4	24.4	17.1	17.8	14.5	14.5	14.6	14.6	19.0	17.0	17.0
LOS by Move:	D	C	C	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	2	8	8	3	7	0	0	1	1	6	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.644
Loss Time (sec):	0	Average Delay (sec/veh):	16.9
Optimal Cycle:	40	Level Of Service:	B

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	15	499	86	83	188	89	300	539	12	39	215	98
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	499	86	83	188	89	300	539	12	39	215	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	499	86	83	188	89	300	539	12	39	215	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	499	86	83	188	89	300	539	12	39	215	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	499	86	83	188	89	300	539	12	39	215	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.56	0.98	0.98	0.22	1.00	0.85	0.48	0.95	0.95	0.79	0.79	0.79
Lanes:	1.00	0.85	0.15	1.00	1.00	1.00	1.00	1.96	0.04	0.22	1.22	0.56
Final Sat.:	1055	1585	273	416	1900	1615	912	3521	78	331	1827	833
Capacity Analysis Module:												
Vol/Sat:	0.01	0.31	0.31	0.20	0.10	0.06	0.33	0.15	0.15	0.12	0.12	0.12
Crit Moves:		****					****					
Green/Cycle:	0.49	0.49	0.49	0.49	0.49	0.49	0.51	0.51	0.51	0.51	0.51	0.51
Volume/Cap:	0.03	0.64	0.64	0.41	0.20	0.11	0.64	0.30	0.30	0.23	0.23	0.23
Delay/Veh:	13.3	20.6	20.6	17.6	14.6	13.9	20.9	14.2	14.2	13.6	13.6	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.3	20.6	20.6	17.6	14.6	13.9	20.9	14.2	14.2	13.6	13.6	13.6
LOS by Move:	B	C	C	B	B	B	C	B	B	B	B	B
HCM2kAvgQ:	0	14	14	2	3	1	8	5	5	3	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.635
Loss Time (sec):	0	Average Delay (sec/veh):	17.1
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	112	544	38	170	384	143	46	941	153	69	346	154
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	544	38	170	384	143	46	941	153	69	346	154
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	112	544	38	170	384	143	46	941	153	69	346	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	544	38	170	384	143	46	941	153	69	346	154
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	112	544	38	170	384	143	46	941	153	69	346	154
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.35	0.94	0.94	0.32	0.91	0.91	0.85	0.85	0.85	0.63	0.63	0.63
Lanes:	1.00	1.87	0.13	1.00	1.46	0.54	0.08	1.65	0.27	0.24	1.22	0.54
Final Sat.:	663	3341	233	604	2523	939	130	2660	433	291	1461	650
Capacity Analysis Module:												
Vol/Sat:	0.17	0.16	0.16	0.28	0.15	0.15	0.35	0.35	0.35	0.24	0.24	0.24
Crit Moves:				****				****				
Green/Cycle:	0.44	0.44	0.44	0.44	0.44	0.44	0.56	0.56	0.56	0.56	0.56	0.56
Volume/Cap:	0.38	0.37	0.37	0.64	0.34	0.34	0.64	0.64	0.64	0.43	0.43	0.43
Delay/Veh:	19.5	18.7	18.7	26.5	18.4	18.4	15.9	15.9	15.9	13.1	13.1	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.5	18.7	18.7	26.5	18.4	18.4	15.9	15.9	15.9	13.1	13.1	13.1
LOS by Move:	B	B	B	C	B	B	B	B	B	B	B	B
HCM2kAvgQ:	3	6	6	5	6	6	13	13	13	6	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 12.9 Worst Case Level Of Service: F[88.8]

Street Name:	Ave 21								Main St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	7	161	5	113	0	1011	5	9	619	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	7	161	5	113	0	1011	5	9	619	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	7	161	5	113	0	1011	5	9	619	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	7	161	5	113	0	1011	5	9	619	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	508	1143	1653	310	xxxx	xxxx	xxxxx	1016	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	515	158	99	692	xxxx	xxxx	xxxxx	691	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	515	154	98	692	xxxx	xxxx	xxxxx	691	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	0.01	1.05	0.05	0.16	xxxx	xxxx	xxxx	0.01	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	8.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	12.1	144.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.3	xxxx	xxxxx								
LOS by Move:	*	*	B	F	*	*	*	*	*	B	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	551	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.8	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.3	xxxxx	xxxx	xxxxx	10.3	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	B	*	*	*	B	*	*								
ApproachDel:	12.1			88.8			xxxxxx			xxxxxx										
ApproachLOS:	B			F			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.360
Loss Time (sec):	0	Average Delay (sec/veh):	8.0
Optimal Cycle:	36	Level Of Service:	A

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	368	870	570	0	0	311	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	368	870	570	0	0	311	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	368	870	570	0	0	311	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	368	870	570	0	0	311	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	368	870	570	0	0	311	2
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.92	0.92	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.81	1.19	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	3177	2081	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.13	0.27	0.27	0.00	0.00	0.09	0.00
Crit Moves:					****			****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.24	0.24
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.17	0.36	0.36	0.00	0.00	0.36	0.01
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	3.3	4.0	4.0	0.0	0.0	31.9	29.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	3.3	4.0	4.0	0.0	0.0	31.9	29.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	C	C
HCM2kAvgQ:	0	0	0	0	0	2	5	5	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
Loss Time (sec):	0	Average Delay (sec/veh):	11.8
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	34	1354	78	112	1223	66	112	257	34	31	171	174
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	34	1354	78	112	1223	66	112	257	34	31	171	174
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	34	1354	78	112	1223	66	112	257	34	31	171	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	1354	78	112	1223	66	112	257	34	31	171	174
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	34	1354	78	112	1223	66	112	257	34	31	171	174
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.17	0.94	0.94	0.14	0.94	0.94	0.65	0.65	0.65	0.80	0.80	0.80
Lanes:	1.00	1.89	0.11	1.00	1.90	0.10	0.56	1.27	0.17	0.16	0.91	0.93
Final Sat.:	315	3386	195	258	3398	183	690	1584	210	250	1379	1403
Capacity Analysis Module:												
Vol/Sat:	0.11	0.40	0.40	0.43	0.36	0.36	0.16	0.16	0.16	0.12	0.12	0.12
Crit Moves:				****				****				
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	0.15	0.55	0.55	0.60	0.49	0.49	0.60	0.60	0.60	0.46	0.46	0.46
Delay/Veh:	4.5	6.4	6.4	11.7	5.9	5.9	33.0	33.0	33.0	30.6	30.6	30.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.5	6.4	6.4	11.7	5.9	5.9	33.0	33.0	33.0	30.6	30.6	30.6
LOS by Move:	A	A	A	B	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	11	11	3	9	9	6	6	6	5	5	5

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.720
Loss Time (sec):	0	Average Delay (sec/veh):	30.6
Optimal Cycle:	81	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	2	0	1	1	0	1	1	0
Volume Module:												
Base Vol:	281	1110	430	17	748	62	35	247	214	609	342	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	281	1110	430	17	748	62	35	247	214	609	342	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	281	1110	430	17	748	62	35	247	0	609	342	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	281	1110	430	17	748	62	35	247	0	609	342	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	281	1110	430	17	748	62	35	247	0	609	342	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.16	0.84	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.94	0.06
Final Sat.:	1805	3582	1387	1805	4732	392	1805	3610	1900	1805	3493	102
Capacity Analysis Module:												
Vol/Sat:	0.16	0.31	0.31	0.01	0.16	0.16	0.02	0.07	0.00	0.34	0.10	0.10
Crit Moves:	****				****			****		****		
Green/Cycle:	0.22	0.42	0.42	0.01	0.22	0.22	0.09	0.10	0.00	0.47	0.47	0.47
Volume/Cap:	0.72	0.73	0.73	0.73	0.72	0.72	0.21	0.72	0.00	0.72	0.21	0.21
Delay/Veh:	42.8	25.5	25.5	125.3	38.4	38.4	42.5	51.2	0.0	24.3	15.6	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.8	25.5	25.5	125.3	38.4	38.4	42.5	51.2	0.0	24.3	15.6	15.6
LOS by Move:	D	C	C	F	D	D	D	D	A	C	B	B
HCM2kAvgQ:	9	16	16	2	10	10	1	5	0	16	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 7.2 Worst Case Level Of Service: A[8.9]

Street Name:	ASP SB Exit 31B									State St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	74	0	6	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	74	0	6	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	74	0	6	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	74	0	6	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.07	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1011	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				8.9	xxxxxx				xxxxxx										
ApproachLOS:	*				A	*				*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.489
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	319	1384	54	1	805	171	0	0	0	228	72	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	1384	54	1	805	171	0	0	0	228	72	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	319	1384	54	1	805	171	0	0	0	228	72	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	319	1384	54	1	805	171	0	0	0	228	72	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	1384	54	1	805	171	0	0	0	228	72	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.90	0.90	0.85
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.52	0.48	1.00
Final Sat.:	3502	3455	135	1805	3610	1615	0	0	0	2602	822	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.40	0.40	0.00	0.22	0.11	0.00	0.00	0.00	0.09	0.09	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.24	0.82	0.82	0.00	0.58	0.58	0.00	0.00	0.00	0.18	0.18	0.18
Volume/Cap:	0.38	0.49	0.49	0.49	0.38	0.18	0.00	0.00	0.00	0.49	0.49	0.16
Delay/Veh:	32.2	2.8	2.8	171.1	11.3	9.8	0.0	0.0	0.0	37.5	37.5	34.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	2.8	2.8	171.1	11.3	9.8	0.0	0.0	0.0	37.5	37.5	34.9
LOS by Move:	C	A	A	F	B	A	A	A	A	D	D	C
HCM2kAvgQ:	4	7	7	0	7	2	0	0	0	5	5	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.590
Loss Time (sec):	0	Average Delay (sec/veh):	22.9
Optimal Cycle:	45	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	1101	17	0	1030	0	199	90	223	15	0	458
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1101	17	0	1030	0	199	90	223	15	0	458
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1101	17	0	1030	0	199	90	223	15	0	458
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1101	17	0	1030	0	199	90	223	15	0	458
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1101	17	0	1030	0	199	90	223	15	0	458
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.87	0.87	0.87	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.78	0.35	0.87	0.06	0.00	1.94
Final Sat.:	0	5096	79	0	3610	0	1286	582	1442	100	0	3143
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.22	0.00	0.29	0.00	0.15	0.15	0.15	0.15	0.00	0.15
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.48	0.48	0.00	0.48	0.00	0.26	0.26	0.26	0.25	0.00	0.25
Volume/Cap:	0.00	0.45	0.45	0.00	0.59	0.00	0.59	0.59	0.59	0.59	0.00	0.57
Delay/Veh:	0.0	17.2	17.2	0.0	19.2	0.0	33.3	33.3	33.3	33.9	0.0	33.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.2	17.2	0.0	19.2	0.0	33.3	33.3	33.3	33.9	0.0	33.5
LOS by Move:	A	B	B	A	B	A	C	C	C	C	A	C
HCM2kAvgQ:	0	8	8	0	12	0	8	8	8	7	0	7

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.330
Loss Time (sec):	0	Average Delay (sec/veh):	9.9
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	156	754	0	0	357	1182	0	0	0	71	0	12	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	156	754	0	0	357	1182	0	0	0	71	0	12	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	156	754	0	0	357	0	0	0	0	71	0	12	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	156	754	0	0	357	0	0	0	0	71	0	12	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	156	754	0	0	357	0	0	0	0	71	0	12	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.86	0.00	0.14	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1270	0	215	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.21	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.06	0.00	0.06	
Crit Moves:	****				****					****			
Green/Cycle:	0.26	0.83	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.17	0.00	0.17	
Volume/Cap:	0.33	0.25	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.33	
Delay/Veh:	30.2	1.8	0.0	0.0	11.6	0.0	0.0	0.0	0.0	37.4	0.0	37.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	30.2	1.8	0.0	0.0	11.6	0.0	0.0	0.0	0.0	37.4	0.0	37.4	
LOS by Move:	C	A	A	A	B	A	A	A	A	D	A	D	
HCM2kAvgQ:	4	3	0	0	6	0	0	0	0	3	0	3	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.419
Loss Time (sec):	0	Average Delay (sec/veh):	23.4
Optimal Cycle:	45	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0 1	1 0	1	0 1	0 0	1	0 1!	0 0	0	0 0	0 0	
Volume Module:													
Base Vol:	0	416	164	24	402	0	493	3	87	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	416	164	24	402	0	493	3	87	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	416	164	24	402	0	493	3	87	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	416	164	24	402	0	493	3	87	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	416	164	24	402	0	493	3	87	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.43	0.57	1.00	1.00	0.00	1.73	0.01	0.26	0.00	0.00	0.00	
Final Sat.:	0	2479	977	1805	1900	0	2810	14	419	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.17	0.17	0.01	0.21	0.00	0.18	0.21	0.21	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.29	0.29	0.36	0.65	0.00	0.35	0.35	0.35	0.00	0.00	0.00	
Volume/Cap:	0.00	0.59	0.59	0.04	0.33	0.00	0.50	0.59	0.59	0.00	0.00	0.00	
Delay/Veh:	0.0	31.6	31.6	20.7	8.1	0.0	25.7	27.3	27.3	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	31.6	31.6	20.7	8.1	0.0	25.7	27.3	27.3	0.0	0.0	0.0	
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A	
HCM2kAvgQ:	0	9	9	0	5	0	7	9	9	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A[9.0]

Street Name:	Bridewell St									Hough St								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	9	0	0	0	35	72	9	0	71	0	0	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	9	0	0	0	35	72	9	0	71	0	0	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	9	0	0	0	35	72	9	0	71	0	0	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	9	0	0	0	35	72	9	0	71	0	0	0								
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx								
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	107	xxxx	xxxxx	xxxx	xxxx	xxxxx	89	89	71	xxxx	xxxx	xxxxx								
Potent Cap.:	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx	917	805	997	xxxx	xxxx	xxxxx								
Move Cap.:	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx	912	800	997	xxxx	xxxx	xxxxx								
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.07	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	987	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	A	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			9.0			xxxxxx										
ApproachLOS:	*			*			A			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[11.7]

Street Name: Bridewell St (N/S) & ASP SB Exit ASP SB Exit 30

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	14	3	25	97	0	16	3	214	15	12	53	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	3	25	97	0	16	3	214	15	12	53	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	3	25	97	0	16	3	214	15	12	53	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	3	25	97	0	16	3	214	15	12	53	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	313	305	222	319	312	53	53	xxxx	xxxxx	229	xxxx	xxxxx
Potent Cap.:	644	612	823	638	606	1020	1566	xxxx	xxxxx	1351	xxxx	xxxxx
Move Cap.:	629	606	823	611	600	1020	1566	xxxx	xxxxx	1351	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.03	0.16	0.00	0.02	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	729	xxxxx	xxxx	648	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.2	xxxxx	xxxxx	11.7	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.2			11.7			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 16.2 Worst Case Level Of Service: E[40.4]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	423		0		64	0		0		0	0		44		0	0		127		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	423		0		64	0		0		0	0		44		0	0		127		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	423		0		0	0		0		0	0		44		0	0		127		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	423		0		0	0		0		0	0		44		0	0		127		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		846	xxxxx	xxxx		846	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		301	xxxxx	xxxx		301	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		223	xxxxx	xxxx		223	xxxxx						
Volume/Cap:	0.26	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.20	xxxx	xxxx		0.57	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		0.7	xxxxx	xxxx		3.1	xxxxx						
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		25.0	xxxxx	xxxxx		40.4	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		D	*	*		E	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shared LOS:	*	*	*	*	*	*	*	*	*		*	*	*							
ApproachDel:	xxxxxx			xxxxxx				25.0				40.4								
ApproachLOS:	*			*				D				E								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.836
Loss Time (sec):	0	Average Delay (sec/veh):	22.0
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy									Ave 66								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			32	0			84	0	0	0			0	670			48
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Initial Bse:	0	0	0			32	0			84	0	0	0			0	670			48
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Volume:	0	0	0			32	0			84	0	0	0			0	670			48
Reduct Vol:	0	0	0			0	0			0	0	0	0			0	0			0
Reduced Vol:	0	0	0			32	0			84	0	0	0			0	670			48
PCE Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
MLF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
FinalVolume:	0	0	0			32	0			84	0	0	0			0	670			48
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Lanes:	0.00	0.00	0.00			1.00	0.00			1.00	0.00	0.00	0.00			0.00	0.93			0.07
Final Sat.:	0	0	0			530	0			642	0	0	0			0	802			57
Capacity Analysis Module:																				
Vol/Sat:	xxxx	xxxx	xxxx			0.06	xxxx			0.13	xxxx	xxxx	xxxx			xxxx	0.84			0.84
Crit Moves:										****							****			
Delay/Veh:	0.0	0.0	0.0			9.6	0.0			8.7	0.0	0.0	0.0			0.0	24.1			24.1
Delay Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
AdjDel/Veh:	0.0	0.0	0.0			9.6	0.0			8.7	0.0	0.0	0.0			0.0	24.1			24.1
LOS by Move:	*	*	*			A	*			A	*	*	*			*	C			C
ApproachDel:	xxxxxx					9.0					xxxxxx					24.1				
Delay Adj:	xxxxx					1.00					xxxxx					1.00				
ApprAdjDel:	xxxxxx					9.0					xxxxxx					24.1				
LOS by Appr:	*					A					*					C				
AllWayAvgQ:	0.0	0.0	0.0			0.1	0.0			0.1	0.0	0.0	0.0			4.0	4.0			4.0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C[15.2]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	10	0	54	73	611	0	0	418	203								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	10	0	54	73	611	0	0	418	203								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	10	0	54	73	611	0	0	418	203								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	10	0	54	73	611	0	0	418	203								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1277	1277	520	621	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	186	168	560	969	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	175	155	560	969	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.00	0.10	0.08	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	417	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	15.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				15.2		xxxxxx				xxxxxx									
ApproachLOS:	*				C		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	9.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr						ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	16	2	3	2	2	5	6	250	9	6	110	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	2	3	2	2	5	6	250	9	6	110	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	2	3	2	2	5	6	250	9	6	110	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	16	2	3	2	2	5	6	250	9	6	110	2
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.76	0.10	0.14	0.22	0.22	0.56	0.02	0.94	0.03	0.05	0.93	0.02
Final Sat.:	160	20	30	0	0	1	19	783	28	37	685	12
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	9.00	9.00	9.00	0.32	0.32	0.32	0.16	0.16	0.16
Crit Moves:			****		****		****			****		
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume/Cap:	0.10	0.10	0.10	9.00	9.00	9.00	0.32	0.32	0.32	0.16	0.16	0.16
Delay/Veh:	1.5	1.5	1.5	xxxxx	xxxx	xxxxx	3.4	3.4	3.4	1.8	1.8	1.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.5	1.5	1.5	xxxxx	xxxx	xxxxx	3.4	3.4	3.4	1.8	1.8	1.8
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: C[24.2]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	83	0	190	0	0	0	82	400	0	0	515	53
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	0	190	0	0	0	82	400	0	0	515	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	83	0	190	0	0	0	82	400	0	0	515	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	83	0	190	0	0	0	82	400	0	0	515	53
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1106	1132	200	xxxx	xxxx	xxxxx	568	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	235	205	846	xxxx	xxxx	xxxxx	1014	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	220	188	846	xxxx	xxxx	xxxxx	1014	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.38	0.00	0.22	xxxx	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	454	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.9	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	24.2	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	*	*	*
ApproachDel:		24.2		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C			*			*			*	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[11.3]

Street Name:	Ave 57							ASP SB Exit 28B/Carlota Bl							
Approach:	North Bound				South Bound			East Bound				West Bound			
Movement:	L	T	R		L	T	R	L	T	R		L	T	R	
Control:	Uncontrolled				Uncontrolled			Stop Sign				Yield Sign			
Rights:	Include				Include			Include				Include			
Lanes:	0 0 0 0 0				0 0 0 1 0			1 0 0 0 0				0 0 0 0 1			
Volume Module:															
Base Vol:	0	0	0	0	351	7		1	0	0	0	0	62		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	351	7		1	0	0	0	0	62		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	351	7		1	0	0	0	0	62		
Reduct Vol:	0	0	0	0	0	0		0	0	0	0	0	0		
FinalVolume:	0	0	0	0	351	7		1	0	0	0	0	62		
Critical Gap Module:															
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		7.1	xxxx	xxxxx	xxxxx	xxxx	6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx	xxxxx	xxxxx	xxxx	3.3		
Capacity Module:															
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		355	xxxx	xxxxx	xxxx	xxxx	0		
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		604	xxxx	xxxxx	xxxx	xxxx	1091		
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		570	xxxx	xxxxx	xxxx	xxxx	1091		
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.00	xxxx	xxxx	xxxx	xxxx	0.06		
Level Of Service Module:															
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxx	xxxx	0.2		
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		11.3	xxxx	xxxxx	xxxxx	xxxx	8.5		
LOS by Move:	*	*	*	*	*	*		B	*	*	*	*	A		
Movement:	LT	LTR	RT	LT	LTR	RT		LT	LTR	RT	LT	LTR	RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*		*	*	*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx				11.3			8.5				
ApproachLOS:	*			*				B			A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.509
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	151	28	63	10	309	354	8	315	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	151	28	63	10	309	354	8	315	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	151	28	63	10	309	354	8	315	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	151	28	63	10	309	354	8	315	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	151	28	63	10	309	354	8	315	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.62	0.12	0.26	0.03	0.97	1.00	0.05	1.89	0.07
Final Sat.:	0	496	0	366	68	153	20	607	716	28	1104	39
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.41	0.41	0.41	0.51	0.51	0.49	0.29	0.29	0.28
Crit Moves:		****			****		****			****		
Delay/Veh:	0.0	0.0	0.0	12.6	12.6	12.6	13.9	13.9	12.2	11.0	10.9	10.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	12.6	12.6	12.6	13.9	13.9	12.2	11.0	10.9	10.8
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			12.6			13.0			10.9		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.6			13.0			10.9		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.6	0.6	0.6	1.0	1.0	0.9	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.636
Loss Time (sec):	0	Average Delay (sec/veh):	13.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	249	2	4		0	0	0		223	237	0		0	86	45					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	249	2	4		0	0	0		223	237	0		0	86	45					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	249	2	4		0	0	0		223	237	0		0	86	45					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	249	2	4		0	0	0		223	237	0		0	86	45					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	249	2	4		0	0	0		223	237	0		0	86	45					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	0.98	0.01	0.02		0.00	0.00	0.00		0.48	0.52	0.00		0.00	0.66	0.34					
Final Sat.:	610	5	10		0	0	0		351	373	0		0	449	235					
Capacity Analysis Module:																				
Vol/Sat:	0.41	0.41	0.41		xxxx	xxxx	xxxx		0.64	0.64	xxxx		xxxx	0.19	0.19					
Crit Moves:		****								****				****						
Delay/Veh:	11.8	11.8	11.8		0.0	0.0	0.0		15.6	15.6	0.0		0.0	9.1	9.1					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	11.8	11.8	11.8		0.0	0.0	0.0		15.6	15.6	0.0		0.0	9.1	9.1					
LOS by Move:	B	B	B		*	*	*		C	C	*		*	A	A					
ApproachDel:	11.8				xxxxxx				15.6				9.1							
Delay Adj:	1.00				xxxxx				1.00				1.00							
ApprAdjDel:	11.8				xxxxxx				15.6				9.1							
LOS by Appr:	B				*				C				A							
AllWayAvgQ:	0.6	0.6	0.6		0.0	0.0	0.0		1.5	1.5	1.5		0.2	0.2	0.2					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.823
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	10	25	53	91	71	131	182	297	14	47	278	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	25	53	91	71	131	182	297	14	47	278	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	25	53	91	71	131	182	297	14	47	278	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	25	53	91	71	131	182	297	14	47	278	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	25	53	91	71	131	182	297	14	47	278	100
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.11	0.28	0.60	0.31	0.24	0.45	0.37	0.60	0.03	0.11	0.65	0.24
Final Sat.:	50	126	267	163	127	234	221	361	17	66	389	140
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.20	0.56	0.56	0.56	0.82	0.82	0.82	0.71	0.71	0.71
Crit Moves:		****		****					****		****	
Delay/Veh:	11.2	11.2	11.2	15.9	15.9	15.9	28.9	28.9	28.9	20.8	20.8	20.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.2	11.2	11.2	15.9	15.9	15.9	28.9	28.9	28.9	20.8	20.8	20.8
LOS by Move:	B	B	B	C	C	C	D	D	D	C	C	C
ApproachDel:	11.2			15.9			28.9			20.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.2			15.9			28.9			20.8		
LOS by Appr:	B			C			D			C		
AllWayAvgQ:	0.2	0.2	0.2	1.0	1.0	1.0	3.3	3.3	3.3	2.0	2.0	2.0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.605
Loss Time (sec):	0	Average Delay (sec/veh):	13.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	162	6	101	13	11	32	10	221	184	74	265	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	6	101	13	11	32	10	221	184	74	265	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	162	6	101	13	11	32	10	221	184	74	265	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	6	101	13	11	32	10	221	184	74	265	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	162	6	101	13	11	32	10	221	184	74	265	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.25	0.75	0.23	0.20	0.57	0.02	0.53	0.44	0.22	0.77	0.01
Final Sat.:	489	141	426	116	98	286	17	365	304	137	492	7
Capacity Analysis Module:												
Vol/Sat:	0.33	0.04	0.24	0.11	0.11	0.11	0.61	0.61	0.61	0.54	0.54	0.54
Crit Moves:	****				****			****			****	
Delay/Veh:	12.7	9.9	9.9	9.8	9.8	9.8	15.1	15.1	15.1	14.2	14.2	14.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.7	9.9	9.9	9.8	9.8	9.8	15.1	15.1	15.1	14.2	14.2	14.2
LOS by Move:	B	A	A	A	A	A	C	C	C	B	B	B
ApproachDel:	11.6			9.8			15.1			14.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.6			9.8			15.1			14.2		
LOS by Appr:	B			A			C			B		
AllWayAvgQ:	0.4	0.2	0.2	0.1	0.1	0.1	1.3	1.3	1.3	1.0	1.0	1.0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 101.9 Worst Case Level Of Service: F[828.7]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	254	0	107	0	1604	0	0	970	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	254	0	107	0	1604	0	0	970	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	254	0	107	0	1604	0	0	970	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	254	0	107	0	1604	0	0	970	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2089	2574	802	1772	2574	485	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	31	26	331	76	26	533	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	25	26	331	76	26	533	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	3.35	0.00	0.20	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	76	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	25.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	1172	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			828.7			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.5]

Street Name:	ASP NB on-ramp									Ave 26								
Approach:	North Bound					South Bound					East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	90	1187	0	0	0	1018	85			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	90	1187	0	0	0	1018	85			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	90	1187	0	0	0	1018	85			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	90	1187	0	0	0	1018	85			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1103	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					640	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					640	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.14	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	64	Critical Vol./Cap.(X):	0.773
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	180	Level Of Service:	B

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2
Volume Module:												
Base Vol:	0	272	157	792	745	203	83	36	17	0	0	519
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	272	157	792	745	203	83	36	17	0	0	519
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	272	157	792	745	203	83	36	17	0	0	519
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	272	157	792	745	203	83	36	17	0	0	519
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	272	157	792	745	203	83	36	17	0	0	519
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.00	1.27	0.73	2.00	0.79	0.21	0.61	0.26	0.13	0.00	0.00	2.00
Final Sat.:	0	2163	1249	3502	1445	394	1106	480	227	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.23	0.52	0.52	0.08	0.08	0.08	0.00	0.00	0.18
Crit Moves:					****			****				****
Green/Cycle:	0.00	0.14	0.14	0.57	0.71	0.71	0.08	0.08	0.08	0.00	0.00	0.78
Volume/Cap:	0.00	0.90	0.90	0.39	0.72	0.72	0.90	0.90	0.90	0.00	0.00	0.24
Delay/Veh:	0.0	46.7	46.7	7.7	7.4	7.4	73.7	73.7	73.7	0.0	0.0	2.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	46.7	46.7	7.7	7.4	7.4	73.7	73.7	73.7	0.0	0.0	2.0
LOS by Move:	A	D	D	A	A	A	E	E	E	A	A	A
HCM2kAvgQ:	0	8	8	5	12	12	6	6	6	0	0	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[12.4]

Street Name:	ASP NB on-ramp									San Fernando Rd									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	75	1105		0	0	0	1175		74	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	75	1105		0	0	0	1175		74	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	75	1105		0	0	0	1175		74	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0	
FinalVolume:	0	0	0	0	0	0	0	0	0	0	75	1105		0	0	0	1175		74	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1249	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					564	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					564	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.13	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.7]

Street Name:	ASP SB Exit 25									Casanova St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	49	10		5	188		0		0	0		0		0	25		0		8
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	49	10		5	188		0		0	0		0		0	25		0		8
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	49	10		5	188		0		0	0		0		0	25		0		8
Reduct Vol:	0	0	0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0	49	10		5	188		0		0	0		0		0	25		0		8
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4		6.5		6.2				
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5		4.0		3.3				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		59	xxxx	xxxxx	xxxx	xxxx	xxxxx		252		252		54				
Potent Cap.:	xxxx	xxxx	xxxxx		1558	xxxx	xxxxx	xxxx	xxxx	xxxxx		741		655		1019				
Move Cap.:	xxxx	xxxx	xxxxx		1558	xxxx	xxxxx	xxxx	xxxx	xxxxx		739		653		1019				
Volume/Cap:	xxxx	xxxx	xxxx		0.00	xxxx	xxxx	xxxx	xxxx	xxxx		0.03		0.00		0.01				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
Control Del:	xxxxx	xxxx	xxxxx		7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							
LOS by Move:	*	*	*		A	*	*	*	*	*	*	*	*							
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT					
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx							
Shrd ConDel:	xxxxx	xxxx	xxxxx		7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.7	xxxxx							
Shared LOS:	*	*	*		A	*	*	*	*	*	*	A	*							
ApproachDel:	xxxxxx				xxxxxx			xxxxxx			9.7									
ApproachLOS:	*				*			*			A									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[14.8]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0			25	6			12	25	252			246	71	117			104
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			25	6			12	25	252			246	71	117			104
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			25	6			12	25	252			246	71	117			104
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			25	6			12	25	252			246	71	117			104
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			736	859			169	221	xxxx	xxxxx			498	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			389	296			880	1360	xxxx	xxxxx			1076	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			364	271			880	1360	xxxx	xxxxx			1076	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.07	0.02			0.01	0.02	xxxx	xxxx			0.07	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			0.1	xxxx	xxxxx			0.2	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			7.7	xxxx	xxxxx			8.6	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*	*			A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	411	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.3	xxxxx			0.1	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	14.8	xxxxx			7.7	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	B	*			A	*	*			*	*	*		
ApproachDel:	xxxxxx					14.8					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	0	278	0	0	322	0	0	0	0	181	1	74	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	278	0	0	322	0	0	0	0	181	1	74	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	278	0	0	322	0	0	0	0	181	1	74	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	278	0	0	322	0	0	0	0	181	1	74	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	278	0	0	322	0	0	0	0	181	1	74	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	571	623	0	0	625	0	0	0	0	527	567	636	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.45	xxxx	xxxx	0.52	xxxx	xxxx	xxxx	xxxx	0.34	0.00	0.12	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	12.6	0.0	0.0	14.2	0.0	0.0	0.0	0.0	12.4	8.7	8.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	12.6	0.0	0.0	14.2	0.0	0.0	0.0	0.0	12.4	8.7	8.7	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		12.6			14.2			xxxxxx			11.3		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		12.6			14.2			xxxxxx			11.3		
LOS by Appr:		B			B			*			B		
AllWayAvgQ:	0.0	0.7	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.5	0.0	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.561
Loss Time (sec):	0	Average Delay (sec/veh):	13.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1	0 1	0	0 1	0 1	0	
Volume Module:													
Base Vol:	0	188	260	314	362	0	0	0	1	69	1	92	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	188	260	314	362	0	0	0	1	69	1	92	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	188	260	314	362	0	0	0	1	69	1	92	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	188	260	314	362	0	0	0	1	69	1	92	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	188	260	314	362	0	0	0	1	69	1	92	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.85	0.15	1.00	
Final Sat.:	0	604	686	592	646	0	0	456	500	396	69	543	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.31	0.38	0.53	0.56	xxxx	xxxx	0.00	0.00	0.17	0.01	0.17	
Crit Moves:			****		****				****	****			
Delay/Veh:	0.0	11.0	10.8	15.1	14.8	0.0	0.0	0.0	9.2	11.2	11.2	10.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	11.0	10.8	15.1	14.8	0.0	0.0	0.0	9.2	11.2	11.2	10.0	
LOS by Move:	*	B	B	C	B	*	*	*	A	B	B	B	
ApproachDel:	10.9			14.9			9.2			10.5			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.9			14.9			9.2			10.5			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.4	0.6	1.1	1.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.687
Loss Time (sec):	0	Average Delay (sec/veh):	7.8
Optimal Cycle:	59	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0 0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1115	74	193	1093	0	0	0	0	187	0	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1115	74	193	1093	0	0	0	0	187	0	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1115	74	193	1093	0	0	0	0	187	0	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1115	74	193	1093	0	0	0	0	187	0	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1115	74	193	1093	0	0	0	0	187	0	141
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.58	0.58	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.88	0.12	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3355	223	331	1875	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.33	0.58	0.58	0.00	0.00	0.00	0.00	0.10	0.00	0.09
Crit Moves:					****					****		
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.39	0.39	0.69	0.69	0.00	0.00	0.00	0.00	0.69	0.00	0.58
Delay/Veh:	0.0	1.8	1.8	3.8	3.8	0.0	0.0	0.0	0.0	47.4	0.0	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.8	1.8	3.8	3.8	0.0	0.0	0.0	0.0	47.4	0.0	42.9
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	5	5	9	9	0	0	0	0	7	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.639
Loss Time (sec):	0	Average Delay (sec/veh):	17.4
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	23	1011	181	66	691	211	45	245	5	61	190	327
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	1011	181	66	691	211	45	245	5	61	190	327
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	1011	181	66	691	211	45	245	5	61	190	327
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	1011	181	66	691	211	45	245	5	61	190	327
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	1011	181	66	691	211	45	245	5	61	190	327
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.22	0.93	0.93	0.12	0.92	0.92	0.26	1.00	1.00	0.49	0.91	0.91
Lanes:	1.00	1.70	0.30	1.00	1.53	0.47	1.00	0.98	0.02	1.00	0.37	0.63
Final Sat.:	409	2991	536	236	2669	815	486	1856	38	929	632	1088
Capacity Analysis Module:												
Vol/Sat:	0.06	0.34	0.34	0.28	0.26	0.26	0.09	0.13	0.13	0.07	0.30	0.30
Crit Moves:		****									****	
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	0.11	0.64	0.64	0.53	0.49	0.49	0.20	0.28	0.28	0.14	0.64	0.64
Delay/Veh:	12.0	17.5	17.5	19.6	15.2	15.2	15.9	16.3	16.3	15.1	21.7	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.0	17.5	17.5	19.6	15.2	15.2	15.9	16.3	16.3	15.1	21.7	21.7
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
HCM2kAvgQ:	0	14	14	2	9	9	1	5	5	1	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.326
Loss Time (sec):	0	Average Delay (sec/veh):	9.3
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	136	0	164	191	395	0	0	396	182
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	136	0	164	191	395	0	0	396	182
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	136	0	164	191	395	0	0	396	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	136	0	164	191	395	0	0	396	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	136	0	164	191	395	0	0	396	182
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.45	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	849	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.10	0.22	0.11	0.00	0.00	0.21	0.11
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.69	0.69	0.00	0.00	0.69	1.00
Volume/Cap:	0.00	0.00	0.00	0.12	0.00	0.33	0.33	0.16	0.00	0.00	0.30	0.11
Delay/Veh:	0.0	0.0	0.0	24.7	0.0	26.8	6.6	5.5	0.0	0.0	6.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.7	0.0	26.8	6.6	5.5	0.0	0.0	6.2	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	4	3	2	0	0	5	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	87	248	3	17	160	289	285	296	106	2	531	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	87	248	3	17	160	289	285	296	106	2	531	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	248	3	17	160	289	285	296	106	2	531	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	248	3	17	160	289	285	296	106	2	531	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	248	3	17	160	289	285	296	106	2	531	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.85	0.85	0.96	0.96	0.85	0.34	1.00	0.85	0.52	0.99	0.99
Lanes:	0.26	0.73	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	416	1185	14	175	1651	1615	642	1900	1615	988	1687	184
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.10	0.10	0.18	0.44	0.16	0.07	0.00	0.31	0.31
Crit Moves:		****					****					
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.68	0.68	0.68	0.68	0.68	0.68
Volume/Cap:	0.65	0.65	0.65	0.30	0.30	0.56	0.65	0.23	0.10	0.00	0.46	0.46
Delay/Veh:	32.2	32.2	32.2	25.9	25.9	29.5	12.8	6.2	5.5	5.1	7.8	7.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	32.2	32.2	25.9	25.9	29.5	12.8	6.2	5.5	5.1	7.8	7.8
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	10	10	10	4	4	8	6	3	1	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.771
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	63	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	606	290	101	1324	18	17	47	18	345	27	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	606	290	101	1324	18	17	47	18	345	27	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	606	290	101	1324	18	17	47	18	345	27	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	606	290	101	1324	18	17	47	18	345	27	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	606	290	101	1324	18	17	47	18	345	27	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.81	0.81	0.81	0.89	0.89	0.89	0.65	0.65	0.85
Lanes:	0.01	1.99	1.00	0.14	1.84	0.02	0.21	0.57	0.22	0.93	0.07	1.00
Final Sat.:	17	3413	1615	215	2813	38	350	967	370	1147	90	1615
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.47	0.47	0.47	0.05	0.05	0.05	0.30	0.30	0.03
Crit Moves:					****						****	
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.29	0.29	0.29	0.77	0.77	0.77	0.12	0.12	0.12	0.77	0.77	0.07
Delay/Veh:	9.3	9.3	9.4	16.4	16.4	16.4	19.6	19.6	19.6	34.1	34.1	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.3	9.3	9.4	16.4	16.4	16.4	19.6	19.6	19.6	34.1	34.1	19.2
LOS by Move:	A	A	A	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	5	5	4	19	19	19	2	2	2	12	12	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.494
Loss Time (sec):	0	Average Delay (sec/veh):	9.2
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1!	0	0
Volume Module:													
Base Vol:	166	1257	8	5	895	59	170	9	92	12	22	46	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	166	1257	8	5	895	59	170	9	92	12	22	46	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	166	1257	8	5	895	59	170	9	92	12	22	46	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	166	1257	8	5	895	59	170	9	92	12	22	46	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	166	1257	8	5	895	59	170	9	92	12	22	46	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.95	0.95	0.17	0.94	0.94	0.66	0.66	0.85	0.89	0.89	0.89	
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.95	0.05	1.00	0.15	0.27	0.58	
Final Sat.:	483	3584	23	317	3356	221	1191	63	1615	252	462	967	
Capacity Analysis Module:													
Vol/Sat:	0.34	0.35	0.35	0.02	0.27	0.27	0.14	0.14	0.06	0.05	0.05	0.05	
Crit Moves:		****						****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.48	0.49	0.49	0.02	0.38	0.38	0.49	0.49	0.20	0.16	0.16	0.16	
Delay/Veh:	7.5	6.6	6.6	4.3	5.8	5.8	30.5	30.5	27.0	26.7	26.7	26.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	7.5	6.6	6.6	4.3	5.8	5.8	30.5	30.5	27.0	26.7	26.7	26.7	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	3	9	9	0	6	6	5	5	2	2	2	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.529
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	1 0	1! 0	1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	208	0	270	385	347	0	0	324	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	208	0	270	385	347	0	0	324	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	208	0	270	385	347	0	0	324	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	208	0	270	385	347	0	0	324	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	208	0	270	385	347	0	0	324	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.90	0.47	0.95	1.00	1.00	0.91	0.91
Lanes:	0.00	0.00	0.00	1.44	0.00	1.56	1.00	2.00	0.00	0.00	1.46	0.54
Final Sat.:	0	0	0	2443	0	2663	901	3610	0	0	2528	936
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.10	0.43	0.10	0.00	0.00	0.13	0.13
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.19	0.00	0.19	0.81	0.81	0.00	0.00	0.81	0.81
Volume/Cap:	0.00	0.00	0.00	0.44	0.00	0.53	0.53	0.12	0.00	0.00	0.16	0.16
Delay/Veh:	0.0	0.0	0.0	36.0	0.0	36.9	3.9	2.1	0.0	0.0	2.1	2.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	36.0	0.0	36.9	3.9	2.1	0.0	0.0	2.1	2.1
LOS by Move:	A	A	A	D	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	5	5	1	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.547
Loss Time (sec):	0	Average Delay (sec/veh):	14.8
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	65	714	21	107	595	55	132	286	111	22	257	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	714	21	107	595	55	132	286	111	22	257	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	714	21	107	595	55	132	286	111	22	257	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	714	21	107	595	55	132	286	111	22	257	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	714	21	107	595	55	132	286	111	22	257	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.27	1.00	0.85	0.41	0.91	0.91	0.37	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.56	1.00	1.48	0.52
Final Sat.:	644	1900	1615	515	1900	1615	773	2492	967	698	2570	900
Capacity Analysis Module:												
Vol/Sat:	0.10	0.38	0.01	0.21	0.31	0.03	0.17	0.11	0.11	0.03	0.10	0.10
Crit Moves:		****					****					
Green/Cycle:	0.69	0.69	0.69	0.69	0.69	0.69	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.15	0.55	0.02	0.30	0.46	0.05	0.55	0.37	0.37	0.10	0.32	0.32
Delay/Veh:	5.6	8.3	5.0	6.6	7.4	5.1	31.1	26.9	26.9	24.6	26.4	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.6	8.3	5.0	6.6	7.4	5.1	31.1	26.9	26.9	24.6	26.4	26.4
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	11	0	2	8	1	4	5	5	1	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	0	Average Delay (sec/veh):	22.5
Optimal Cycle:	58	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	69	1034	30	113	999	40	55	216	65	54	227	166
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	1034	30	113	999	40	55	216	65	54	227	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	1034	30	113	999	40	55	216	65	54	227	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1034	30	113	999	40	55	216	65	54	227	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1034	30	113	999	40	55	216	65	54	227	166
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.94	0.94	0.95	0.97	0.97	0.95	0.94	0.94
Lanes:	1.00	1.94	0.06	1.00	1.92	0.08	1.00	0.77	0.23	1.00	0.58	0.42
Final Sat.:	1805	3493	101	1805	3451	138	1805	1410	424	1805	1028	752
Capacity Analysis Module:												
Vol/Sat:	0.04	0.30	0.30	0.06	0.29	0.29	0.03	0.15	0.15	0.03	0.22	0.22
Crit Moves:		****		****			****				****	
Green/Cycle:	0.07	0.49	0.49	0.10	0.52	0.52	0.34	0.34	0.34	0.07	0.36	0.36
Volume/Cap:	0.56	0.61	0.61	0.61	0.56	0.56	0.27	0.44	0.44	0.44	0.61	0.61
Delay/Veh:	50.7	19.5	19.5	48.8	16.6	16.6	24.5	25.9	25.9	47.4	27.8	27.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.7	19.5	19.5	48.8	16.6	16.6	24.5	25.9	25.9	47.4	27.8	27.8
LOS by Move:	D	B	B	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	3	13	13	4	12	12	1	7	7	2	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.389
Loss Time (sec):	0	Average Delay (sec/veh):	7.1
Optimal Cycle:	24	Level Of Service:	A

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	97	0	64	0	0	0	0	887	116	80	766	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	0	64	0	0	0	0	887	116	80	766	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	97	0	64	0	0	0	0	887	116	80	766	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	0	64	0	0	0	0	887	116	80	766	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	97	0	64	0	0	0	0	887	116	80	766	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	1.00	0.79	1.00	1.00	1.00	1.00	0.93	0.93	0.24	0.95	1.00
Lanes:	0.60	0.00	0.40	0.00	0.00	0.00	0.00	1.77	0.23	1.00	2.00	0.00
Final Sat.:	909	0	600	0	0	0	0	3137	410	458	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.28	0.28	0.17	0.21	0.00
Crit Moves:	****							****				
Green/Cycle:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.73	0.73	0.73	0.73	0.00
Volume/Cap:	0.39	0.00	0.39	0.00	0.00	0.00	0.00	0.39	0.39	0.24	0.29	0.00
Delay/Veh:	30.1	0.0	30.1	0.0	0.0	0.0	0.0	5.3	5.3	4.9	4.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.1	0.0	30.1	0.0	0.0	0.0	0.0	5.3	5.3	4.9	4.8	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	4	0	4	0	0	0	0	6	6	1	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.540
Loss Time (sec):	0	Average Delay (sec/veh):	20.1
Optimal Cycle:	40	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0	2 0	0	0 1	1 0	2	0 0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	68	0	308	258	714	0	0	639	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	68	0	308	258	714	0	0	639	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	68	0	308	258	714	0	0	639	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	68	0	308	258	714	0	0	639	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	68	0	308	258	714	0	0	639	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.75	0.25
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3101	442
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.19	0.14	0.20	0.00	0.00	0.21	0.21
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.26	0.65	0.00	0.00	0.38	0.38
Volume/Cap:	0.00	0.00	0.00	0.05	0.00	0.54	0.54	0.31	0.00	0.00	0.54	0.54
Delay/Veh:	0.0	0.0	0.0	21.3	0.0	26.9	32.8	7.9	0.0	0.0	24.5	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.3	0.0	26.9	32.8	7.9	0.0	0.0	24.5	24.5
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	8	7	5	0	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	0	Average Delay (sec/veh):	28.2
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	141	0	268	0	0	264	0	721	214	205	474	237
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	141	0	268	0	0	264	0	721	214	205	474	237
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	141	0	268	0	0	264	0	721	214	205	474	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	141	0	268	0	0	264	0	721	214	205	474	237
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	141	0	268	0	0	264	0	721	214	205	474	237
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.17	0.00	0.00	0.16	0.00	0.20	0.13	0.11	0.13	0.15
Crit Moves:			****			****		****		****		
Green/Cycle:	0.26	0.00	0.26	0.00	0.00	0.25	0.00	0.31	0.31	0.18	0.49	0.49
Volume/Cap:	0.16	0.00	0.64	0.00	0.00	0.64	0.00	0.64	0.42	0.64	0.27	0.30
Delay/Veh:	28.7	0.0	36.2	0.0	0.0	36.8	0.0	30.8	27.9	42.5	15.1	15.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	36.2	0.0	0.0	36.8	0.0	30.8	27.9	42.5	15.1	15.5
LOS by Move:	C	A	D	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	8	0	0	8	0	11	5	7	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.615
Loss Time (sec):	0	Average Delay (sec/veh):	18.6
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	145	629	42	56	603	43	108	811	187	35	741	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	145	629	42	56	603	43	108	811	187	35	741	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	145	629	42	56	603	43	108	811	187	35	741	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	629	42	56	603	43	108	811	187	35	741	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	145	629	42	56	603	43	108	811	187	35	741	71
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	1.00	0.85	0.23	1.00	0.85	0.22	0.92	0.92	0.15	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.63	0.37	1.00	1.83	0.17
Final Sat.:	467	1900	1615	431	1900	1615	412	2851	657	284	3251	312
Capacity Analysis Module:												
Vol/Sat:	0.31	0.33	0.03	0.13	0.32	0.03	0.26	0.28	0.28	0.12	0.23	0.23
Crit Moves:		****						****				
Green/Cycle:	0.54	0.54	0.54	0.54	0.54	0.54	0.46	0.46	0.46	0.46	0.46	0.46
Volume/Cap:	0.58	0.62	0.05	0.24	0.59	0.05	0.57	0.62	0.62	0.27	0.49	0.49
Delay/Veh:	18.8	17.1	11.0	12.8	16.6	11.0	23.5	20.9	20.9	17.6	19.0	19.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.8	17.1	11.0	12.8	16.6	11.0	23.5	20.9	20.9	17.6	19.0	19.0
LOS by Move:	B	B	B	B	B	B	C	C	C	B	B	B
HCM2kAvgQ:	4	14	1	1	13	1	3	13	13	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.889
Loss Time (sec):	0	Average Delay (sec/veh):	28.9
Optimal Cycle:	168	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	395	890	69	54	1178	58	81	261	529	99	324	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	890	69	54	1178	58	81	261	529	99	324	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	890	69	54	1178	58	81	261	529	99	324	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	890	69	54	1178	58	81	261	529	99	324	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	890	69	54	1178	58	81	261	529	99	324	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.42	0.85	0.85	0.17	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.74	0.26
Final Sat.:	1805	3610	1615	1805	3417	168	794	1624	1624	317	3084	457
Capacity Analysis Module:												
Vol/Sat:	0.22	0.25	0.04	0.03	0.34	0.34	0.10	0.16	0.33	0.31	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.63	0.57	0.57	0.46	0.39	0.39	0.37	0.37	0.37	0.37	0.37	0.37
Volume/Cap:	0.76	0.44	0.08	0.15	0.89	0.89	0.28	0.44	0.89	0.85	0.29	0.29
Delay/Veh:	31.8	12.7	9.9	15.4	36.1	36.1	22.9	24.1	40.8	71.2	22.6	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.8	12.7	9.9	15.4	36.1	36.1	22.9	24.1	40.8	71.2	22.6	22.6
LOS by Move:	C	B	A	B	D	D	C	C	D	E	C	C
HCM2kAvgQ:	10	8	1	1	22	22	2	7	20	5	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.355
Loss Time (sec):	0	Average Delay (sec/veh):	95.5
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	103	680	310	67	1043	187	192	650	50	719	1697	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	103	680	310	67	1043	187	192	650	50	719	1697	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	103	680	310	67	1043	187	192	650	50	719	1697	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	680	310	67	1043	187	192	650	50	719	1697	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	680	310	67	1043	187	192	650	50	719	1697	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.07	1.00	0.85	0.24	1.00	0.85	0.95	0.90	0.90	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.79	0.21	1.00	3.00	1.00
Final Sat.:	126	1900	1615	459	1900	1615	1805	4765	367	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.82	0.36	0.19	0.15	0.55	0.12	0.11	0.14	0.14	0.40	0.33	0.04
Crit Moves:	****							****		****		
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.10	0.10	0.10	0.29	0.30	0.30
Volume/Cap:	1.35	0.59	0.32	0.24	0.91	0.19	1.10	1.35	1.35	1.35	1.10	0.14
Delay/Veh:	243.8	13.0	9.8	9.6	27.7	8.9	142.0	217	217.0	207.0	89.9	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	243.8	13.0	9.8	9.6	27.7	8.9	142.0	217	217.0	207.0	89.9	25.9
LOS by Move:	F	B	A	A	C	A	F	F	F	F	F	C
HCM2kAvgQ:	9	13	5	1	32	3	11	18	18	47	30	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.061
Loss Time (sec):	0	Average Delay (sec/veh):	45.6
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	914	0	594	416	499	0	0	1349	928
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	914	0	594	416	499	0	0	1349	928
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	914	0	594	416	499	0	0	1349	928
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	914	0	594	416	499	0	0	1349	928
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	914	0	594	416	499	0	0	1349	928
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.00	0.37	0.12	0.10	0.00	0.00	0.26	0.57
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.11	0.65	0.00	0.00	0.54	0.54
Volume/Cap:	0.00	0.00	0.00	0.75	0.00	1.06	1.06	0.15	0.00	0.00	0.48	1.06
Delay/Veh:	0.0	0.0	0.0	31.6	0.0	88.0	107.1	6.7	0.0	0.0	14.3	70.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.6	0.0	88.0	107.1	6.7	0.0	0.0	14.3	70.9
LOS by Move:	A	A	A	C	A	F	F	A	A	A	B	E
HCM2kAvgQ:	0	0	0	14	0	28	12	2	0	0	9	40

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.845
Loss Time (sec):	0	Average Delay (sec/veh):	28.5
Optimal Cycle:	120	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	109	651	3	201	879	75	167	899	181	292	831	202
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	651	3	201	879	75	167	899	181	292	831	202
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	651	3	201	879	75	167	899	181	292	831	202
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	651	3	201	879	75	167	899	181	292	831	202
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	651	3	201	879	75	167	899	181	292	831	202
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.16	0.95	0.85	0.28	0.94	0.94	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.84	0.16	1.00	1.66	0.34	1.00	1.61	0.39
Final Sat.:	297	3610	1615	535	3287	280	1805	2930	590	1805	2819	685
Capacity Analysis Module:												
Vol/Sat:	0.37	0.18	0.00	0.38	0.27	0.27	0.09	0.31	0.31	0.16	0.29	0.29
Crit Moves:				****				****		****		
Green/Cycle:	0.45	0.45	0.45	0.45	0.45	0.45	0.13	0.36	0.36	0.42	0.42	0.42
Volume/Cap:	0.83	0.41	0.00	0.84	0.60	0.60	0.70	0.84	0.84	0.69	0.70	0.70
Delay/Veh:	57.0	18.9	15.4	47.9	21.7	21.7	50.2	34.6	34.6	24.8	25.2	25.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.0	18.9	15.4	47.9	21.7	21.7	50.2	34.6	34.6	24.8	25.2	25.2
LOS by Move:	E	B	B	D	C	C	D	C	C	C	C	C
HCM2kAvgQ:	5	7	0	8	12	12	6	19	19	9	15	15

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.615
Loss Time (sec):	0	Average Delay (sec/veh):	20.3
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0
Volume Module:												
Base Vol:	205	151	30	211	272	82	97	720	175	47	867	144
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	205	151	30	211	272	82	97	720	175	47	867	144
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	205	151	30	211	272	82	97	720	175	47	867	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	151	30	211	272	82	97	720	175	47	867	144
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	205	151	30	211	272	82	97	720	175	47	867	144
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.17	0.92	0.92	0.21	0.93	0.93
Lanes:	1.00	0.83	0.17	1.00	0.77	0.23	1.00	1.61	0.39	1.00	1.72	0.28
Final Sat.:	1805	1546	307	1805	1409	425	314	2819	685	390	3030	503
Capacity Analysis Module:												
Vol/Sat:	0.11	0.10	0.10	0.12	0.19	0.19	0.31	0.26	0.26	0.12	0.29	0.29
Crit Moves:	****				****		****					
Green/Cycle:	0.41	0.23	0.23	0.50	0.31	0.31	0.50	0.50	0.50	0.50	0.50	0.50
Volume/Cap:	0.42	0.43	0.43	0.32	0.62	0.62	0.62	0.51	0.51	0.24	0.57	0.57
Delay/Veh:	20.5	33.8	33.8	15.0	31.2	31.2	25.0	16.9	16.9	14.8	17.9	17.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.5	33.8	33.8	15.0	31.2	31.2	25.0	16.9	16.9	14.8	17.9	17.9
LOS by Move:	C	C	C	B	C	C	C	B	B	B	B	B
HCM2kAvgQ:	5	5	5	4	10	10	3	10	10	1	12	12

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.582
Loss Time (sec):	0	Average Delay (sec/veh):	18.7
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	415	105	439	672	3	1	1	1	127	2	307	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	415	105	439	672	3	1	1	1	127	2	307	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	415	105	439	672	3	1	1	1	127	2	307	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	415	105	439	672	3	1	1	1	127	2	307	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	415	105	439	672	3	1	1	1	127	2	307	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.60	0.40	1.00	1.99	0.01	0.33	0.33	0.33	0.98	0.02	1.00	
Final Sat.:	1900	2794	707	1805	3591	16	585	585	585	1391	22	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.15	0.15	0.24	0.19	0.19	0.00	0.00	0.00	0.09	0.09	0.19	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.26	0.26	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33	
Volume/Cap:	0.00	0.58	0.58	0.51	0.28	0.28	0.01	0.01	0.01	0.28	0.28	0.58	
Delay/Veh:	0.0	33.5	33.5	10.0	6.6	6.6	22.7	22.7	22.7	25.3	25.3	29.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	33.5	33.5	10.0	6.6	6.6	22.7	22.7	22.7	25.3	25.3	29.6	
LOS by Move:	A	C	C	B	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	8	8	7	4	4	0	0	0	3	3	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.688
Loss Time (sec):	0	Average Delay (sec/veh):	28.6
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Protected					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	342	136	32		77	219	37		10	243	318		66	322	30			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	342	136	32		77	219	37		10	243	318		66	322	30			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	342	136	32		77	219	37		10	243	318		66	322	30			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	342	136	32		77	219	37		10	243	318		66	322	30			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	342	136	32		77	219	37		10	243	318		66	322	30			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.92	0.96	0.82		0.92	0.96	0.82		0.41	0.88	0.88		0.92	0.95	0.95			
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.43	0.57		1.00	0.91	0.09			
Final Sat.:	1742	1833	1558		1742	1833	1558		773	727	951		1742	1656	154			
Capacity Analysis Module:																		
Vol/Sat:	0.20	0.07	0.02		0.04	0.12	0.02		0.01	0.33	0.33		0.04	0.19	0.19			
Crit Moves:	****					****				****			****					
Green/Cycle:	0.29	0.29	0.29		0.17	0.17	0.17		0.49	0.49	0.49		0.06	0.54	0.54			
Volume/Cap:	0.69	0.26	0.07		0.25	0.69	0.14		0.03	0.69	0.69		0.69	0.36	0.36			
Delay/Veh:	35.8	27.8	26.1		36.2	45.0	35.2		13.4	22.3	22.3		65.3	13.3	13.3			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	35.8	27.8	26.1		36.2	45.0	35.2		13.4	22.3	22.3		65.3	13.3	13.3			
LOS by Move:	D	C	C		D	D	D		B	C	C		E	B	B			
HCM2kAvgQ:	10	3	1		2	8	1		0	14	14		3	6	6			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.487
Loss Time (sec):	0	Average Delay (sec/veh):	18.2
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	0	1! 0 0 0 0 1! 0 0
Volume Module:													
Base Vol:	14	418	186	123	746	12	13	77	8	237	100	56	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	14	418	186	123	746	12	13	77	8	237	100	56	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	14	418	186	123	746	12	13	77	8	237	100	56	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	14	418	186	123	746	12	13	77	8	237	100	56	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	14	418	186	123	746	12	13	77	8	237	100	56	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.23	0.91	0.91	0.30	0.95	0.95	0.94	0.94	0.94	0.76	0.76	0.76	
Lanes:	1.00	1.38	0.62	1.00	1.97	0.03	0.13	0.79	0.08	0.60	0.25	0.14	
Final Sat.:	432	2383	1060	576	3544	57	236	1400	145	867	366	205	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.18	0.18	0.21	0.21	0.21	0.05	0.05	0.05	0.27	0.27	0.27	
Crit Moves:				****							****		
Green/Cycle:	0.44	0.44	0.44	0.44	0.44	0.44	0.56	0.56	0.56	0.56	0.56	0.56	
Volume/Cap:	0.07	0.40	0.40	0.49	0.48	0.48	0.10	0.10	0.10	0.49	0.49	0.49	
Delay/Veh:	16.5	19.3	19.3	21.5	20.2	20.2	10.2	10.2	10.2	13.7	13.7	13.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	16.5	19.3	19.3	21.5	20.2	20.2	10.2	10.2	10.2	13.7	13.7	13.7	
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B	
HCM2kAvgQ:	0	7	7	3	9	9	1	1	1	8	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.623
Loss Time (sec):	0	Average Delay (sec/veh):	16.4
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	236	332	34	56	498	45	32	157	422	53	236	145
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	236	332	34	56	498	45	32	157	422	53	236	145
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	236	332	34	56	498	45	32	157	422	53	236	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	236	332	34	56	498	45	32	157	422	53	236	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	236	332	34	56	498	45	32	157	422	53	236	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.46	1.00	0.85	0.47	0.85	0.85	0.33	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	654	1900	1615	883	1900	1615	886	1608	1608	620	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.36	0.17	0.02	0.06	0.26	0.03	0.04	0.10	0.26	0.09	0.12	0.09
Crit Moves:	****								****			
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.42	0.42	0.42	0.42
Volume/Cap:	0.62	0.30	0.04	0.11	0.45	0.05	0.09	0.23	0.62	0.20	0.29	0.21
Delay/Veh:	17.1	10.9	9.1	9.6	12.3	9.1	17.5	18.6	24.0	18.7	19.3	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.1	10.9	9.1	9.6	12.3	9.1	17.5	18.6	24.0	18.7	19.3	18.6
LOS by Move:	B	B	A	A	B	A	B	B	C	B	B	B
HCM2kAvgQ:	6	5	0	1	9	1	1	3	11	1	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	0	Average Delay (sec/veh):	22.7
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	76	380	75	109	920	74	51	345	151	77	198	59	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	76	380	75	109	920	74	51	345	151	77	198	59	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	76	380	75	109	920	74	51	345	151	77	198	59	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	76	380	75	109	920	74	51	345	151	77	198	59	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	76	380	75	109	920	74	51	345	151	77	198	59	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.91	0.91	0.91	0.78	0.78	0.78	
Lanes:	1.00	1.67	0.33	1.00	1.85	0.15	0.09	0.63	0.28	0.23	0.59	0.18	
Final Sat.:	1805	2940	580	1805	3304	266	161	1088	476	341	876	261	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.13	0.13	0.06	0.28	0.28	0.32	0.32	0.32	0.23	0.23	0.23	
Crit Moves:					****			****					
Green/Cycle:	0.07	0.34	0.34	0.44	0.44	0.44	0.50	0.50	0.50	0.50	0.50	0.50	
Volume/Cap:	0.64	0.38	0.38	0.26	0.64	0.64	0.64	0.64	0.64	0.45	0.45	0.45	
Delay/Veh:	56.5	25.0	25.0	18.4	22.9	22.9	20.1	20.1	20.1	16.8	16.8	16.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	56.5	25.0	25.0	18.4	22.9	22.9	20.1	20.1	20.1	16.8	16.8	16.8	
LOS by Move:	E	C	C	B	C	C	C	C	C	B	B	B	
HCM2kAvgQ:	3	6	6	2	13	13	13	13	13	7	7	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.690
Loss Time (sec):	0	Average Delay (sec/veh):	13.0
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	10	437	181	310	1225	1	7	11	0	163	21	181	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	437	181	310	1225	1	7	11	0	163	21	181	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	437	181	310	1225	1	7	11	0	163	21	181	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	10	437	181	310	1225	1	7	11	0	163	21	181	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	10	437	181	310	1225	1	7	11	0	163	21	181	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.16	0.91	0.91	0.36	0.95	0.95	0.90	0.90	1.00	0.80	0.80	0.80	
Lanes:	1.00	1.41	0.59	1.00	2.00	0.00	0.39	0.61	0.00	0.45	0.06	0.50	
Final Sat.:	304	2441	1011	690	3607	3	665	1045	0	677	87	752	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.18	0.18	0.45	0.34	0.34	0.01	0.01	0.00	0.24	0.24	0.24	
Crit Moves:				****							****		
Green/Cycle:	0.65	0.65	0.65	0.65	0.65	0.65	0.35	0.35	0.00	0.35	0.35	0.35	
Volume/Cap:	0.05	0.28	0.28	0.69	0.52	0.52	0.03	0.03	0.00	0.69	0.69	0.69	
Delay/Veh:	6.4	7.5	7.5	15.6	9.4	9.4	21.4	21.4	0.0	31.8	31.8	31.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	6.4	7.5	7.5	15.6	9.4	9.4	21.4	21.4	0.0	31.8	31.8	31.8	
LOS by Move:	A	A	A	B	A	A	C	C	A	C	C	C	
HCM2kAvgQ:	0	4	4	7	11	11	0	0	0	11	11	11	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.688
Loss Time (sec):	0	Average Delay (sec/veh):	14.9
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	109	66	32	65	309	92	22	130	95	38	145	29	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	109	66	32	65	309	92	22	130	95	38	145	29	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	109	66	32	65	309	92	22	130	95	38	145	29	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	109	66	32	65	309	92	22	130	95	38	145	29	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	109	66	32	65	309	92	22	130	95	38	145	29	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.67	0.33	1.00	0.77	0.23	0.09	0.53	0.38	0.18	0.68	0.14	
Final Sat.:	477	356	172	525	449	134	50	297	217	97	370	74	
Capacity Analysis Module:													
Vol/Sat:	0.23	0.19	0.19	0.12	0.69	0.69	0.44	0.44	0.44	0.39	0.39	0.39	
Crit Moves:	****				****			****			****		
Delay/Veh:	11.7	10.3	10.3	10.3	20.0	20.0	13.0	13.0	13.0	12.6	12.6	12.6	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	11.7	10.3	10.3	10.3	20.0	20.0	13.0	13.0	13.0	12.6	12.6	12.6	
LOS by Move:	B	B	B	B	C	C	B	B	B	B	B	B	
ApproachDel:	11.0			18.7			13.0			12.6			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	11.0			18.7			13.0			12.6			
LOS by Appr:	B			C			B			B			
AllWayAvgQ:	0.3	0.2	0.2	0.1	1.8	1.8	0.6	0.6	0.6	0.5	0.5	0.5	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.590
Loss Time (sec):	0	Average Delay (sec/veh):	24.2
Optimal Cycle:	45	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	133	393	100	395	773	27	61	290	372	71	84	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	393	100	395	773	27	61	290	372	71	84	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	393	100	395	773	27	61	290	372	71	84	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	393	100	395	773	27	61	290	372	71	84	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	393	100	395	773	27	61	290	372	71	84	108
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.65	1.00	0.85	0.40	1.00	0.85
Lanes:	1.00	1.59	0.41	1.00	1.93	0.07	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2790	710	1805	3470	121	1231	1900	1615	767	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.14	0.14	0.22	0.22	0.22	0.05	0.15	0.23	0.09	0.04	0.07
Crit Moves:		****		****					****			
Green/Cycle:	0.15	0.24	0.24	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.49	0.59	0.59	0.53	0.49	0.49	0.13	0.39	0.59	0.24	0.11	0.17
Delay/Veh:	40.2	34.9	34.9	19.5	19.1	19.1	19.7	22.3	25.6	20.9	19.5	20.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.2	34.9	34.9	19.5	19.1	19.1	19.7	22.3	25.6	20.9	19.5	20.0
LOS by Move:	D	C	C	B	B	B	B	C	C	C	B	C
HCM2kAvgQ:	4	8	8	9	9	9	1	6	10	2	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.493
Loss Time (sec):	0	Average Delay (sec/veh):	7.5
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	134	578	36	26	1118	243	69	41	51	78	91	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	134	578	36	26	1118	243	69	41	51	78	91	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	134	578	36	26	1118	243	69	41	51	78	91	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	578	36	26	1118	243	69	41	51	78	91	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	134	578	36	26	1118	243	69	41	51	78	91	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.17	0.94	0.94	0.40	0.92	0.92	0.59	0.92	0.92	0.49	0.87	0.87
Lanes:	1.00	1.88	0.12	1.00	1.64	0.36	1.00	0.45	0.55	1.00	2.12	0.88
Final Sat.:	328	3368	210	751	2886	627	1120	776	966	929	3497	1460
Capacity Analysis Module:												
Vol/Sat:	0.41	0.17	0.17	0.03	0.39	0.39	0.06	0.05	0.05	0.08	0.03	0.03
Crit Moves:	****									****		
Green/Cycle:	0.83	0.83	0.83	0.83	0.83	0.83	0.17	0.17	0.17	0.17	0.17	0.17
Volume/Cap:	0.49	0.21	0.21	0.04	0.47	0.47	0.36	0.31	0.31	0.49	0.15	0.15
Delay/Veh:	3.9	1.8	1.8	1.5	2.5	2.5	37.8	36.9	36.9	40.0	35.4	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.9	1.8	1.8	1.5	2.5	2.5	37.8	36.9	36.9	40.0	35.4	35.4
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	6	6	2	3	3	3	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.809
Loss Time (sec):	0	Average Delay (sec/veh):	36.5
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Figueroa St						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	269	338	212	359	1195	53	14	964	193	211	673	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	269	338	212	359	1195	53	14	964	193	211	673	165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	269	338	212	359	1195	53	14	964	193	211	673	165
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	269	338	212	359	1195	53	14	964	193	211	673	165
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	269	338	212	359	1195	53	14	964	193	211	673	165
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.67	0.33	1.00	1.61	0.39
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2933	587	1805	2814	690
Capacity Analysis Module:												
Vol/Sat:	0.15	0.09	0.13	0.20	0.33	0.03	0.01	0.33	0.33	0.12	0.24	0.24
Crit Moves:	****				****			****				
Green/Cycle:	0.37	0.21	0.21	0.52	0.36	0.36	0.36	0.36	0.36	0.13	0.47	0.47
Volume/Cap:	0.73	0.45	0.64	0.52	0.93	0.09	0.14	0.93	0.93	0.93	0.51	0.51
Delay/Veh:	33.0	35.2	40.3	15.8	42.3	21.4	25.6	42.7	42.7	82.9	19.0	19.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.0	35.2	40.3	15.8	42.3	21.4	25.6	42.7	42.7	82.9	19.0	19.0
LOS by Move:	C	D	D	B	D	C	C	D	D	F	B	B
HCM2kAvgQ:	9	5	7	8	23	1	0	22	22	10	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.423
Loss Time (sec):	0	Average Delay (sec/veh):	16.7
Optimal Cycle:	32	Level Of Service:	B

Street Name:	I-5 NB off-ramp									Ave 26								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Permitted					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1!	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	301	32	33		31	0	103		90	749	0		0	830	29			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	301	32	33		31	0	103		90	749	0		0	830	29			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	301	32	33		31	0	103		90	749	0		0	830	29			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	301	32	33		31	0	103		90	749	0		0	830	29			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	301	32	33		31	0	103		90	749	0		0	830	29			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.95	0.95	0.95		0.95	1.00	0.85		0.24	0.95	1.00		1.00	0.95	0.95			
Lanes:	1.70	0.15	0.15		1.00	0.00	1.00		1.00	2.00	0.00		0.00	1.93	0.07			
Final Sat.:	3058	267	276		1805	0	1615		461	3610	0		0	3470	121			
Capacity Analysis Module:																		
Vol/Sat:	0.10	0.12	0.12		0.02	0.00	0.06		0.20	0.21	0.00		0.00	0.24	0.24			
Crit Moves:			****				****							****				
Green/Cycle:	0.28	0.28	0.28		0.15	0.00	0.15		0.57	0.57	0.00		0.00	0.57	0.57			
Volume/Cap:	0.35	0.42	0.42		0.11	0.00	0.42		0.34	0.37	0.00		0.00	0.42	0.42			
Delay/Veh:	28.7	29.5	29.5		36.9	0.0	39.7		12.5	12.0	0.0		0.0	12.5	12.5			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	28.7	29.5	29.5		36.9	0.0	39.7		12.5	12.0	0.0		0.0	12.5	12.5			
LOS by Move:	C	C	C		D	A	D		B	B	A		A	B	B			
HCM2kAvgQ:	4	6	6		1	0	3		2	7	0		0	8	8			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	0	Average Delay (sec/veh):	13.8
Optimal Cycle:	57	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	121	294	58	76	457	111	85	959	174	85	1665	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	121	294	58	76	457	111	85	959	174	85	1665	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	121	294	58	76	457	111	85	959	174	85	1665	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	294	58	76	457	111	85	959	174	85	1665	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	121	294	58	76	457	111	85	959	174	85	1665	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.93	0.93	0.42	0.92	0.92	0.09	0.89	0.89	0.20	0.90	0.90
Lanes:	1.00	1.67	0.33	1.00	1.61	0.39	1.00	2.54	0.46	1.00	2.84	0.16
Final Sat.:	504	2941	580	793	2819	685	167	4289	778	384	4867	278
Capacity Analysis Module:												
Vol/Sat:	0.24	0.10	0.10	0.10	0.16	0.16	0.51	0.22	0.22	0.22	0.34	0.34
Crit Moves:	****						****					
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.68	0.68	0.68	0.68	0.68	0.68
Volume/Cap:	0.75	0.31	0.31	0.30	0.51	0.51	0.75	0.33	0.33	0.33	0.50	0.50
Delay/Veh:	47.9	25.8	25.8	26.2	27.9	27.9	34.3	6.7	6.7	7.3	7.9	7.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.9	25.8	25.8	26.2	27.9	27.9	34.3	6.7	6.7	7.3	7.9	7.9
LOS by Move:	D	C	C	C	C	C	C	A	A	A	A	A
HCM2kAvgQ:	5	4	4	2	8	8	3	5	5	1	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.374
Loss Time (sec):	0	Average Delay (sec/veh):	11.8
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	30	339	39	0	0	0	52	179	0	0	762	146
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	339	39	0	0	0	52	179	0	0	762	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	339	39	0	0	0	52	179	0	0	762	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	339	39	0	0	0	52	179	0	0	762	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	339	39	0	0	0	52	179	0	0	762	146
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	1.00	1.00	1.00	0.26	0.95	1.00	1.00	0.93	0.93
Lanes:	0.15	1.66	0.19	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.68	0.32
Final Sat.:	259	2924	336	0	0	0	499	3610	0	0	2957	566
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.26	0.26
Crit Moves:		****									****	
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.69	0.69
Volume/Cap:	0.37	0.37	0.37	0.00	0.00	0.00	0.15	0.07	0.00	0.00	0.37	0.37
Delay/Veh:	27.1	27.1	27.1	0.0	0.0	0.0	5.6	5.1	0.0	0.0	6.6	6.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.1	27.1	27.1	0.0	0.0	0.0	5.6	5.1	0.0	0.0	6.6	6.6
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	5	5	0	0	0	1	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.290
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	20	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 1	0 1	1	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	38	140	308	0	172	119	116	683	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	38	140	308	0	172	119	116	683	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	38	140	308	0	172	119	116	683	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	38	140	308	0	172	119	116	683	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	38	140	308	0	172	119	116	683	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.89	0.89	0.54	0.95	1.00
Lanes:	0.00	0.00	0.00	0.23	0.86	1.90	0.00	1.18	0.82	1.00	2.00	0.00
Final Sat.:	0	0	0	379	1395	3069	0	2003	1386	1027	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.10	0.10	0.00	0.09	0.09	0.11	0.19	0.00
Crit Moves:					****						****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.35	0.35	0.00	0.65	0.65	0.65	0.65	0.00
Volume/Cap:	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.13	0.13	0.17	0.29	0.00
Delay/Veh:	0.0	0.0	0.0	23.8	23.8	23.8	0.0	6.6	6.6	6.9	7.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.8	23.8	23.8	0.0	6.6	6.6	6.9	7.5	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	4	4	0	2	2	1	5	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 303.4 Worst Case Level Of Service: F[5857.8]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			717	1324			0	116		10		0	6		0		393
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			717	1324			0	116		10		0	6		0		393
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			717	1324			0	116		10		0	6		0		393
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			717	1324			0	116		10		0	6		0		393
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2758		2758	xxxxx		2101		2758		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			13		20	xxxxx		38		20		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			5		11	xxxxx		6		11		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.44	xxxx	xxxx			21.46		0.89	xxxx		0.95		0.00		0.36
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			2.3	xxxx	xxxxx			9.0		xxxx	xxxxx		xxxx		xxxx		0.7
Control Del:	xxxxx	xxxx	xxxxx			8.9	xxxx	xxxxx			5691		xxxx	xxxxx		xxxxx		xxxx		9.0
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			6		xxxx	xxxxx		xxxx		179		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6.0		xxxx	xxxxx		xxxxx		10.3		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6000		xxxx	xxxxx		xxxxx		159		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		F		*
ApproachDel:	xxxxxx					xxxxxx					5857.8							85.3		
ApproachLOS:	*					*					F							F		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.820
Loss Time (sec):	0	Average Delay (sec/veh):	26.2
Optimal Cycle:	103	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	75	206	416	416	374	20	113	485	128	179	305	154
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	206	416	416	374	20	113	485	128	179	305	154
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	206	416	416	374	20	113	485	128	179	305	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	206	416	416	374	20	113	485	128	179	305	154
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	206	416	416	374	20	113	485	128	179	305	154
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.85	0.85	0.95	1.00	0.85	0.37	0.92	0.92	0.28	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.58	0.42	1.00	1.33	0.67
Final Sat.:	1805	1624	1624	1805	1900	1615	712	2767	730	537	2278	1150
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.26	0.23	0.20	0.01	0.16	0.18	0.18	0.33	0.13	0.13
Crit Moves:			****	****						****		
Green/Cycle:	0.10	0.31	0.31	0.49	0.49	0.49	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.40	0.41	0.82	0.71	0.40	0.03	0.39	0.43	0.43	0.82	0.33	0.33
Delay/Veh:	43.4	27.3	38.9	24.4	16.5	13.2	21.8	21.6	21.6	47.6	20.5	20.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.4	27.3	38.9	24.4	16.5	13.2	21.8	21.6	21.6	47.6	20.5	20.5
LOS by Move:	D	C	D	C	B	B	C	C	C	D	C	C
HCM2kAvgQ:	3	5	15	11	7	0	3	7	7	7	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.987
Loss Time (sec):	0	Average Delay (sec/veh):	26.0
Optimal Cycle:	180	Level Of Service:	C

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	1 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	10	593	62	118	790	504	138	124	16	105	819	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	593	62	118	790	504	138	124	16	105	819	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	593	62	118	790	504	138	124	16	105	819	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	593	62	118	790	504	138	124	16	105	819	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	593	62	118	790	504	138	124	16	105	819	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.10	0.99	0.99	0.10	1.00	0.85	0.21	0.93	0.93	0.84	0.84	0.84
Lanes:	1.00	0.91	0.09	1.00	1.00	1.00	1.00	1.77	0.23	0.21	1.66	0.13
Final Sat.:	185	1696	177	185	1900	1615	397	3143	406	342	2665	202
Capacity Analysis Module:												
Vol/Sat:	0.05	0.35	0.35	0.64	0.42	0.31	0.35	0.04	0.04	0.31	0.31	0.31
Crit Moves:				****			****					
Green/Cycle:	0.65	0.65	0.65	0.65	0.65	0.65	0.35	0.35	0.35	0.35	0.35	0.35
Volume/Cap:	0.08	0.54	0.54	0.99	0.64	0.48	0.99	0.11	0.11	0.87	0.87	0.87
Delay/Veh:	6.9	10.0	10.0	95.3	11.8	9.4	104.2	21.9	21.9	37.9	37.9	37.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.9	10.0	10.0	95.3	11.8	9.4	104.2	21.9	21.9	37.9	37.9	37.9
LOS by Move:	A	B	B	F	B	A	F	C	C	D	D	D
HCM2kAvgQ:	0	11	11	7	15	8	8	2	2	18	18	18

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.038
Loss Time (sec):	0	Average Delay (sec/veh):	36.8
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	190	347	32	174	591	403	34	529	327	81	1152	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	190	347	32	174	591	403	34	529	327	81	1152	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	190	347	32	174	591	403	34	529	327	81	1152	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	347	32	174	591	403	34	529	327	81	1152	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	190	347	32	174	591	403	34	529	327	81	1152	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	0.94	0.94	0.47	0.89	0.89	0.68	0.68	0.68	0.71	0.71	0.71
Lanes:	1.00	1.83	0.17	1.00	1.19	0.81	0.08	1.19	0.73	0.12	1.74	0.13
Final Sat.:	347	3263	301	889	2016	1375	98	1525	942	165	2346	179
Capacity Analysis Module:												
Vol/Sat:	0.55	0.11	0.11	0.20	0.29	0.29	0.35	0.35	0.35	0.49	0.49	0.49
Crit Moves:	****										****	
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	1.04	0.20	0.20	0.37	0.56	0.56	0.73	0.73	0.73	1.04	1.04	1.04
Delay/Veh:	100.5	12.6	12.6	14.4	16.2	16.2	23.6	23.6	23.6	62.0	62.0	62.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	100.5	12.6	12.6	14.4	16.2	16.2	23.6	23.6	23.6	62.0	62.0	62.0
LOS by Move:	F	B	B	B	B	B	C	C	C	E	E	E
HCM2kAvgQ:	11	3	3	3	11	11	13	13	13	30	30	30

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 139.4 Worst Case Level Of Service: F[1343.2]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	164		1	123				0	738		0		2	1745		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	2	164		1	123				0	738		0		2	1745		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	2	164		1	123				0	738		0		2	1745		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	2	164		1	123				0	738		0		2	1745		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	369	2118		2487	873				xxxx	xxxx		xxxxx		738	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	634	29		30	298				xxxx	xxxx		xxxxx		877	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	634	29		30	298				xxxx	xxxx		xxxxx		877	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.00	5.60		0.03	0.41				xxxx	xxxx		xxxx		0.00	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	19.9		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	10.7	2338		xxxx	xxxxx				xxxxx	xxxx		xxxxx		9.1	xxxx		xxxxx	
LOS by Move:	*	*	B	F		*	*				*	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	277				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.2				xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	28.1				xxxxx	xxxx		xxxxx		9.1	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	D				*	*		*		A	*		*	
ApproachDel:	10.7			1343.2							xxxxxx					xxxxxx				
ApproachLOS:	B			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.887
Loss Time (sec):	0	Average Delay (sec/veh):	798.0
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1851	288	458	0	0	851	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1851	288	458	0	0	851	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1851	288	458	0	0	851	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1851	288	458	0	0	851	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1851	288	458	0	0	851	9
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.16	1.84	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2051	3262	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.14	0.14	0.00	0.00	0.24	0.01
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.27	0.27
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	4.11	0.89	0.89	0.00	0.00	0.89	0.02
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1448	52.5	52.5	0.0	0.0	45.3	27.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1448	52.5	52.5	0.0	0.0	45.3	27.1
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	130	11	11	0	0	17	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	0	Average Delay (sec/veh):	14.4
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	15	253	7	94	1532	66	59	206	92	114	308	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	253	7	94	1532	66	59	206	92	114	308	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	253	7	94	1532	66	59	206	92	114	308	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	253	7	94	1532	66	59	206	92	114	308	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	253	7	94	1532	66	59	206	92	114	308	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.10	0.95	0.95	0.57	0.94	0.94	0.71	0.71	0.71	0.68	0.68	0.68
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.33	1.15	0.52	0.49	1.33	0.18
Final Sat.:	193	3499	97	1074	3439	148	446	1557	695	634	1714	228
Capacity Analysis Module:												
Vol/Sat:	0.08	0.07	0.07	0.09	0.45	0.45	0.13	0.13	0.13	0.18	0.18	0.18
Crit Moves:					****						****	
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.11	0.10	0.10	0.12	0.63	0.63	0.46	0.46	0.46	0.63	0.63	0.63
Delay/Veh:	4.8	4.5	4.5	4.6	7.9	7.9	29.7	29.7	29.7	32.6	32.6	32.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.8	4.5	4.5	4.6	7.9	7.9	29.7	29.7	29.7	32.6	32.6	32.6
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	14	14	5	5	5	7	7	7

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.029
Loss Time (sec):	0	Average Delay (sec/veh):	44.6
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	143	888	862	55	1022	83	45	420	476	621	325	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	888	862	55	1022	83	45	420	476	621	325	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	143	888	862	55	1022	83	45	420	0	621	325	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	888	862	55	1022	83	45	420	0	621	325	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	143	888	862	55	1022	83	45	420	0	621	325	28
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.84	0.84	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.94	0.94
Lanes:	1.00	2.00	1.00	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.84	0.16
Final Sat.:	1805	3202	1601	1805	4745	385	1805	3610	1900	1805	3284	283
Capacity Analysis Module:												
Vol/Sat:	0.08	0.28	0.54	0.03	0.22	0.22	0.02	0.12	0.00	0.34	0.10	0.10
Crit Moves:			****	****				****		****		
Green/Cycle:	0.15	0.52	0.52	0.03	0.40	0.40	0.09	0.11	0.00	0.33	0.36	0.36
Volume/Cap:	0.53	0.53	1.03	1.03	0.53	0.53	0.28	1.03	0.00	1.03	0.28	0.28
Delay/Veh:	41.4	15.9	53.5	180.2	22.9	22.9	43.4	96.6	0.0	77.6	23.0	23.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.4	15.9	53.5	180.2	22.9	22.9	43.4	96.6	0.0	77.6	23.0	23.0
LOS by Move:	D	B	D	F	C	C	D	F	A	E	C	C
HCM2kAvgQ:	5	10	39	4	10	10	2	12	0	27	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 7.5 Worst Case Level Of Service: A[9.8]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	196	0	8	0	13	0	0	49	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	196	0	8	0	13	0	0	49	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	196	0	8	0	13	0	0	49	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	196	0	8	0	13	0	0	49	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	62	62	49	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	949	833	1025	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	949	833	1025	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.21	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	952	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				9.8		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.486
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	298	1307	128	10	915	211	0	0	0	226	36	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	298	1307	128	10	915	211	0	0	0	226	36	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	298	1307	128	10	915	211	0	0	0	226	36	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	298	1307	128	10	915	211	0	0	0	226	36	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	298	1307	128	10	915	211	0	0	0	226	36	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.88	0.88	0.85
Lanes:	2.00	1.82	0.18	1.00	2.00	1.00	0.00	0.00	0.00	1.73	0.27	1.00
Final Sat.:	3502	3244	318	1805	3610	1615	0	0	0	2899	462	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.40	0.40	0.01	0.25	0.13	0.00	0.00	0.00	0.08	0.08	0.02
Crit Moves:		****		****						****		
Green/Cycle:	0.21	0.83	0.83	0.01	0.63	0.63	0.00	0.00	0.00	0.16	0.16	0.16
Volume/Cap:	0.40	0.49	0.49	0.49	0.40	0.21	0.00	0.00	0.00	0.49	0.49	0.12
Delay/Veh:	34.4	2.6	2.6	66.1	9.4	8.0	0.0	0.0	0.0	38.9	38.9	36.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	2.6	2.6	66.1	9.4	8.0	0.0	0.0	0.0	38.9	38.9	36.2
LOS by Move:	C	A	A	E	A	A	A	A	A	D	D	D
HCM2kAvgQ:	4	7	7	1	7	3	0	0	0	4	4	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.674
Loss Time (sec):	0	Average Delay (sec/veh):	23.5
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1238	33	0	1149	0	227	323	335	18	0	266
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1238	33	0	1149	0	227	323	335	18	0	266
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1238	33	0	1149	0	227	323	335	18	0	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1238	33	0	1149	0	227	323	335	18	0	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1238	33	0	1149	0	227	323	335	18	0	266
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.88	0.88	0.88	0.86	1.00	0.86
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.51	0.73	0.76	0.12	0.00	1.88
Final Sat.:	0	5033	134	0	3610	0	862	1227	1273	194	0	3062
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.25	0.00	0.32	0.00	0.26	0.26	0.26	0.09	0.00	0.09
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.47	0.47	0.00	0.47	0.00	0.39	0.39	0.39	0.14	0.00	0.14
Volume/Cap:	0.00	0.52	0.52	0.00	0.67	0.00	0.67	0.67	0.67	0.67	0.00	0.63
Delay/Veh:	0.0	18.7	18.7	0.0	21.5	0.0	26.6	26.6	26.6	45.3	0.0	43.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	18.7	18.7	0.0	21.5	0.0	26.6	26.6	26.6	45.3	0.0	43.6
LOS by Move:	A	B	B	A	C	A	C	C	C	D	A	D
HCM2kAvgQ:	0	10	10	0	15	0	13	13	13	6	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.451
Loss Time (sec):	0	Average Delay (sec/veh):	13.7
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	2	0	0	0	0	1	0	1	0	0	0
	0	0	0	0	0	1!	0	0	0	0			
Volume Module:													
Base Vol:	205	1121	0	0	400	573	0	0	0	169	0	11	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	205	1121	0	0	400	573	0	0	0	169	0	11	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	205	1121	0	0	400	0	0	0	0	169	0	11	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	205	1121	0	0	400	0	0	0	0	169	0	11	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	205	1121	0	0	400	0	0	0	0	169	0	11	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	1.00	0.74	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.94	0.00	0.06	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1329	0	86	
Capacity Analysis Module:													
Vol/Sat:	0.11	0.31	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.13	0.00	0.13	
Crit Moves:	****				****					****			
Green/Cycle:	0.25	0.72	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.28	0.00	0.28	
Volume/Cap:	0.45	0.43	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.45	0.00	0.45	
Delay/Veh:	32.3	5.9	0.0	0.0	18.4	0.0	0.0	0.0	0.0	30.4	0.0	30.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	32.3	5.9	0.0	0.0	18.4	0.0	0.0	0.0	0.0	30.4	0.0	30.4	
LOS by Move:	C	A	A	A	B	A	A	A	A	C	A	C	
HCM2kAvgQ:	6	7	0	0	8	0	0	0	0	5	0	5	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.689
Loss Time (sec):	0	Average Delay (sec/veh):	28.2
Optimal Cycle:	127	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	411	158	28	539	0	913	6	196	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	411	158	28	539	0	913	6	196	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	411	158	28	539	0	913	6	196	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	411	158	28	539	0	913	6	196	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	411	158	28	539	0	913	6	196	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.44	0.56	1.00	1.00	0.00	1.69	0.01	0.30	0.00	0.00	0.00	
Final Sat.:	0	2499	961	1805	1900	0	2748	15	483	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.16	0.16	0.02	0.28	0.00	0.33	0.41	0.41	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.19	0.19	0.33	0.52	0.00	0.48	0.48	0.48	0.00	0.00	0.00	
Volume/Cap:	0.00	0.85	0.85	0.05	0.54	0.00	0.70	0.85	0.85	0.00	0.00	0.00	
Delay/Veh:	0.0	49.5	49.5	22.7	16.4	0.0	22.0	28.9	28.9	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	49.5	49.5	22.7	16.4	0.0	22.0	28.9	28.9	0.0	0.0	0.0	
LOS by Move:	A	D	D	C	B	A	C	C	C	A	A	A	
HCM2kAvgQ:	0	12	12	1	11	0	14	21	21	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[9.0]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	32		0		0	0		34		75	5		0		70	0		0		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	32		0		0	0		34		75	5		0		70	0		0		0
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	32		0		0	0		34		75	5		0		70	0		0		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	32		0		0	0		34		75	5		0		70	0		0		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5			6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0			3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	109	xxxx	xxxxx	xxxx	xxxx	xxxxx					136	136			72	xxxx	xxxx	xxxxx		
Potent Cap.:	1494	xxxx	xxxxx	xxxx	xxxx	xxxxx					863	759			996	xxxx	xxxx	xxxxx		
Move Cap.:	1494	xxxx	xxxxx	xxxx	xxxx	xxxxx					849	743			996	xxxx	xxxx	xxxxx		
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx					0.01	0.00			0.07	xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A	*		*		*	*		*		*	*		*		*	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	985	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.2	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	9.0	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*		*		*	*		*		*	*	A		*		*	*		*	
ApproachDel:	xxxxxx			xxxxxx							9.0					xxxxxx				
ApproachLOS:	*			*							A					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: B[12.6]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	9	4	2	76	5	9	4	105	11	15	239	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	4	2	76	5	9	4	105	11	15	239	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	4	2	76	5	9	4	105	11	15	239	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	4	2	76	5	9	4	105	11	15	239	32
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	411	420	111	407	409	255	271	xxxx	xxxxx	116	xxxx	xxxxx
Potent Cap.:	555	528	948	559	535	789	1304	xxxx	xxxxx	1485	xxxx	xxxxx
Move Cap.:	539	521	948	549	528	789	1304	xxxx	xxxxx	1485	xxxx	xxxxx
Volume/Cap:	0.02	0.01	0.00	0.14	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	567	xxxxx	xxxx	564	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.5	xxxxx	xxxxx	12.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			12.6			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 243.3 Worst Case Level Of Service: F[929.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	696	0	324			0	0	0			0	105	0			0	232	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	696	0	324			0	0	0			0	105	0			0	232	0		
User Adj:	1.00	1.00	0.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	0.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	696	0	0			0	0	0			0	105	0			0	232	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	696	0	0			0	0	0			0	105	0			0	232	0		
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				6.5	xxxxx	xxxxx			6.5	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				4.0	xxxxx	xxxxx			4.0	xxxxx			
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		1392	xxxxx		xxxx		1392	xxxxx			
Potent Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		143	xxxxx		xxxx		143	xxxxx			
Move Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		82	xxxxx		xxxx		82	xxxxx			
Volume/Cap:	0.43	xxxx	xxxx		xxxx	xxxx	xxxx		xxxx		1.28	xxxx		xxxx		2.82	xxxx			
Level Of Service Module:																				
2Way95thQ:	2.2	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		7.9	xxxxx		xxxx		22.6	xxxxx			
Control Del:	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				281	xxxxx	xxxxx			930	xxxxx			
LOS by Move:	A	*	*	*	*	*	*				F	*	*			F	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	xxxxx		xxxx		xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx			
Shared LOS:	*	*	*		*	*	*		*		*	*		*		*	*			
ApproachDel:	xxxxxx				xxxxxx						280.8					929.8				
ApproachLOS:	*				*						F					F				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	0	Average Delay (sec/veh):	16.7
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy							Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0			
Volume Module:													
Base Vol:	0	0	0	104	0	20	0	0	0	0	469	184	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	104	0	20	0	0	0	0	469	184	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	104	0	20	0	0	0	0	469	184	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	104	0	20	0	0	0	0	469	184	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	104	0	20	0	0	0	0	469	184	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72	0.28	
Final Sat.:	0	0	0	530	0	642	0	0	0	0	626	246	
Capacity Analysis Module:													
Vol/Sat:	xxxx	xxxx	xxxx	0.20	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	0.75	0.75	
Crit Moves:				****							****		
Delay/Veh:	0.0	0.0	0.0	10.4	0.0	8.0	0.0	0.0	0.0	0.0	18.0	18.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	10.4	0.0	8.0	0.0	0.0	0.0	0.0	18.0	18.0	
LOS by Move:	*	*	*	B	*	A	*	*	*	*	C	C	
ApproachDel:	xxxxxx			10.1			xxxxxx			18.0			
Delay Adj:	xxxxx			1.00			xxxxx			1.00			
ApprAdjDel:	xxxxxx			10.1			xxxxxx			18.0			
LOS by Appr:	*			B			*			C			
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: C[21.2]

Street Name:	ASP NB Exit 29									Ave 60							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	42	0	83	64	507	0	0	449	193								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	42	0	83	64	507	0	0	449	193								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	42	0	83	64	507	0	0	449	193								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	42	0	83	64	507	0	0	449	193								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1181	1181	546	642	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	212	192	542	952	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	201	179	542	952	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.21	0.00	0.15	0.07	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	345	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	1.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	21.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				21.2		xxxxxx				xxxxxx									
ApproachLOS:	*				C		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	18.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	11	1	2	4	2	12	13	143	15	8	220	3	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	11	1	2	4	2	12	13	143	15	8	220	3	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	11	1	2	4	2	12	13	143	15	8	220	3	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	11	1	2	4	2	12	13	143	15	8	220	3	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.79	0.07	0.14	0.22	0.11	0.67	0.08	0.84	0.09	0.03	0.95	0.01	
Final Sat.:	178	16	32	0	0	1	65	710	74	31	850	12	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.06	0.06	18.00	18.00	18.00	0.20	0.20	0.20	0.26	0.26	0.26	
Crit Moves:			****		****				****			****	
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.06	0.06	0.06	18.00	18.00	18.00	0.20	0.20	0.20	0.26	0.26	0.26	
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	2.1	2.1	2.1	2.7	2.7	2.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	2.1	2.1	2.1	2.7	2.7	2.7	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 19.8 Worst Case Level Of Service: F[57.3]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	179	0	288	0	0	0	48	330	0	0	481	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	0	288	0	0	0	48	330	0	0	481	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	0	288	0	0	0	48	330	0	0	481	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	179	0	288	0	0	0	48	330	0	0	481	47
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	931	954	165	xxxx	xxxx	xxxxx	528	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	299	261	885	xxxx	xxxx	xxxxx	1049	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	288	248	885	xxxx	xxxx	xxxxx	1049	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.62	0.00	0.33	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	493	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	11.7	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	57.3	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	A	*	*	*	*	*
ApproachDel:		57.3		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		F			*			*			*	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 5.2 Worst Case Level Of Service: B[11.4]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		206		4			28	0		0		0		0		233
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		206		4			28	0		0		0		0		233
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		206		4			28	0		0		0		0		233
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		206		4			28	0		0		0		0		233
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			208	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			754	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			593	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.05	xxxx		xxxx		xxxx		xxxx		0.21
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			0.1	xxxx		xxxxx		xxxx		xxxx		0.8
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			11.4	xxxx		xxxxx		xxxxx		xxxx		9.2
LOS by Move:	*	*	*	*		*		*			B	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							11.4							9.2		
ApproachLOS:	*			*							B							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	14.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	98	11	168	12	233	305	18	592	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	98	11	168	12	233	305	18	592	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	98	11	168	12	233	305	18	592	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	98	11	168	12	233	305	18	592	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	98	11	168	12	233	305	18	592	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.35	0.04	0.61	0.05	0.95	1.00	0.06	1.89	0.05
Final Sat.:	0	455	0	207	23	355	28	544	647	34	1113	32
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.47	0.47	0.47	0.43	0.43	0.47	0.53	0.53	0.53
Crit Moves:		****		****					****	****		
Delay/Veh:	0.0	0.0	0.0	13.7	13.7	13.7	13.2	13.2	12.7	15.2	15.1	15.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.7	13.7	13.7	13.2	13.2	12.7	15.2	15.1	15.0
LOS by Move:	*	*	*	B	B	B	B	B	B	C	C	B
ApproachDel:	xxxxxx			13.7			12.9			15.1		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			13.7			12.9			15.1		
LOS by Appr:	*			B			B			C		
AllWayAvgQ:	0.0	0.0	0.0	0.8	0.8	0.8	0.7	0.7	0.8	1.1	1.0	1.0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.771
Loss Time (sec):	0	Average Delay (sec/veh):	18.1
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	488	2	8		0	0	0		111	214	0		0	144	55					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	488	2	8		0	0	0		111	214	0		0	144	55					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	488	2	8		0	0	0		111	214	0		0	144	55					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	488	2	8		0	0	0		111	214	0		0	144	55					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	488	2	8		0	0	0		111	214	0		0	144	55					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	0.98	0.00	0.02		0.00	0.00	0.00		0.34	0.66	0.00		0.00	0.72	0.28					
Final Sat.:	633	3	10		0	0	0		207	399	0		0	431	165					
Capacity Analysis Module:																				
Vol/Sat:	0.77	0.77	0.77		xxxx	xxxx	xxxx		0.54	0.54	xxxx		xxxx	0.33	0.33					
Crit Moves:	****									****					****					
Delay/Veh:	23.2	23.2	23.2		0.0	0.0	0.0		14.5	14.5	0.0		0.0	11.2	11.2					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	23.2	23.2	23.2		0.0	0.0	0.0		14.5	14.5	0.0		0.0	11.2	11.2					
LOS by Move:	C	C	C		*	*	*		B	B	*		*	B	B					
ApproachDel:	23.2				xxxxxx				14.5				11.2							
Delay Adj:	1.00				xxxxx				1.00				1.00							
ApprAdjDel:	23.2				xxxxxx				14.5				11.2							
LOS by Appr:	C				*				B				B							
AllWayAvgQ:	2.7	2.7	2.7		0.0	0.0	0.0		1.0	1.0	1.0		0.4	0.4	0.4					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
Loss Time (sec):	0	Average Delay (sec/veh):	16.5
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	7	36	31		32	30	137		162	213	22		49	382	54					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	7	36	31		32	30	137		162	213	22		49	382	54					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	7	36	31		32	30	137		162	213	22		49	382	54					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	7	36	31		32	30	137		162	213	22		49	382	54					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	7	36	31		32	30	137		162	213	22		49	382	54					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	0.09	0.49	0.42		0.16	0.15	0.69		0.41	0.54	0.06		0.10	0.79	0.11					
Final Sat.:	46	234	202		89	84	382		262	344	36		68	529	75					
Capacity Analysis Module:																				
Vol/Sat:	0.15	0.15	0.15		0.36	0.36	0.36		0.62	0.62	0.62		0.72	0.72	0.72					
Crit Moves:			****			****				****				****						
Delay/Veh:	10.2	10.2	10.2		11.5	11.5	11.5		16.2	16.2	16.2		19.7	19.7	19.7					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	10.2	10.2	10.2		11.5	11.5	11.5		16.2	16.2	16.2		19.7	19.7	19.7					
LOS by Move:	B	B	B		B	B	B		C	C	C		C	C	C					
ApproachDel:	10.2				11.5				16.2				19.7							
Delay Adj:	1.00				1.00				1.00				1.00							
ApprAdjDel:	10.2				11.5				16.2				19.7							
LOS by Appr:	B				B				C				C							
AllWayAvgQ:	0.1	0.1	0.1		0.4	0.4	0.4		1.4	1.4	1.4		2.1	2.1	2.1					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	11.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	255	25	65	6	4	14	12	107	138	47	130	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	25	65	6	4	14	12	107	138	47	130	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	255	25	65	6	4	14	12	107	138	47	130	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	255	25	65	6	4	14	12	107	138	47	130	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	255	25	65	6	4	14	12	107	138	47	130	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.62	0.38	0.25	0.17	0.58	0.05	0.42	0.54	0.25	0.69	0.06
Final Sat.:	570	404	245	152	102	356	33	296	382	163	452	38
Capacity Analysis Module:												
Vol/Sat:	0.45	0.06	0.27	0.04	0.04	0.04	0.36	0.36	0.36	0.29	0.29	0.29
Crit Moves:	****				****		****				****	
Delay/Veh:	13.4	8.9	8.9	8.5	8.5	8.5	10.4	10.4	10.4	10.2	10.2	10.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.4	8.9	8.9	8.5	8.5	8.5	10.4	10.4	10.4	10.2	10.2	10.2
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	12.2			8.5			10.4			10.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.2			8.5			10.4			10.2		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.7	0.1	0.1	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 49.0 Worst Case Level Of Service: F[420.0]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	173	0	146	0	1218	0	0	1196	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	0	146	0	1218	0	0	1196	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	173	0	146	0	1218	0	0	1196	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	173	0	146	0	1218	0	0	1196	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1816	2414	609	1805	2414	598	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	50	33	443	72	33	450	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	34	33	443	72	33	450	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.40	0.00	0.32	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	16.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	72	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	16.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	760.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			420.0			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[14.4]

Street Name:	ASP NB on-ramp									Ave 26									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	111	938	0	0	1243	161				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	0	0	0	111	938	0	0	1243	161				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	0	0	0	0	0	0	0	0	0	111	938	0	0	1243	161				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	0	0	0	0	0	0	0	0	0	0	111	938	0	0	1243	161				
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1404	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					493	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					493	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.23	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					14.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					14.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.566
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	43	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	2	0 0	1 0	0	0 1!	0 0	0	0 0	0 2
Volume Module:												
Base Vol:	2	589	55	443	300	144	103	21	13	0	0	494
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	589	55	443	300	144	103	21	13	0	0	494
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	589	55	443	300	144	103	21	13	0	0	494
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	589	55	443	300	144	103	21	13	0	0	494
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	589	55	443	300	144	103	21	13	0	0	494
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.92	0.95	0.95	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.01	1.82	0.17	2.00	0.68	0.32	0.75	0.15	0.09	0.00	0.00	2.00
Final Sat.:	11	3100	289	3502	1221	586	1359	277	172	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.13	0.25	0.25	0.08	0.08	0.08	0.00	0.00	0.17
Crit Moves:		****		****					****			****
Green/Cycle:	0.34	0.34	0.34	0.22	0.56	0.56	0.13	0.13	0.13	0.00	0.00	0.53
Volume/Cap:	0.57	0.57	0.57	0.57	0.44	0.44	0.57	0.57	0.57	0.00	0.00	0.33
Delay/Veh:	18.1	18.1	18.1	23.1	8.6	8.6	29.1	29.1	29.1	0.0	0.0	8.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.1	18.1	18.1	23.1	8.6	8.6	29.1	29.1	29.1	0.0	0.0	8.7
LOS by Move:	B	B	B	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	6	6	6	5	5	5	3	3	3	0	0	3

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.5]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	27	700	0	0	1360	15				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	0	0	0	27	700	0	0	1360	15				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	0	0	0	0	0	0	0	0	0	27	700	0	0	1360	15				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	0	0	0	0	0	0	0	0	0	0	27	700	0	0	1360	15				
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1375	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					505	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					505	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.05	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[9.7]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	191		9		4	105		0		0		0		0	4		0		7
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	191		9		4	105		0		0		0		0	4		0		7
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	191		9		4	105		0		0		0		0	4		0		7
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	191		9		4	105		0		0		0		0	4		0		7
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	6.4		6.5		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		xxxxx	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		200	xxxx		xxxxx		xxxx		xxxx		xxxxx	309		309		196
Potent Cap.:	xxxx	xxxx		xxxxx		1384	xxxx		xxxxx		xxxx		xxxx		xxxxx	688		609		851
Move Cap.:	xxxx	xxxx		xxxxx		1384	xxxx		xxxxx		xxxx		xxxx		xxxxx	686		607		851
Volume/Cap:	xxxx	xxxx		xxxx		0.00	xxxx		xxxx		xxxx		xxxx		xxxx	0.01		0.00		0.01
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx		7.6	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*	*		*		A	*		*		*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		783		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		0.0		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		7.6	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		9.7		xxxxx
Shared LOS:	*	*		*		A	*		*		*		*		*	*		A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							9.7		
ApproachLOS:	*					*					*							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[11.5]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	25	1	3	4	182	65	13	184	22								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	25	1	3	4	182	65	13	184	22								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	25	1	3	4	182	65	13	184	22								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	25	1	3	4	182	65	13	184	22								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	444	476	195	206	xxxx	xxxxx	247	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	576	491	851	1377	xxxx	xxxxx	1331	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	570	484	851	1377	xxxx	xxxxx	1331	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.00	0.00	xxxx	xxxx	0.01	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	7.7	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	586	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.5	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx				11.5		xxxxxx			xxxxxx										
ApproachLOS:	*				B		*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.854
Loss Time (sec):	0	Average Delay (sec/veh):	22.9
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	2	547	0	0	283	2	0	0	0	179	5	34	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	547	0	0	283	2	0	0	0	179	5	34	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	547	0	0	283	2	0	0	0	179	5	34	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	547	0	0	283	2	0	0	0	179	5	34	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	547	0	0	283	2	0	0	0	179	5	34	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	583	641	0	0	583	4	0	0	0	486	521	578	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.85	xxxx	xxxx	0.49	0.49	xxxx	xxxx	xxxx	0.37	0.01	0.06	
Crit Moves:		****			****					****			
Delay/Veh:	8.8	31.5	0.0	0.0	14.3	14.3	0.0	0.0	0.0	13.5	9.3	8.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.8	31.5	0.0	0.0	14.3	14.3	0.0	0.0	0.0	13.5	9.3	8.9	
LOS by Move:	A	D	*	*	B	B	*	*	*	B	A	A	
ApproachDel:		31.4			14.3			xxxxxx			12.7		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		31.4			14.3			xxxxxx			12.7		
LOS by Appr:		D			B			*			B		
AllWayAvgQ:	0.0	4.1	0.0	0.9	0.9	0.9	0.0	0.0	0.0	0.5	0.0	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.753
Loss Time (sec):	0	Average Delay (sec/veh):	16.4
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	516	71	113	371	0	0	4	2	27	0	47	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	516	71	113	371	0	0	4	2	27	0	47	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	516	71	113	371	0	0	4	2	27	0	47	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	516	71	113	371	0	0	4	2	27	0	47	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	516	71	113	371	0	0	4	2	27	0	47	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.33	0.67	0.73	0.27	1.00	
Final Sat.:	0	685	776	612	675	0	0	636	333	339	126	538	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.75	0.09	0.18	0.55	xxxx	xxxx	0.01	0.01	0.08	0.00	0.09	
Crit Moves:		****			****			****				****	
Delay/Veh:	0.0	21.8	7.7	9.7	14.1	0.0	0.0	9.6	9.2	10.3	10.3	9.3	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	21.8	7.7	9.7	14.1	0.0	0.0	9.6	9.2	10.3	10.3	9.3	
LOS by Move:	*	C	A	A	B	*	*	A	A	B	B	A	
ApproachDel:		20.1			13.1			9.5			9.7		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		20.1			13.1			9.5			9.7		
LOS by Appr:		C			B			A			A		
AllWayAvgQ:	0.0	2.6	0.1	0.2	1.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.646
Loss Time (sec):	0	Average Delay (sec/veh):	7.0
Optimal Cycle:	53	Level Of Service:	A

Street Name:	Pasadena Av							Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1	
Volume Module:													
Base Vol:	0	1078	84	204	981	0	0	0	0	131	0	158	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	1078	84	204	981	0	0	0	0	131	0	158	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	1078	84	204	981	0	0	0	0	131	0	158	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	1078	84	204	981	0	0	0	0	131	0	158	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	1078	84	204	981	0	0	0	0	131	0	158	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.94	0.94	0.57	0.57	1.00	1.00	1.00	1.00	0.95	1.00	0.85	
Lanes:	0.00	1.86	0.14	0.34	1.66	0.00	0.00	0.00	0.00	1.00	0.00	1.00	
Final Sat.:	0	3312	258	372	1790	0	0	0	0	1805	0	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.33	0.33	0.55	0.55	0.00	0.00	0.00	0.00	0.07	0.00	0.10	
Crit Moves:					****							****	
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15	
Volume/Cap:	0.00	0.38	0.38	0.65	0.65	0.00	0.00	0.00	0.00	0.48	0.00	0.65	
Delay/Veh:	0.0	1.8	1.8	3.3	3.3	0.0	0.0	0.0	0.0	40.1	0.0	45.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	1.8	1.8	3.3	3.3	0.0	0.0	0.0	0.0	40.1	0.0	45.8	
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D	
HCM2kAvgQ:	0	4	4	8	8	0	0	0	0	4	0	6	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.137
Loss Time (sec):	0	Average Delay (sec/veh):	36.5
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	18	1011	101	360	993	42	42	222	13	116	255	219
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	1011	101	360	993	42	42	222	13	116	255	219
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	1011	101	360	993	42	42	222	13	116	255	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	1011	101	360	993	42	42	222	13	116	255	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	18	1011	101	360	993	42	42	222	13	116	255	219
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.94	0.94	0.22	0.94	0.94	0.17	0.99	0.99	0.31	0.93	0.93
Lanes:	1.00	1.82	0.18	1.00	1.92	0.08	1.00	0.94	0.06	1.00	0.54	0.46
Final Sat.:	456	3236	323	414	3443	146	323	1781	104	591	952	817
Capacity Analysis Module:												
Vol/Sat:	0.04	0.31	0.31	0.87	0.29	0.29	0.13	0.12	0.12	0.20	0.27	0.27
Crit Moves:				****							****	
Green/Cycle:	0.76	0.76	0.76	0.76	0.76	0.76	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.05	0.41	0.41	1.14	0.38	0.38	0.55	0.53	0.53	0.83	1.14	1.14
Delay/Veh:	3.0	4.1	4.1	104.8	4.0	4.0	42.0	34.6	34.6	69.2	125	125.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.0	4.1	4.1	104.8	4.0	4.0	42.0	34.6	34.6	69.2	125	125.3
LOS by Move:	A	A	A	F	A	A	D	C	C	E	F	F
HCM2kAvgQ:	0	6	6	20	6	6	2	7	7	6	25	25

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.352
Loss Time (sec):	0	Average Delay (sec/veh):	11.1
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	202	0	201	165	552	0	0	432	113
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	202	0	201	165	552	0	0	432	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	202	0	201	165	552	0	0	432	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	202	0	201	165	552	0	0	432	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	202	0	201	165	552	0	0	432	113
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.41	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	770	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.12	0.21	0.15	0.00	0.00	0.23	0.07
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.65	0.65	0.00	0.00	0.65	1.00
Volume/Cap:	0.00	0.00	0.00	0.16	0.00	0.35	0.33	0.24	0.00	0.00	0.35	0.07
Delay/Veh:	0.0	0.0	0.0	22.2	0.0	24.2	8.4	7.4	0.0	0.0	8.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.2	0.0	24.2	8.4	7.4	0.0	0.0	8.3	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	5	3	4	0	0	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.937
Loss Time (sec):	0	Average Delay (sec/veh):	26.2
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	131	267	13	43	272	401	462	677	205	8	401	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	267	13	43	272	401	462	677	205	8	401	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	267	13	43	272	401	462	677	205	8	401	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	267	13	43	272	401	462	677	205	8	401	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	267	13	43	272	401	462	677	205	8	401	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.62	0.62	0.62	0.91	0.91	0.85	0.41	1.00	0.85	0.26	0.99	0.99
Lanes:	0.32	0.65	0.03	0.14	0.86	1.00	1.00	1.00	1.00	1.00	0.92	0.08
Final Sat.:	376	766	37	235	1485	1615	785	1900	1615	490	1736	143
Capacity Analysis Module:												
Vol/Sat:	0.35	0.35	0.35	0.18	0.18	0.25	0.59	0.36	0.13	0.02	0.23	0.23
Crit Moves:		****					****					
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.63	0.63	0.63	0.63	0.63	0.63
Volume/Cap:	0.94	0.94	0.94	0.49	0.49	0.67	0.94	0.57	0.20	0.03	0.37	0.37
Delay/Veh:	58.1	58.1	58.1	24.7	24.7	29.1	42.5	11.4	8.0	7.1	9.2	9.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.1	58.1	58.1	24.7	24.7	29.1	42.5	11.4	8.0	7.1	9.2	9.2
LOS by Move:	E	E	E	C	C	C	D	B	A	A	A	A
HCM2kAvgQ:	17	17	17	8	8	11	18	12	3	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.584
Loss Time (sec):	0	Average Delay (sec/veh):	14.7
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	6	868	378	83	807	32	24	42	13	281	47	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	868	378	83	807	32	24	42	13	281	47	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	868	378	83	807	32	24	42	13	281	47	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	868	378	83	807	32	24	42	13	281	47	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	868	378	83	807	32	24	42	13	281	47	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.73	0.73	0.73	0.86	0.86	0.86	0.69	0.69	0.85
Lanes:	0.01	1.99	1.00	0.18	1.75	0.07	0.30	0.54	0.16	0.86	0.14	1.00
Final Sat.:	24	3413	1615	248	2415	96	497	870	269	1123	188	1615
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.23	0.33	0.33	0.33	0.05	0.05	0.05	0.25	0.25	0.03
Crit Moves:					****						****	
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.43	0.43	0.43	0.43	0.43	0.43
Volume/Cap:	0.44	0.44	0.41	0.58	0.58	0.58	0.11	0.11	0.11	0.58	0.58	0.06
Delay/Veh:	12.5	12.5	12.3	14.3	14.3	14.3	17.3	17.3	17.3	23.4	23.4	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	12.5	12.3	14.3	14.3	14.3	17.3	17.3	17.3	23.4	23.4	16.8
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	8	8	7	10	10	10	1	1	1	8	8	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.443
Loss Time (sec):	0	Average Delay (sec/veh):	6.8
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	114	1143	22	30	1054	164	122	22	103	2	15	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	114	1143	22	30	1054	164	122	22	103	2	15	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	114	1143	22	30	1054	164	122	22	103	2	15	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	1143	22	30	1054	164	122	22	103	2	15	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	114	1143	22	30	1054	164	122	22	103	2	15	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.95	0.95	0.21	0.93	0.93	0.77	0.77	0.85	0.91	0.91	0.91
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.85	0.15	1.00	0.05	0.38	0.57
Final Sat.:	369	3531	68	393	3061	476	1241	224	1615	87	651	998
Capacity Analysis Module:												
Vol/Sat:	0.31	0.32	0.32	0.08	0.34	0.34	0.10	0.10	0.06	0.02	0.02	0.02
Crit Moves:					****			****				
Green/Cycle:	0.78	0.78	0.78	0.78	0.78	0.78	0.22	0.22	0.22	0.22	0.22	0.22
Volume/Cap:	0.40	0.42	0.42	0.10	0.44	0.44	0.44	0.44	0.29	0.10	0.10	0.10
Delay/Veh:	4.5	3.7	3.7	2.8	3.9	3.9	34.5	34.5	32.8	31.1	31.1	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.5	3.7	3.7	2.8	3.9	3.9	34.5	34.5	32.8	31.1	31.1	31.1
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	2	6	6	0	7	7	4	4	3	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.601
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	262	0	381	337	400	0	0	463	152
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	262	0	381	337	400	0	0	463	152
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	262	0	381	337	400	0	0	463	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	262	0	381	337	400	0	0	463	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	262	0	381	337	400	0	0	463	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.89	1.00	0.89	0.39	0.95	1.00	1.00	0.91	0.91
Lanes:	0.00	0.00	0.00	1.41	0.00	1.59	1.00	2.00	0.00	0.00	1.51	0.49
Final Sat.:	0	0	0	2388	0	2702	733	3610	0	0	2617	859
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.14	0.46	0.11	0.00	0.00	0.18	0.18
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.23	0.77	0.77	0.00	0.00	0.77	0.77
Volume/Cap:	0.00	0.00	0.00	0.47	0.00	0.60	0.60	0.14	0.00	0.00	0.23	0.23
Delay/Veh:	0.0	0.0	0.0	33.1	0.0	35.0	6.9	3.1	0.0	0.0	3.4	3.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.1	0.0	35.0	6.9	3.1	0.0	0.0	3.4	3.4
LOS by Move:	A	A	A	C	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	5	0	7	5	2	0	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.585
Loss Time (sec):	0	Average Delay (sec/veh):	16.7
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	129	684	22	116	692	64	144	437	152	38	410	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	684	22	116	692	64	144	437	152	38	410	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	129	684	22	116	692	64	144	437	152	38	410	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	684	22	116	692	64	144	437	152	38	410	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	684	22	116	692	64	144	437	152	38	410	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	1.00	0.85	0.25	1.00	0.85	0.34	0.91	0.91	0.28	0.93	0.93
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.69	0.31
Final Sat.:	467	1900	1615	476	1900	1615	653	2575	896	531	2988	539
Capacity Analysis Module:												
Vol/Sat:	0.28	0.36	0.01	0.24	0.36	0.04	0.22	0.17	0.17	0.07	0.14	0.14
Crit Moves:					****		****					
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.44	0.58	0.02	0.39	0.58	0.06	0.58	0.45	0.45	0.19	0.36	0.36
Delay/Veh:	10.9	11.8	7.2	10.3	11.9	7.4	28.5	23.6	23.6	21.4	22.6	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.9	11.8	7.2	10.3	11.9	7.4	28.5	23.6	23.6	21.4	22.6	22.6
LOS by Move:	B	B	A	B	B	A	C	C	C	C	C	C
HCM2kAvgQ:	3	13	0	2	13	1	4	7	7	1	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.706
Loss Time (sec):	0	Average Delay (sec/veh):	27.4
Optimal Cycle:	79	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	106	1145	53	144	1187	53	95	343	100	100	284	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	1145	53	144	1187	53	95	343	100	100	284	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	1145	53	144	1187	53	95	343	100	100	284	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	1145	53	144	1187	53	95	343	100	100	284	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	1145	53	144	1187	53	95	343	100	100	284	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.97	0.97	0.95	0.95	0.95
Lanes:	1.00	1.91	0.09	1.00	1.91	0.09	1.00	0.77	0.23	1.00	0.66	0.34
Final Sat.:	1805	3428	159	1805	3434	153	1805	1421	414	1805	1185	617
Capacity Analysis Module:												
Vol/Sat:	0.06	0.33	0.33	0.08	0.35	0.35	0.05	0.24	0.24	0.06	0.24	0.24
Crit Moves:		****		****			****				****	
Green/Cycle:	0.08	0.47	0.47	0.11	0.50	0.50	0.34	0.34	0.34	0.08	0.34	0.34
Volume/Cap:	0.69	0.71	0.71	0.71	0.69	0.69	0.45	0.71	0.71	0.71	0.70	0.70
Delay/Veh:	57.5	22.5	22.5	54.0	20.5	20.5	24.5	32.6	32.6	60.6	32.0	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.5	22.5	22.5	54.0	20.5	20.5	24.5	32.6	32.6	60.6	32.0	32.0
LOS by Move:	E	C	C	D	C	C	C	C	C	E	C	C
HCM2kAvgQ:	5	16	16	6	16	16	3	13	13	5	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.557
Loss Time (sec):	0	Average Delay (sec/veh):	14.7
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	74	0	310	0	0	0	0	813	153	126	1057	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	74	0	310	0	0	0	0	813	153	126	1057	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	74	0	310	0	0	0	0	813	153	126	1057	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	0	310	0	0	0	0	813	153	126	1057	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	0	310	0	0	0	0	813	153	126	1057	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.93	0.93	0.21	0.95	1.00
Lanes:	0.19	0.00	0.81	0.00	0.00	0.00	0.00	1.68	0.32	1.00	2.00	0.00
Final Sat.:	308	0	1292	0	0	0	0	2966	558	397	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.27	0.27	0.32	0.29	0.00
Crit Moves:	****									****		
Green/Cycle:	0.43	0.00	0.43	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.57	0.00
Volume/Cap:	0.56	0.00	0.56	0.00	0.00	0.00	0.00	0.48	0.48	0.56	0.51	0.00
Delay/Veh:	22.3	0.0	22.3	0.0	0.0	0.0	0.0	13.0	13.0	16.7	13.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.3	0.0	22.3	0.0	0.0	0.0	0.0	13.0	13.0	16.7	13.3	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	9	0	9	0	0	0	0	9	9	3	10	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	23.9
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	74	0	388	371	643	0	0	709	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	74	0	388	371	643	0	0	709	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	74	0	388	371	643	0	0	709	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	74	0	388	371	643	0	0	709	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	74	0	388	371	643	0	0	709	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.94	0.94
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.85	0.15
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3299	270
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.24	0.21	0.18	0.00	0.00	0.21	0.21
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.31	0.64	0.00	0.00	0.33	0.33
Volume/Cap:	0.00	0.00	0.00	0.06	0.00	0.66	0.66	0.28	0.00	0.00	0.66	0.66
Delay/Veh:	0.0	0.0	0.0	20.7	0.0	29.5	32.8	8.1	0.0	0.0	30.4	30.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.7	0.0	29.5	32.8	8.1	0.0	0.0	30.4	30.4
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	11	11	5	0	0	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.309
Loss Time (sec):	0	Average Delay (sec/veh):	10.6
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	300	0	64	0	0	0	0	724	250	41	582	274
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	300	0	64	0	0	0	0	724	250	41	582	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	300	0	64	0	0	0	0	724	250	41	582	274
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	300	0	64	0	0	0	0	724	250	41	582	274
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	300	0	64	0	0	0	0	724	250	41	582	274
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1900	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.04	0.00	0.00	0.00	0.00	0.20	0.15	0.02	0.16	0.17
Crit Moves:	****							****		****		
Green/Cycle:	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.65	0.65	0.07	0.72	0.72
Volume/Cap:	0.31	0.00	0.14	0.00	0.00	0.00	0.00	0.31	0.24	0.31	0.22	0.23
Delay/Veh:	28.7	0.0	27.3	0.0	0.0	0.0	0.0	7.8	7.4	45.2	4.6	4.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	27.3	0.0	0.0	0.0	0.0	7.8	7.4	45.2	4.6	4.7
LOS by Move:	C	A	C	A	A	A	A	A	A	D	A	A
HCM2kAvgQ:	4	0	2	0	0	0	0	5	3	2	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.903
Loss Time (sec):	0	Average Delay (sec/veh):	24.7
Optimal Cycle:	149	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	173	608	41	172	611	76	118	846	159	35	986	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	608	41	172	611	76	118	846	159	35	986	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	608	41	172	611	76	118	846	159	35	986	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	608	41	172	611	76	118	846	159	35	986	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	608	41	172	611	76	118	846	159	35	986	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	1.00	0.85	0.18	1.00	0.85	0.15	0.93	0.93	0.18	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.68	0.32	1.00	1.82	0.18
Final Sat.:	346	1900	1615	351	1900	1615	292	2967	558	341	3232	328
Capacity Analysis Module:												
Vol/Sat:	0.50	0.32	0.03	0.49	0.32	0.05	0.40	0.29	0.29	0.10	0.31	0.31
Crit Moves:	****						****					
Green/Cycle:	0.55	0.55	0.55	0.55	0.55	0.55	0.45	0.45	0.45	0.45	0.45	0.45
Volume/Cap:	0.90	0.58	0.05	0.89	0.58	0.09	0.90	0.64	0.64	0.23	0.68	0.68
Delay/Veh:	59.0	15.5	10.3	54.6	15.5	10.5	76.0	22.3	22.3	17.8	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.0	15.5	10.3	54.6	15.5	10.5	76.0	22.3	22.3	17.8	23.2	23.2
LOS by Move:	E	B	B	D	B	B	E	C	C	B	C	C
HCM2kAvgQ:	8	12	1	8	13	1	6	13	13	1	15	15

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.064
Loss Time (sec):	0	Average Delay (sec/veh):	44.9
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	558	1084	71	73	1347	61	105	353	456	91	331	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	558	1084	71	73	1347	61	105	353	456	91	331	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	558	1084	71	73	1347	61	105	353	456	91	331	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	558	1084	71	73	1347	61	105	353	456	91	331	59
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	558	1084	71	73	1347	61	105	353	456	91	331	59
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.57	0.95	0.85	0.95	0.94	0.94	0.38	0.87	0.87	0.12	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.70	0.30
Final Sat.:	1090	3610	1615	1805	3431	155	723	1652	1652	235	2994	534
Capacity Analysis Module:												
Vol/Sat:	0.51	0.30	0.04	0.04	0.39	0.39	0.15	0.21	0.28	0.39	0.11	0.11
Crit Moves:	****				****					****		
Green/Cycle:	0.64	0.57	0.57	0.44	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.95	0.53	0.08	0.23	1.09	1.09	0.41	0.60	0.78	1.09	0.31	0.31
Delay/Veh:	34.5	13.6	9.8	15.9	85.1	85.1	25.3	27.1	32.4	157.1	23.5	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.5	13.6	9.8	15.9	85.1	85.1	25.3	27.1	32.4	157.1	23.5	23.5
LOS by Move:	C	B	A	B	F	F	C	C	C	F	C	C
HCM2kAvgQ:	21	11	1	2	35	35	3	10	15	6	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.465
Loss Time (sec):	0	Average Delay (sec/veh):	106.7
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	75	1160	483	144	713	100	245	1259	35	442	691	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	1160	483	144	713	100	245	1259	35	442	691	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	1160	483	144	713	100	245	1259	35	442	691	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1160	483	144	713	100	245	1259	35	442	691	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	1160	483	144	713	100	245	1259	35	442	691	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	1.00	0.85	0.08	1.00	0.85	0.95	0.91	0.91	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.92	0.08	1.00	3.00	1.00
Final Sat.:	550	1900	1615	149	1900	1615	1805	5027	140	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.61	0.30	0.97	0.38	0.06	0.14	0.25	0.25	0.24	0.13	0.06
Crit Moves:				****				****		****		
Green/Cycle:	0.66	0.66	0.66	0.66	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
Volume/Cap:	0.21	0.92	0.45	1.46	0.57	0.09	0.80	1.46	1.46	1.46	0.80	0.33
Delay/Veh:	6.9	26.0	8.5	273.2	9.8	6.1	53.1	257	256.8	268.2	45.1	37.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.9	26.0	8.5	273.2	9.8	6.1	53.1	257	256.8	268.2	45.1	37.4
LOS by Move:	A	C	A	F	A	A	D	F	F	F	D	D
HCM2kAvgQ:	1	35	7	12	12	1	9	35	35	33	10	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.193
Loss Time (sec):	0	Average Delay (sec/veh):	84.6
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	1306	0	520	605	1097	0	0	673	1045
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1306	0	520	605	1097	0	0	673	1045
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1306	0	520	605	1097	0	0	673	1045
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1306	0	520	605	1097	0	0	673	1045
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1306	0	520	605	1097	0	0	673	1045
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.37	0.00	0.32	0.17	0.21	0.00	0.00	0.13	0.65
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.14	0.69	0.00	0.00	0.54	0.54
Volume/Cap:	0.00	0.00	0.00	1.19	0.00	1.03	1.19	0.31	0.00	0.00	0.24	1.19
Delay/Veh:	0.0	0.0	0.0	130.3	0.0	82.2	147.8	6.2	0.0	0.0	12.1	120.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	130.3	0.0	82.2	147.8	6.2	0.0	0.0	12.1	120.9
LOS by Move:	A	A	A	F	A	F	F	A	A	A	B	F
HCM2kAvgQ:	0	0	0	37	0	23	19	5	0	0	4	55

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	0	Average Delay (sec/veh):	29.5
Optimal Cycle:	155	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	232	671	3	150	594	78	141	976	122	263	957	259
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	232	671	3	150	594	78	141	976	122	263	957	259
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	232	671	3	150	594	78	141	976	122	263	957	259
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	232	671	3	150	594	78	141	976	122	263	957	259
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	232	671	3	150	594	78	141	976	122	263	957	259
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	0.95	0.85	0.29	0.93	0.93	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.77	0.23	1.00	1.78	0.22	1.00	1.57	0.43
Final Sat.:	546	3610	1615	547	3135	412	1805	3155	394	1805	2750	744
Capacity Analysis Module:												
Vol/Sat:	0.42	0.19	0.00	0.27	0.19	0.19	0.08	0.31	0.31	0.15	0.35	0.35
Crit Moves:	****							****		****		
Green/Cycle:	0.48	0.48	0.48	0.48	0.48	0.48	0.09	0.35	0.35	0.42	0.42	0.42
Volume/Cap:	0.88	0.39	0.00	0.57	0.39	0.39	0.82	0.88	0.88	0.70	0.82	0.82
Delay/Veh:	50.2	16.6	13.4	21.3	16.7	16.7	70.9	37.9	37.9	25.4	29.5	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	16.6	13.4	21.3	16.7	16.7	70.9	37.9	37.9	25.4	29.5	29.5
LOS by Move:	D	B	B	C	B	B	E	D	D	C	C	C
HCM2kAvgQ:	10	7	0	4	7	7	7	20	20	8	20	20

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.951
Loss Time (sec):	0	Average Delay (sec/veh):	27.4
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	346	347	75	294	225	65	109	917	213	49	1195	201
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	346	347	75	294	225	65	109	917	213	49	1195	201
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	346	347	75	294	225	65	109	917	213	49	1195	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	346	347	75	294	225	65	109	917	213	49	1195	201
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	346	347	75	294	225	65	109	917	213	49	1195	201
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.97	0.97	0.10	0.92	0.92	0.17	0.93	0.93
Lanes:	1.00	0.82	0.18	1.00	0.78	0.22	1.00	1.62	0.38	1.00	1.71	0.29
Final Sat.:	1805	1521	329	1805	1425	412	195	2847	661	319	3023	509
Capacity Analysis Module:												
Vol/Sat:	0.19	0.23	0.23	0.16	0.16	0.16	0.56	0.32	0.32	0.15	0.40	0.40
Crit Moves:		****		****			****					
Green/Cycle:	0.41	0.24	0.24	0.36	0.19	0.19	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.71	0.95	0.95	0.76	0.85	0.85	0.95	0.55	0.55	0.26	0.67	0.67
Delay/Veh:	28.1	68.0	68.0	35.2	57.4	57.4	87.8	12.8	12.8	10.7	14.8	14.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.1	68.0	68.0	35.2	57.4	57.4	87.8	12.8	12.8	10.7	14.8	14.8
LOS by Move:	C	E	E	D	E	E	F	B	B	B	B	B
HCM2kAvgQ:	10	18	18	10	11	11	6	11	11	1	16	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.604
Loss Time (sec):	0	Average Delay (sec/veh):	18.6
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	6	716	161	297	668	6	3	4	8	197	4	306	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	6	716	161	297	668	6	3	4	8	197	4	306	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	6	716	161	297	668	6	3	4	8	197	4	306	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	6	716	161	297	668	6	3	4	8	197	4	306	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	6	716	161	297	668	6	3	4	8	197	4	306	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.90	0.90	0.90	0.72	0.72	0.85	
Lanes:	1.00	1.63	0.37	1.00	1.98	0.02	0.20	0.27	0.53	0.98	0.02	1.00	
Final Sat.:	1805	2866	645	1805	3573	32	341	454	909	1346	27	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.25	0.25	0.16	0.19	0.19	0.01	0.01	0.01	0.15	0.15	0.19	
Crit Moves:		****		****								****	
Green/Cycle:	0.01	0.41	0.41	0.69	0.67	0.67	0.31	0.31	0.31	0.31	0.31	0.31	
Volume/Cap:	0.28	0.60	0.60	0.48	0.28	0.28	0.03	0.03	0.03	0.47	0.47	0.60	
Delay/Veh:	55.8	23.6	23.6	10.5	6.6	6.6	23.8	23.8	23.8	28.4	28.4	31.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	55.8	23.6	23.6	10.5	6.6	6.6	23.8	23.8	23.8	28.4	28.4	31.1	
LOS by Move:	E	C	C	B	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	11	11	5	4	4	0	0	0	5	5	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.597
Loss Time (sec):	0	Average Delay (sec/veh):	25.5
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Permitted						Protected					
Rights:		Include						Include						Include						Include				
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Y+R:	4.0	4.0	4.0				4.0	4.0	4.0				4.0	4.0	4.0				4.0	4.0	4.0			
Lanes:	1	0	1	0	1		1	0	1	0	1		1	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	309	171	76				103	179	44				54	244	268				33	305	44			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	309	171	76				103	179	44				54	244	268				33	305	44			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Volume:	309	171	76				103	179	44				54	244	268				33	305	44			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	309	171	76				103	179	44				54	244	268				33	305	44			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
FinalVolume:	309	171	76				103	179	44				54	244	268				33	305	44			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.92	0.96	0.82				0.92	0.96	0.82				0.41	0.89	0.89				0.92	0.95	0.95			
Lanes:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	0.48	0.52				1.00	0.87	0.13			
Final Sat.:	1742	1833	1558				1742	1833	1558				786	805	884				1742	1572	227			
Capacity Analysis Module:																								
Vol/Sat:	0.18	0.09	0.05				0.06	0.10	0.03				0.07	0.30	0.30				0.02	0.19	0.19			
Crit Moves:	****							****						****					****					
Green/Cycle:	0.30	0.30	0.30				0.16	0.16	0.16				0.51	0.51	0.51				0.03	0.54	0.54			
Volume/Cap:	0.60	0.31	0.16				0.36	0.60	0.17				0.14	0.60	0.60				0.60	0.36	0.36			
Delay/Veh:	31.9	27.6	26.1				38.0	42.1	36.3				13.2	18.6	18.6				64.5	13.4	13.4			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	31.9	27.6	26.1				38.0	42.1	36.3				13.2	18.6	18.6				64.5	13.4	13.4			
LOS by Move:	C	C	C				D	D	D				B	B	B				E	B	B			
HCM2kAvgQ:	9	4	2				3	6	1				1	11	11				2	6	6			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.804
Loss Time (sec):	0	Average Delay (sec/veh):	19.3
Optimal Cycle:	74	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	42	772	209	157	709	30	33	71	15	257	82	190	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	42	772	209	157	709	30	33	71	15	257	82	190	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	42	772	209	157	709	30	33	71	15	257	82	190	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	42	772	209	157	709	30	33	71	15	257	82	190	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	42	772	209	157	709	30	33	71	15	257	82	190	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.28	0.92	0.92	0.19	0.94	0.94	0.83	0.83	0.83	0.75	0.75	0.75	
Lanes:	1.00	1.57	0.43	1.00	1.92	0.08	0.28	0.60	0.13	0.49	0.16	0.36	
Final Sat.:	528	2750	745	363	3442	146	437	940	199	690	220	510	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.28	0.28	0.43	0.21	0.21	0.08	0.08	0.08	0.37	0.37	0.37	
Crit Moves:				****							****		
Green/Cycle:	0.54	0.54	0.54	0.54	0.54	0.54	0.46	0.46	0.46	0.46	0.46	0.46	
Volume/Cap:	0.15	0.52	0.52	0.80	0.38	0.38	0.16	0.16	0.16	0.80	0.80	0.80	
Delay/Veh:	11.9	15.2	15.2	39.9	13.6	13.6	15.7	15.7	15.7	30.1	30.1	30.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	11.9	15.2	15.2	39.9	13.6	13.6	15.7	15.7	15.7	30.1	30.1	30.1	
LOS by Move:	B	B	B	D	B	B	B	B	B	C	C	C	
HCM2kAvgQ:	1	10	10	6	7	7	2	2	2	16	16	16	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.492
Loss Time (sec):	0	Average Delay (sec/veh):	15.0
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	314	401	50	79	321	80	105	269	271	30	146	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	314	401	50	79	321	80	105	269	271	30	146	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	314	401	50	79	321	80	105	269	271	30	146	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	314	401	50	79	321	80	105	269	271	30	146	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	314	401	50	79	321	80	105	269	271	30	146	57
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.50	1.00	0.85	0.45	1.00	0.85	0.53	0.88	0.88	0.29	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	952	1900	1615	858	1900	1615	1006	1669	1669	559	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.33	0.21	0.03	0.09	0.17	0.05	0.10	0.16	0.16	0.05	0.08	0.04
Crit Moves:	****								****			
Green/Cycle:	0.67	0.67	0.67	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.49	0.31	0.05	0.14	0.25	0.07	0.32	0.49	0.49	0.16	0.23	0.11
Delay/Veh:	8.7	7.0	5.6	6.1	6.7	5.8	25.6	27.1	27.1	24.1	24.5	23.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.7	7.0	5.6	6.1	6.7	5.8	25.6	27.1	27.1	24.1	24.5	23.4
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	5	5	1	1	4	1	3	7	7	1	3	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.632
Loss Time (sec):	0	Average Delay (sec/veh):	24.5
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	113	630	80	131	571	64	68	254	76	92	364	131	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	113	630	80	131	571	64	68	254	76	92	364	131	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	113	630	80	131	571	64	68	254	76	92	364	131	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	113	630	80	131	571	64	68	254	76	92	364	131	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	113	630	80	131	571	64	68	254	76	92	364	131	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.84	0.84	0.84	0.86	0.86	0.86	
Lanes:	1.00	1.77	0.23	1.00	1.80	0.20	0.17	0.64	0.19	0.16	0.62	0.22	
Final Sat.:	1805	3149	400	1805	3197	358	271	1013	303	256	1012	364	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.20	0.20	0.07	0.18	0.18	0.25	0.25	0.25	0.36	0.36	0.36	
Crit Moves:		****		****							****		
Green/Cycle:	0.11	0.32	0.32	0.32	0.32	0.32	0.57	0.57	0.57	0.57	0.57	0.57	
Volume/Cap:	0.56	0.63	0.63	0.46	0.56	0.56	0.44	0.44	0.44	0.63	0.63	0.63	
Delay/Veh:	45.6	30.4	30.4	27.9	28.8	28.8	12.8	12.8	12.8	15.9	15.9	15.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	45.6	30.4	30.4	27.9	28.8	28.8	12.8	12.8	12.8	15.9	15.9	15.9	
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B	
HCM2kAvgQ:	4	10	10	4	9	9	7	7	7	13	13	13	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.748
Loss Time (sec):	0	Average Delay (sec/veh):	17.0
Optimal Cycle:	57	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1!	0	0
Volume Module:													
Base Vol:	9	665	146	217	520	1	7	7	0	143	42	310	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	665	146	217	520	1	7	7	0	143	42	310	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	665	146	217	520	1	7	7	0	143	42	310	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	665	146	217	520	1	7	7	0	143	42	310	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	665	146	217	520	1	7	7	0	143	42	310	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.40	0.92	0.92	0.26	0.95	0.95	0.87	0.87	1.00	0.83	0.83	0.83	
Lanes:	1.00	1.64	0.36	1.00	2.00	0.00	0.50	0.50	0.00	0.29	0.08	0.63	
Final Sat.:	752	2880	632	501	3602	7	825	825	0	454	133	985	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.23	0.23	0.43	0.14	0.14	0.01	0.01	0.00	0.31	0.31	0.31	
Crit Moves:				****							****		
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.00	0.42	0.42	0.42	
Volume/Cap:	0.02	0.40	0.40	0.75	0.25	0.25	0.02	0.02	0.00	0.75	0.75	0.75	
Delay/Veh:	9.0	11.6	11.6	25.9	10.4	10.4	16.9	16.9	0.0	29.2	29.2	29.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	9.0	11.6	11.6	25.9	10.4	10.4	16.9	16.9	0.0	29.2	29.2	29.2	
LOS by Move:	A	B	B	C	B	B	B	B	A	C	C	C	
HCM2kAvgQ:	0	7	7	7	4	4	0	0	0	14	14	14	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.349
Loss Time (sec):	0	Average Delay (sec/veh):	10.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av									Ave 43								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	119	186	36		20	137	55		55	70	79		17	66	23					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	119	186	36		20	137	55		55	70	79		17	66	23					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	119	186	36		20	137	55		55	70	79		17	66	23					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	119	186	36		20	137	55		55	70	79		17	66	23					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	119	186	36		20	137	55		55	70	79		17	66	23					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	1.00	0.84	0.16		1.00	0.71	0.29		0.27	0.34	0.39		0.16	0.62	0.22					
Final Sat.:	574	533	103		552	443	178		173	220	249		96	375	131					
Capacity Analysis Module:																				
Vol/Sat:	0.21	0.35	0.35		0.04	0.31	0.31		0.32	0.32	0.32		0.18	0.18	0.18					
Crit Moves:		****					****			****				****						
Delay/Veh:	10.3	10.9	10.9		9.2	10.5	10.5		10.5	10.5	10.5		9.6	9.6	9.6					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	10.3	10.9	10.9		9.2	10.5	10.5		10.5	10.5	10.5		9.6	9.6	9.6					
LOS by Move:	B	B	B		A	B	B		B	B	B		A	A	A					
ApproachDel:		10.7				10.4				10.5				9.6						
Delay Adj:		1.00				1.00				1.00				1.00						
ApprAdjDel:		10.7				10.4				10.5				9.6						
LOS by Appr:		B				B				B				A						
AllWayAvgQ:	0.2	0.5	0.5		0.0	0.4	0.4		0.4	0.4	0.4		0.2	0.2	0.2					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	0	Average Delay (sec/veh):	23.2
Optimal Cycle:	33	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	198	568	97	186	526	39	40	103	195	96	155	226
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	198	568	97	186	526	39	40	103	195	96	155	226
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	198	568	97	186	526	39	40	103	195	96	155	226
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	198	568	97	186	526	39	40	103	195	96	155	226
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	198	568	97	186	526	39	40	103	195	96	155	226
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.52	1.00	0.85	0.60	1.00	0.85
Lanes:	1.00	1.71	0.29	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3016	515	1805	3326	247	997	1900	1615	1141	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.19	0.10	0.16	0.16	0.04	0.05	0.12	0.08	0.08	0.14
Crit Moves:		****		****								****
Green/Cycle:	0.28	0.44	0.44	0.40	0.40	0.40	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.40	0.43	0.43	0.37	0.40	0.40	0.12	0.17	0.37	0.26	0.25	0.43
Delay/Veh:	29.9	19.7	19.7	21.6	21.6	21.6	23.9	24.3	26.4	25.3	25.1	27.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.9	19.7	19.7	21.6	21.6	21.6	23.9	24.3	26.4	25.3	25.1	27.1
LOS by Move:	C	B	B	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	7	7	4	7	7	1	2	5	2	4	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.455
Loss Time (sec):	0	Average Delay (sec/veh):	4.4
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0
Volume Module:												
Base Vol:	227	861	35	28	600	360	44	12	29	41	43	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	227	861	35	28	600	360	44	12	29	41	43	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	227	861	35	28	600	360	44	12	29	41	43	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	227	861	35	28	600	360	44	12	29	41	43	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	227	861	35	28	600	360	44	12	29	41	43	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	0.94	0.94	0.31	0.90	0.90	0.62	0.89	0.89	0.54	0.86	0.86
Lanes:	1.00	1.92	0.08	1.00	1.25	0.75	1.00	0.29	0.71	1.00	2.00	1.00
Final Sat.:	548	3449	140	581	2129	1278	1173	497	1201	1021	3263	1631
Capacity Analysis Module:												
Vol/Sat:	0.41	0.25	0.25	0.05	0.28	0.28	0.04	0.02	0.02	0.04	0.01	0.02
Crit Moves:	****									****		
Green/Cycle:	0.91	0.91	0.91	0.91	0.91	0.91	0.09	0.09	0.09	0.09	0.09	0.09
Volume/Cap:	0.45	0.27	0.27	0.05	0.31	0.31	0.42	0.27	0.27	0.45	0.15	0.18
Delay/Veh:	1.3	0.6	0.6	0.5	0.6	0.6	46.0	43.6	43.6	46.9	42.3	42.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	0.6	0.6	0.5	0.6	0.6	46.0	43.6	43.6	46.9	42.3	42.5
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	2	2	2	1	1	2	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.758
Loss Time (sec):	0	Average Delay (sec/veh):	32.0
Optimal Cycle:	110	Level Of Service:	C

Street Name:	Figueroa St						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	400	597	237	234	586	90	90	717	176	279	982	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	400	597	237	234	586	90	90	717	176	279	982	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	400	597	237	234	586	90	90	717	176	279	982	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	597	237	234	586	90	90	717	176	279	982	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	400	597	237	234	586	90	90	717	176	279	982	162
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.61	0.39	1.00	1.72	0.28
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2813	690	1805	3033	500
Capacity Analysis Module:												
Vol/Sat:	0.22	0.17	0.15	0.13	0.16	0.06	0.05	0.25	0.25	0.15	0.32	0.32
Crit Moves:	****				****		****				****	
Green/Cycle:	0.48	0.27	0.27	0.42	0.20	0.20	0.32	0.32	0.32	0.19	0.45	0.45
Volume/Cap:	0.69	0.61	0.54	0.49	0.79	0.27	0.45	0.79	0.79	0.79	0.72	0.72
Delay/Veh:	23.3	32.9	32.5	20.8	43.7	33.9	25.8	34.9	34.9	50.1	24.3	24.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.3	32.9	32.5	20.8	43.7	33.9	25.8	34.9	34.9	50.1	24.3	24.3
LOS by Move:	C	C	C	C	D	C	C	C	C	D	C	C
HCM2kAvgQ:	11	9	7	6	11	2	3	15	15	10	16	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.492
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	37	Level Of Service:	B

Street Name:	I-5 NB off-ramp									Ave 26								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Permitted					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0			
Lanes:	1	0	1!	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Volume Module:																		
Base Vol:	288	16	18		26	0	150		64	828	0		0	1056	26			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	288	16	18		26	0	150		64	828	0		0	1056	26			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	288	16	18		26	0	150		64	828	0		0	1056	26			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	288	16	18		26	0	150		64	828	0		0	1056	26			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	288	16	18		26	0	150		64	828	0		0	1056	26			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.95	0.95	0.95		0.95	1.00	0.85		0.19	0.95	1.00		1.00	0.95	0.95			
Lanes:	1.81	0.09	0.10		1.00	0.00	1.00		1.00	2.00	0.00		0.00	1.95	0.05			
Final Sat.:	3262	162	182		1805	0	1615		354	3610	0		0	3511	86			
Capacity Analysis Module:																		
Vol/Sat:	0.09	0.10	0.10		0.01	0.00	0.09		0.18	0.23	0.00		0.00	0.30	0.30			
Crit Moves:			****				****							****				
Green/Cycle:	0.20	0.20	0.20		0.19	0.00	0.19		0.61	0.61	0.00		0.00	0.61	0.61			
Volume/Cap:	0.44	0.49	0.49		0.08	0.00	0.49		0.30	0.38	0.00		0.00	0.49	0.49			
Delay/Veh:	35.5	36.0	36.0		33.5	0.0	37.5		10.0	9.9	0.0		0.0	11.0	11.0			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	35.5	36.0	36.0		33.5	0.0	37.5		10.0	9.9	0.0		0.0	11.0	11.0			
LOS by Move:	D	D	D		C	A	D		B	A	A		A	B	B			
HCM2kAvgQ:	5	5	5		1	0	5		1	7	0		0	10	10			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.618
Loss Time (sec):	0	Average Delay (sec/veh):	16.8
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	253	519	104	108	281	112	124	1388	194	50	867	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	253	519	104	108	281	112	124	1388	194	50	867	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	253	519	104	108	281	112	124	1388	194	50	867	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	519	104	108	281	112	124	1388	194	50	867	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	253	519	104	108	281	112	124	1388	194	50	867	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.45	0.93	0.93	0.31	0.91	0.91	0.22	0.89	0.89	0.08	0.90	0.90
Lanes:	1.00	1.67	0.33	1.00	1.43	0.57	1.00	2.63	0.37	1.00	2.70	0.30
Final Sat.:	849	2932	588	594	2471	985	417	4467	624	156	4595	514
Capacity Analysis Module:												
Vol/Sat:	0.30	0.18	0.18	0.18	0.11	0.11	0.30	0.31	0.31	0.32	0.19	0.19
Crit Moves:	****									****		
Green/Cycle:	0.48	0.48	0.48	0.48	0.48	0.48	0.52	0.52	0.52	0.52	0.52	0.52
Volume/Cap:	0.62	0.37	0.37	0.38	0.24	0.24	0.57	0.60	0.60	0.62	0.36	0.36
Delay/Veh:	22.0	16.4	16.4	17.2	15.2	15.2	20.2	17.2	17.2	30.7	14.4	14.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.0	16.4	16.4	17.2	15.2	15.2	20.2	17.2	17.2	30.7	14.4	14.4
LOS by Move:	C	B	B	B	B	B	C	B	B	C	B	B
HCM2kAvgQ:	7	6	6	2	4	4	4	13	13	2	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.417
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	25	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	18	485	94	0	0	0	246	631	0	0	219	84
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	485	94	0	0	0	246	631	0	0	219	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	485	94	0	0	0	246	631	0	0	219	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	485	94	0	0	0	246	631	0	0	219	84
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	18	485	94	0	0	0	246	631	0	0	219	84
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.52	0.95	1.00	1.00	0.91	0.91
Lanes:	0.06	1.62	0.31	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.45	0.55
Final Sat.:	106	2851	552	0	0	0	997	3610	0	0	2501	959
Capacity Analysis Module:												
Vol/Sat:	0.17	0.17	0.17	0.00	0.00	0.00	0.25	0.17	0.00	0.00	0.09	0.09
Crit Moves:		****					****					
Green/Cycle:	0.41	0.41	0.41	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59	0.59
Volume/Cap:	0.42	0.42	0.42	0.00	0.00	0.00	0.42	0.30	0.00	0.00	0.15	0.15
Delay/Veh:	21.3	21.3	21.3	0.0	0.0	0.0	11.5	10.2	0.0	0.0	9.2	9.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.3	21.3	21.3	0.0	0.0	0.0	11.5	10.2	0.0	0.0	9.2	9.2
LOS by Move:	C	C	C	A	A	A	B	B	A	A	A	A
HCM2kAvgQ:	7	7	7	0	0	0	4	5	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.325
Loss Time (sec):	0	Average Delay (sec/veh):	13.4
Optimal Cycle:	21	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	1 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	193	201	152	0	674	58	27	218	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	193	201	152	0	674	58	27	218	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	193	201	152	0	674	58	27	218	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	193	201	152	0	674	58	27	218	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	193	201	152	0	674	58	27	218	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.94	0.94	0.31	0.95	1.00
Lanes:	0.00	0.00	0.00	0.98	1.02	1.00	0.00	1.84	0.16	1.00	2.00	0.00
Final Sat.:	0	0	0	1605	1671	1638	0	3284	283	585	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.12	0.09	0.00	0.21	0.21	0.05	0.06	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.00	0.00	0.37	0.37	0.37	0.00	0.63	0.63	0.63	0.63	0.00
Volume/Cap:	0.00	0.00	0.00	0.33	0.33	0.25	0.00	0.33	0.33	0.07	0.10	0.00
Delay/Veh:	0.0	0.0	0.0	22.7	22.7	22.0	0.0	8.7	8.7	7.2	7.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.7	22.7	22.0	0.0	8.7	8.7	7.2	7.3	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	5	5	3	0	5	5	0	1	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 848.7 Worst Case Level Of Service: F[1875.3]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			312	203		0		909	70		0		0	0		680	
Growth Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0			312	203		0		909	70		0		0	0		680	
User Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0			312	203		0		909	70		0		0	0		680	
Reduct Vol:	0	0	0			0	0		0		0	0		0		0	0		0	
FinalVolume:	0	0	0			312	203		0		909	70		0		0	0		680	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1	6.5	xxxxx			7.1	6.5		6.2	
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5	4.0	xxxxx			3.5	4.0		3.3	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			827	827	xxxxx			761	827		0	
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			293	309	xxxxx			325	309		1091	
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			94	250	xxxxx			219	250		1091	
Volume/Cap:	xxxx	xxxx	xxxx			0.19	xxxx	xxxx			9.65	0.28	xxxx			0.00	0.00		0.62	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.7	xxxx	xxxxx			48.6	xxxx	xxxxx			xxxx	xxxx		1.3	
Control Del:	xxxxx	xxxx	xxxxx			7.7	xxxx	xxxxx			1812	xxxx	xxxxx			xxxxx	xxxx		9.8	
LOS by Move:	*	*	*			A	*	*			F	*	*			*	*		A	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			103	xxxx	xxxxx			xxxx	1091		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			29.7	xxxx	xxxxx			xxxxx	1.3		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			1930	xxxx	xxxxx			xxxxx	9.8		xxxxx	
Shared LOS:	*	*	*			*	*	*			F	*	*			*	A		*	
ApproachDel:	xxxxxx					xxxxxx					1875.3					9.8				
ApproachLOS:	*					*					F					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.883
Loss Time (sec):	0	Average Delay (sec/veh):	25.1
Optimal Cycle:	160	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	65	371	379	146	267	15	21	283	72	551	573	275
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	371	379	146	267	15	21	283	72	551	573	275
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	371	379	146	267	15	21	283	72	551	573	275
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	371	379	146	267	15	21	283	72	551	573	275
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	371	379	146	267	15	21	283	72	551	573	275
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.88	0.88	0.95	1.00	0.85	0.27	0.92	0.92	0.50	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.59	0.41	1.00	1.35	0.65
Final Sat.:	1805	1668	1668	1805	1900	1615	516	2790	710	958	2321	1114
Capacity Analysis Module:												
Vol/Sat:	0.04	0.22	0.23	0.08	0.14	0.01	0.04	0.10	0.10	0.58	0.25	0.25
Crit Moves:			****	****						****		
Green/Cycle:	0.07	0.26	0.26	0.28	0.28	0.28	0.65	0.65	0.65	0.65	0.65	0.65
Volume/Cap:	0.51	0.86	0.88	0.61	0.51	0.03	0.06	0.16	0.16	0.88	0.38	0.38
Delay/Veh:	48.0	44.5	46.5	32.7	31.2	26.4	6.4	6.8	6.8	28.4	8.2	8.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.0	44.5	46.5	32.7	31.2	26.4	6.4	6.8	6.8	28.4	8.2	8.2
LOS by Move:	D	D	D	C	C	C	A	A	A	C	A	A
HCM2kAvgQ:	3	15	15	5	7	0	0	2	2	17	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.565
Loss Time (sec):	0	Average Delay (sec/veh):	79.3
Optimal Cycle:	180	Level Of Service:	E

Street Name:	San Fernando Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0
Volume Module:													
Base Vol:	20	1234	153	119	593	98	364	471	23	83	160	132	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	20	1234	153	119	593	98	364	471	23	83	160	132	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	20	1234	153	119	593	98	364	471	23	83	160	132	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	20	1234	153	119	593	98	364	471	23	83	160	132	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	20	1234	153	119	593	98	364	471	23	83	160	132	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.34	0.98	0.98	0.06	1.00	0.85	0.39	0.94	0.94	0.65	0.65	0.65	
Lanes:	1.00	0.89	0.11	1.00	1.00	1.00	1.00	1.91	0.09	0.44	0.85	0.70	
Final Sat.:	643	1663	206	111	1900	1615	736	3418	167	544	1048	864	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.74	0.74	1.07	0.31	0.06	0.49	0.14	0.14	0.15	0.15	0.15	
Crit Moves:				****			****						
Green/Cycle:	0.68	0.68	0.68	0.68	0.68	0.68	0.32	0.32	0.32	0.32	0.32	0.32	
Volume/Cap:	0.05	1.09	1.09	1.57	0.46	0.09	1.57	0.44	0.44	0.48	0.48	0.48	
Delay/Veh:	5.2	67.4	67.4	324.2	7.5	5.3	308.4	27.4	27.4	28.1	28.1	28.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	5.2	67.4	67.4	324.2	7.5	5.3	308.4	27.4	27.4	28.1	28.1	28.1	
LOS by Move:	A	E	E	F	A	A	F	C	C	C	C	C	
HCM2kAvgQ:	0	60	60	11	8	1	29	6	6	5	5	5	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.021
Loss Time (sec):	0	Average Delay (sec/veh):	43.7
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	336	595	57	122	442	205	40	1117	291	107	667	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	336	595	57	122	442	205	40	1117	291	107	667	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	336	595	57	122	442	205	40	1117	291	107	667	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	595	57	122	442	205	40	1117	291	107	667	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	336	595	57	122	442	205	40	1117	291	107	667	108
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	0.94	0.94	0.32	0.90	0.90	0.81	0.81	0.81	0.50	0.50	0.50
Lanes:	1.00	1.83	0.17	1.00	1.37	0.63	0.06	1.54	0.40	0.24	1.51	0.24
Final Sat.:	609	3251	311	604	2349	1089	85	2381	620	231	1441	233
Capacity Analysis Module:												
Vol/Sat:	0.55	0.18	0.18	0.20	0.19	0.19	0.47	0.47	0.47	0.46	0.46	0.46
Crit Moves:	****							****				
Green/Cycle:	0.54	0.54	0.54	0.54	0.54	0.54	0.46	0.46	0.46	0.46	0.46	0.46
Volume/Cap:	1.02	0.34	0.34	0.37	0.35	0.35	1.02	1.02	1.02	1.01	1.01	1.01
Delay/Veh:	78.0	13.0	13.0	13.9	13.1	13.1	56.4	56.4	56.4	59.2	59.2	59.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	78.0	13.0	13.0	13.9	13.1	13.1	56.4	56.4	56.4	59.2	59.2	59.2
LOS by Move:	E	B	B	B	B	B	E	E	E	E	E	E
HCM2kAvgQ:	16	6	6	3	6	6	32	32	32	21	21	21

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 87.0 Worst Case Level Of Service: F[885.8]

Street Name:	Ave 21									Main St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	9	160	4	115	0	1316	6	15	1220	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	9	160	4	115	0	1316	6	15	1220	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	9	160	4	115	0	1316	6	15	1220	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	9	160	4	115	0	1316	6	15	1220	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	661	1908	2572	610	xxxx	xxxx	xxxxx	1322	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	410	42	26	442	xxxx	xxxx	xxxxx	529	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	410	41	25	442	xxxx	xxxx	xxxxx	529	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	0.02	3.94	0.16	0.26	xxxx	xxxx	xxxx	0.03	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.1	18.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	14.0	1525	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx								
LOS by Move:	*	*	B	F	*	*	*	*	*	B	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	285	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	2.0	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	26.3	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	D	*	*	*	B	*	*								
ApproachDel:	14.0			885.8			xxxxxx			xxxxxx										
ApproachLOS:	B			F			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.406
Loss Time (sec):	0	Average Delay (sec/veh):	9.1
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	502	892	732	0	0	355	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	502	892	732	0	0	355	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	502	892	732	0	0	355	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	502	892	732	0	0	355	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	502	892	732	0	0	355	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.92	0.92	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.65	1.35	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2895	2376	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.31	0.31	0.00	0.00	0.10	0.06
Crit Moves:					****			****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.24	0.24
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.23	0.41	0.41	0.00	0.00	0.41	0.27
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	3.6	4.3	4.3	0.0	0.0	32.2	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	3.6	4.3	4.3	0.0	0.0	32.2	31.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	C	C
HCM2kAvgQ:	0	0	0	0	0	3	6	6	0	0	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.696
Loss Time (sec):	0	Average Delay (sec/veh):	12.9
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	38	1418	89	118	1302	68	118	294	39	37	197	187
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	1418	89	118	1302	68	118	294	39	37	197	187
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	1418	89	118	1302	68	118	294	39	37	197	187
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	1418	89	118	1302	68	118	294	39	37	197	187
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	1418	89	118	1302	68	118	294	39	37	197	187
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.15	0.94	0.94	0.12	0.94	0.94	0.63	0.63	0.63	0.77	0.77	0.77
Lanes:	1.00	1.88	0.12	1.00	1.90	0.10	0.52	1.30	0.17	0.18	0.94	0.89
Final Sat.:	283	3367	211	232	3405	178	629	1566	208	256	1361	1292
Capacity Analysis Module:												
Vol/Sat:	0.13	0.42	0.42	0.51	0.38	0.38	0.19	0.19	0.19	0.14	0.14	0.14
Crit Moves:				****				****				
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	0.18	0.58	0.58	0.70	0.52	0.52	0.70	0.70	0.70	0.54	0.54	0.54
Delay/Veh:	4.6	6.6	6.6	19.4	6.1	6.1	36.2	36.2	36.2	31.9	31.9	31.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.6	6.6	6.6	19.4	6.1	6.1	36.2	36.2	36.2	31.9	31.9	31.9
LOS by Move:	A	A	A	B	A	A	D	D	D	C	C	C
HCM2kAvgQ:	1	12	12	4	10	10	8	8	8	6	6	6

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.673
Loss Time (sec):	0	Average Delay (sec/veh):	29.5
Optimal Cycle:	70	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	311	977	405	11	536	45	34	255	255	574	327	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	977	405	11	536	45	34	255	255	574	327	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	311	977	405	11	536	45	34	255	0	574	327	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	977	405	11	536	45	34	255	0	574	327	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	311	977	405	11	536	45	34	255	0	574	327	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.12	0.88	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.95	0.05
Final Sat.:	1805	3506	1453	1805	4728	397	1805	3610	1900	1805	3510	86
Capacity Analysis Module:												
Vol/Sat:	0.17	0.28	0.28	0.01	0.11	0.11	0.02	0.07	0.00	0.32	0.09	0.09
Crit Moves:		****		****				****		****		
Green/Cycle:	0.26	0.41	0.41	0.01	0.17	0.17	0.10	0.10	0.00	0.47	0.48	0.48
Volume/Cap:	0.68	0.67	0.67	0.67	0.68	0.68	0.19	0.67	0.00	0.67	0.19	0.19
Delay/Veh:	37.5	24.7	24.7	124.3	41.2	41.2	42.1	47.8	0.0	22.6	15.0	15.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.5	24.7	24.7	124.3	41.2	41.2	42.1	47.8	0.0	22.6	15.0	15.0
LOS by Move:	D	C	C	F	D	D	D	D	A	C	B	B
HCM2kAvgQ:	10	13	13	1	7	7	1	5	0	14	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A[8.6]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	16	0	2	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	16	0	2	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	16	0	2	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	16	0	2	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1014	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				8.6		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.404
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	344	1147	50	1	469	170	0	0	0	157	85	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	344	1147	50	1	469	170	0	0	0	157	85	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	344	1147	50	1	469	170	0	0	0	157	85	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	344	1147	50	1	469	170	0	0	0	157	85	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	344	1147	50	1	469	170	0	0	0	157	85	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.92	0.92	0.85
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.30	0.70	1.00
Final Sat.:	3502	3437	150	1805	3610	1615	0	0	0	2260	1224	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.33	0.33	0.00	0.13	0.11	0.00	0.00	0.00	0.07	0.07	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.36	0.83	0.83	0.00	0.47	0.47	0.00	0.00	0.00	0.17	0.17	0.17
Volume/Cap:	0.28	0.40	0.40	0.40	0.28	0.22	0.00	0.00	0.00	0.40	0.40	0.15
Delay/Veh:	23.1	2.3	2.3	132.6	16.1	15.8	0.0	0.0	0.0	37.3	37.3	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.1	2.3	2.3	132.6	16.1	15.8	0.0	0.0	0.0	37.3	37.3	35.4
LOS by Move:	C	A	A	F	B	B	A	A	A	D	D	D
HCM2kAvgQ:	4	5	5	0	5	3	0	0	0	4	4	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.514
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	886	14	0	623	0	201	93	308	20	0	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	886	14	0	623	0	201	93	308	20	0	453
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	886	14	0	623	0	201	93	308	20	0	453
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	886	14	0	623	0	201	93	308	20	0	453
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	886	14	0	623	0	201	93	308	20	0	453
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.86	0.86	0.86	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.68	0.32	1.00	0.08	0.00	1.92
Final Sat.:	0	5095	81	0	3610	0	1121	519	1639	132	0	3115
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.00	0.17	0.00	0.18	0.18	0.19	0.15	0.00	0.15
Crit Moves:		****							****	****		
Green/Cycle:	0.00	0.34	0.34	0.00	0.34	0.00	0.37	0.37	0.37	0.30	0.00	0.30
Volume/Cap:	0.00	0.51	0.51	0.00	0.51	0.00	0.49	0.49	0.51	0.51	0.00	0.49
Delay/Veh:	0.0	26.7	26.7	0.0	26.8	0.0	24.8	24.8	25.2	29.7	0.0	29.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	26.7	26.7	0.0	26.8	0.0	24.8	24.8	25.2	29.7	0.0	29.4
LOS by Move:	A	C	C	A	C	A	C	C	C	C	A	C
HCM2kAvgQ:	0	8	8	0	8	0	8	8	8	7	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.311
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	188	671	0	0	294	1161	0	0	0	67	0	10	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	188	671	0	0	294	1161	0	0	0	67	0	10	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	188	671	0	0	294	0	0	0	0	67	0	10	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	188	671	0	0	294	0	0	0	0	67	0	10	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	188	671	0	0	294	0	0	0	0	67	0	10	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1294	0	193	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.19	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.05	0.00	0.05	
Crit Moves:	****				****					****			
Green/Cycle:	0.34	0.83	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.17	0.00	0.17	
Volume/Cap:	0.31	0.22	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.31	0.00	0.31	
Delay/Veh:	24.9	1.7	0.0	0.0	15.1	0.0	0.0	0.0	0.0	37.4	0.0	37.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	24.9	1.7	0.0	0.0	15.1	0.0	0.0	0.0	0.0	37.4	0.0	37.4	
LOS by Move:	C	A	A	A	B	A	A	A	A	D	A	D	
HCM2kAvgQ:	4	2	0	0	5	0	0	0	0	2	0	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.379
Loss Time (sec):	0	Average Delay (sec/veh):	22.7
Optimal Cycle:	39	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0 1	1 0	1	0 1	0 0	1	0 1!	0 0	0	0 0	0 0	
Volume Module:													
Base Vol:	0	355	152	26	333	0	503	4	75	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	355	152	26	333	0	503	4	75	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	355	152	26	333	0	503	4	75	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	355	152	26	333	0	503	4	75	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	355	152	26	333	0	503	4	75	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.40	0.60	1.00	1.00	0.00	1.76	0.01	0.23	0.00	0.00	0.00	
Final Sat.:	0	2414	1034	1805	1900	0	2856	20	368	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.15	0.15	0.01	0.18	0.00	0.18	0.20	0.20	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.28	0.28	0.33	0.61	0.00	0.39	0.39	0.39	0.00	0.00	0.00	
Volume/Cap:	0.00	0.53	0.53	0.04	0.29	0.00	0.45	0.53	0.53	0.00	0.00	0.00	
Delay/Veh:	0.0	31.0	31.0	22.6	9.2	0.0	23.0	24.0	24.0	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	31.0	31.0	22.6	9.2	0.0	23.0	24.0	24.0	0.0	0.0	0.0	
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A	
HCM2kAvgQ:	0	7	7	1	5	0	7	8	8	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: A[8.8]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	9	1	0	0		34	63				8	0		38		0	0		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	9	1	0	0		34	63				8	0		38		0	0		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	9	1	0	0		34	63				8	0		38		0	0		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	9	1	0	0		34	63				8	0		38		0	0		0	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5		6.2	xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0		3.3	xxxxx	xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	97	xxxx	xxxxx	xxxx	xxxx	xxxxx					85	85		66	xxxx	xxxx	xxxxx			
Potent Cap.:	1509	xxxx	xxxxx	xxxx	xxxx	xxxxx					922	809		1004	xxxx	xxxx	xxxxx			
Move Cap.:	1509	xxxx	xxxxx	xxxx	xxxx	xxxxx					918	805		1004	xxxx	xxxx	xxxxx			
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx					0.01	0.00		0.04	xxxx	xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx		xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx		xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*					*	*		*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	988		xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.1		xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.8		xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*	*	*	*					*	A		*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx							8.8				xxxxxx					
ApproachLOS:	*			*							A				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[11.0]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	15	2	22	66	0	14	3	198	15	11	57	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	2	22	66	0	14	3	198	15	11	57	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	2	22	66	0	14	3	198	15	11	57	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	2	22	66	0	14	3	198	15	11	57	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	298	291	206	303	298	57	57	xxxx	xxxxx	213	xxxx	xxxxx
Potent Cap.:	659	623	840	654	617	1015	1560	xxxx	xxxxx	1369	xxxx	xxxxx
Move Cap.:	645	617	840	630	611	1015	1560	xxxx	xxxxx	1369	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.03	0.10	0.00	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	740	xxxxx	xxxx	675	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.1	xxxxx	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.1			11.0			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 16.5 Worst Case Level Of Service: E[39.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	409		0		50	0		0		0	0		43		0	0		137		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	409		0		50	0		0		0	0		43		0	0		137		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	409		0		0	0		0		0	0		43		0	0		137		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	409		0		0	0		0		0	0		43		0	0		137		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		818	xxxxx	xxxx		818	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		313	xxxxx	xxxx		313	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		235	xxxxx	xxxx		235	xxxxx						
Volume/Cap:	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.18	xxxx	xxxx		0.58	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		0.7	xxxxx	xxxx		3.3	xxxxx						
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		23.8	xxxxx	xxxxx		39.8	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		C	*	*		E	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx				23.8				39.8								
ApproachLOS:	*			*				C				E								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.797
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy									Ave 66								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			31	0			71	0	0	0			0	640			51
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Initial Bse:	0	0	0			31	0			71	0	0	0			0	640			51
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Volume:	0	0	0			31	0			71	0	0	0			0	640			51
Reduct Vol:	0	0	0			0	0			0	0	0	0			0	0			0
Reduced Vol:	0	0	0			31	0			71	0	0	0			0	640			51
PCE Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
MLF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
FinalVolume:	0	0	0			31	0			71	0	0	0			0	640			51
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Lanes:	0.00	0.00	0.00			1.00	0.00			1.00	0.00	0.00	0.00			0.00	0.93			0.07
Final Sat.:	0	0	0			530	0			642	0	0	0			0	803			64
Capacity Analysis Module:																				
Vol/Sat:	xxxx	xxxx	xxxx			0.06	xxxx			0.11	xxxx	xxxx	xxxx			xxxx	0.80			0.80
Crit Moves:										****										****
Delay/Veh:	0.0	0.0	0.0			9.5	0.0			8.5	0.0	0.0	0.0			0.0	20.9			20.9
Delay Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
AdjDel/Veh:	0.0	0.0	0.0			9.5	0.0			8.5	0.0	0.0	0.0			0.0	20.9			20.9
LOS by Move:	*	*	*			A	*			A	*	*	*			*	C			C
ApproachDel:	xxxxxx					8.8					xxxxxx					20.9				
Delay Adj:	xxxxx					1.00					xxxxx					1.00				
ApprAdjDel:	xxxxxx					8.8					xxxxxx					20.9				
LOS by Appr:	*					A					*					C				
AllWayAvgQ:	0.0	0.0	0.0			0.1	0.0			0.1	0.0	0.0	0.0			3.3	3.3			3.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[13.6]

Street Name:	ASP NB Exit 29									Ave 60									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	8	0	60	66	531	0	0	409	141								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	8	0	60	66	531	0	0	409	141								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	8	0	60	66	531	0	0	409	141								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	8	0	60	66	531	0	0	409	141								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1143	1143	480	550	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	223	202	590	1030	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	213	189	590	1030	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.10	0.06	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	488	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				13.6		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	9.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	15	2	4	2	2	5	6	272	9	5	76	2	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	15	2	4	2	2	5	6	272	9	5	76	2	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	15	2	4	2	2	5	6	272	9	5	76	2	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	15	2	4	2	2	5	6	272	9	5	76	2	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.71	0.10	0.19	0.22	0.22	0.56	0.02	0.95	0.03	0.06	0.92	0.02	
Final Sat.:	152	20	41	0	0	1	18	824	27	44	668	18	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.10	0.10	9.00	9.00	9.00	0.33	0.33	0.33	0.11	0.11	0.11	
Crit Moves:		****			****				****			****	
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.10	0.10	0.10	9.00	9.00	9.00	0.33	0.33	0.33	0.11	0.11	0.11	
Delay/Veh:	1.5	1.5	1.5	xxxxx	xxxx	xxxxx	3.5	3.5	3.5	1.5	1.5	1.5	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.5	1.5	1.5	xxxxx	xxxx	xxxxx	3.5	3.5	3.5	1.5	1.5	1.5	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: C[23.6]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	95	0	183	0	0	0	96	334	0	0	471	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	0	183	0	0	0	96	334	0	0	471	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	0	183	0	0	0	96	334	0	0	471	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	95	0	183	0	0	0	96	334	0	0	471	58
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1026	1055	167	xxxx	xxxx	xxxxx	529	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	262	227	882	xxxx	xxxx	xxxxx	1048	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	243	205	882	xxxx	xxxx	xxxxx	1048	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.39	0.00	0.21	xxxx	xxxx	xxxx	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	465	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.8	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	23.6	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	*	*	*
ApproachDel:		23.6		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C			*			*			*	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[8.5]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		340		8			0	0		0		0		0		66
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		340		8			0	0		0		0		0		66
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		340		8			0	0		0		0		0		66
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		340		8			0	0		0		0		0		66
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			344	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			614	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			577	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.00	xxxx		xxxx		xxxx		xxxx		0.06
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		8.5
LOS by Move:	*	*	*	*		*		*			*	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							xxxxxx							8.5		
ApproachLOS:	*					*								*				A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	11.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	90	28	69	10	339	342	2	325	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	28	69	10	339	342	2	325	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	28	69	10	339	342	2	325	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	28	69	10	339	342	2	325	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	90	28	69	10	339	342	2	325	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.48	0.15	0.37	0.03	0.97	1.00	0.01	1.92	0.07
Final Sat.:	0	512	0	285	89	219	19	634	748	7	1169	40
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.32	0.32	0.32	0.53	0.53	0.46	0.28	0.28	0.28
Crit Moves:		****		****				****		****		
Delay/Veh:	0.0	0.0	0.0	11.2	11.2	11.2	14.1	14.1	11.2	10.6	10.6	10.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.2	11.2	11.2	14.1	14.1	11.2	10.6	10.6	10.5
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			11.2			12.7			10.5		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.2			12.7			10.5		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.4	0.4	0.4	1.1	1.1	0.8	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	257	2	3		0	0	0		244	184	0		0	83	45					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	257	2	3		0	0	0		244	184	0		0	83	45					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	257	2	3		0	0	0		244	184	0		0	83	45					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	257	2	3		0	0	0		244	184	0		0	83	45					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	257	2	3		0	0	0		244	184	0		0	83	45					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	0.98	0.01	0.01		0.00	0.00	0.00		0.57	0.43	0.00		0.00	0.65	0.35					
Final Sat.:	622	5	7		0	0	0		409	309	0		0	446	242					
Capacity Analysis Module:																				
Vol/Sat:	0.41	0.41	0.41		xxxx	xxxx	xxxx		0.60	0.60	xxxx		xxxx	0.19	0.19					
Crit Moves:			****						****					****						
Delay/Veh:	11.8	11.8	11.8		0.0	0.0	0.0		14.5	14.5	0.0		0.0	9.0	9.0					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	11.8	11.8	11.8		0.0	0.0	0.0		14.5	14.5	0.0		0.0	9.0	9.0					
LOS by Move:	B	B	B		*	*	*		B	B	*		*	A	A					
ApproachDel:	11.8				xxxxxx				14.5					9.0						
Delay Adj:	1.00				xxxxx				1.00					1.00						
ApprAdjDel:	11.8				xxxxxx				14.5					9.0						
LOS by Appr:	B				*				B					A						
AllWayAvgQ:	0.6	0.6	0.6		0.0	0.0	0.0		1.3	1.3	1.3		0.2	0.2	0.2					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.806
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	11	26	51		83	71	141		185	279	14		47	300	99			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	11	26	51		83	71	141		185	279	14		47	300	99			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	11	26	51		83	71	141		185	279	14		47	300	99			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	11	26	51		83	71	141		185	279	14		47	300	99			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	11	26	51		83	71	141		185	279	14		47	300	99			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.13	0.30	0.58		0.28	0.24	0.48		0.39	0.58	0.03		0.11	0.67	0.22			
Final Sat.:	55	130	255		147	126	250		229	346	17		63	402	133			
Capacity Analysis Module:																		
Vol/Sat:	0.20	0.20	0.20		0.56	0.56	0.56		0.81	0.81	0.81		0.75	0.75	0.75			
Crit Moves:		****				****				****				****				
Delay/Veh:	11.2	11.2	11.2		15.9	15.9	15.9		27.5	27.5	27.5		22.6	22.6	22.6			
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	11.2	11.2	11.2		15.9	15.9	15.9		27.5	27.5	27.5		22.6	22.6	22.6			
LOS by Move:	B	B	B		C	C	C		D	D	D		C	C	C			
ApproachDel:	11.2				15.9				27.5				22.6					
Delay Adj:	1.00				1.00				1.00				1.00					
ApprAdjDel:	11.2				15.9				27.5				22.6					
LOS by Appr:	B				C				D				C					
AllWayAvgQ:	0.2	0.2	0.2		1.0	1.0	1.0		3.1	3.1	3.1		2.3	2.3	2.3			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	175	9	87	9	9	27	13	196	190	68	258	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	175	9	87	9	9	27	13	196	190	68	258	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	175	9	87	9	9	27	13	196	190	68	258	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	9	87	9	9	27	13	196	190	68	258	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	175	9	87	9	9	27	13	196	190	68	258	5
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.36	0.64	0.20	0.20	0.60	0.03	0.49	0.48	0.21	0.78	0.02
Final Sat.:	498	205	368	102	102	307	23	341	330	132	501	10
Capacity Analysis Module:												
Vol/Sat:	0.35	0.04	0.24	0.09	0.09	0.09	0.58	0.58	0.58	0.51	0.51	0.51
Crit Moves:	****				****			****			****	
Delay/Veh:	12.9	9.7	9.7	9.5	9.5	9.5	14.2	14.2	14.2	13.6	13.6	13.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	9.7	9.7	9.5	9.5	9.5	14.2	14.2	14.2	13.6	13.6	13.6
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	11.7			9.5			14.2			13.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.7			9.5			14.2			13.6		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.5	0.2	0.2	0.1	0.1	0.1	1.2	1.2	1.2	0.9	0.9	0.9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 63.0 Worst Case Level Of Service: F[482.1]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	238	0	109	0	1462	0	0	848	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	238	0	109	0	1462	0	0	848	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	238	0	109	0	1462	0	0	848	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	238	0	109	0	1462	0	0	848	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1886	2310	731	1579	2310	424	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	44	39	369	102	39	584	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	36	39	369	102	39	584	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.33	0.00	0.19	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	102	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	21.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	697.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			482.1			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.8]

Street Name:	ASP NB on-ramp									Ave 26									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					984	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					710	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					710	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.13	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.760
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	163	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2
Volume Module:												
Base Vol:	0	274	156	791	724	197	83	35	17	0	0	524
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	274	156	791	724	197	83	35	17	0	0	524
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	274	156	791	724	197	83	35	17	0	0	524
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	274	156	791	724	197	83	35	17	0	0	524
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	274	156	791	724	197	83	35	17	0	0	524
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.00	1.27	0.73	2.00	0.79	0.21	0.61	0.26	0.13	0.00	0.00	2.00
Final Sat.:	0	2175	1238	3502	1446	393	1114	470	228	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.23	0.50	0.50	0.07	0.07	0.07	0.00	0.00	0.18
Crit Moves:					****				****			****
Green/Cycle:	0.00	0.14	0.14	0.57	0.71	0.71	0.08	0.08	0.08	0.00	0.00	0.77
Volume/Cap:	0.00	0.89	0.89	0.40	0.71	0.71	0.89	0.89	0.89	0.00	0.00	0.24
Delay/Veh:	0.0	44.5	44.5	7.9	7.3	7.3	70.5	70.5	70.5	0.0	0.0	2.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	44.5	44.5	7.9	7.3	7.3	70.5	70.5	70.5	0.0	0.0	2.1
LOS by Move:	A	D	D	A	A	A	E	E	E	A	A	A
HCM2kAvgQ:	0	8	8	5	12	12	6	6	6	0	0	2

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.4]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1111	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					636	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					636	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.11	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.5]

Street Name:	ASP SB Exit 25									Casanova St							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	51	10	4	146	0	0	0	0	0	23	0	8							
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
Initial Bse:	0	51	10	4	146	0	0	0	0	23	0	8								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	51	10	4	146	0	0	0	0	23	0	8								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	51	10	4	146	0	0	0	0	23	0	8								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2								
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	61	xxxx	xxxxx	xxxx	xxxx	xxxxx	210	210	56								
Potent Cap.:	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx	xxxx	xxxx	xxxxx	783	691	1016								
Move Cap.:	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx	xxxx	xxxx	xxxxx	781	689	1016								
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.01								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT					
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	831	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx								
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*								
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.5										
ApproachLOS:	*			*			*			A										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[13.6]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	23	6	10	19	200	201	74	106	97								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	23	6	10	19	200	201	74	106	97								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	23	6	10	19	200	201	74	106	97								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	23	6	10	19	200	201	74	106	97								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	641	742	155	203	xxxx	xxxxx	401	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	442	346	897	1381	xxxx	xxxxx	1169	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	416	319	897	1381	xxxx	xxxxx	1169	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.02	0.01	0.01	xxxx	xxxx	0.06	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	8.3	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	457	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.6	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx				13.6		xxxxxx			xxxxxx										
ApproachLOS:	*				B		*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.471
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	0	263	0	0	300	0	0	0	0	184	1	35	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	263	0	0	300	0	0	0	0	184	1	35	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	263	0	0	300	0	0	0	0	184	1	35	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	263	0	0	300	0	0	0	0	184	1	35	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	263	0	0	300	0	0	0	0	184	1	35	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	583	637	0	0	637	0	0	0	0	536	576	648	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.41	xxxx	xxxx	0.47	xxxx	xxxx	xxxx	xxxx	0.34	0.00	0.05	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	11.9	0.0	0.0	13.2	0.0	0.0	0.0	0.0	12.2	8.6	8.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	11.9	0.0	0.0	13.2	0.0	0.0	0.0	0.0	12.2	8.6	8.2	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		11.9			13.2			xxxxxx			11.5		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		11.9			13.2			xxxxxx			11.5		
LOS by Appr:		B			B			*			B		
AllWayAvgQ:	0.0	0.6	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.5	0.0	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.531
Loss Time (sec):	0	Average Delay (sec/veh):	12.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	175	265	314	343	0	0	0	1	71	1	91	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	175	265	314	343	0	0	0	1	71	1	91	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	175	265	314	343	0	0	0	1	71	1	91	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	175	265	314	343	0	0	0	1	71	1	91	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	175	265	314	343	0	0	0	1	71	1	91	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.87	0.13	1.00	
Final Sat.:	0	606	690	594	646	0	0	459	504	407	60	548	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.29	0.38	0.53	0.53	xxxx	xxxx	0.00	0.00	0.17	0.02	0.17	
Crit Moves:			****		****				****	****			
Delay/Veh:	0.0	10.7	10.8	15.0	14.0	0.0	0.0	0.0	9.2	11.2	11.2	9.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.7	10.8	15.0	14.0	0.0	0.0	0.0	9.2	11.2	11.2	9.9	
LOS by Move:	*	B	B	C	B	*	*	*	A	B	B	A	
ApproachDel:	10.8			14.5			9.2			10.5			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.8			14.5			9.2			10.5			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.4	0.6	1.0	1.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.562
Loss Time (sec):	0	Average Delay (sec/veh):	6.6
Optimal Cycle:	43	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	947	65	177	939	0	0	0	0	154	0	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	947	65	177	939	0	0	0	0	154	0	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	947	65	177	939	0	0	0	0	154	0	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	947	65	177	939	0	0	0	0	154	0	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	947	65	177	939	0	0	0	0	154	0	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.62	0.62	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.87	0.13	0.32	1.68	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3344	230	371	1968	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.48	0.48	0.00	0.00	0.00	0.00	0.09	0.00	0.07
Crit Moves:					****					****		
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.33	0.33	0.56	0.56	0.00	0.00	0.00	0.00	0.56	0.00	0.49
Delay/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	42.0	0.0	40.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	42.0	0.0	40.4
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	4	4	6	6	0	0	0	0	5	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.651
Loss Time (sec):	0	Average Delay (sec/veh):	17.4
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	12	767	188	118	387	196	31	234	2	31	160	385
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	767	188	118	387	196	31	234	2	31	160	385
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	767	188	118	387	196	31	234	2	31	160	385
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	767	188	118	387	196	31	234	2	31	160	385
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	767	188	118	387	196	31	234	2	31	160	385
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	0.92	0.92	0.19	0.90	0.90	0.25	1.00	1.00	0.51	0.89	0.89
Lanes:	1.00	1.61	0.39	1.00	1.33	0.67	1.00	0.99	0.01	1.00	0.29	0.71
Final Sat.:	652	2812	689	357	2277	1153	479	1882	16	971	499	1200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.27	0.27	0.33	0.17	0.17	0.06	0.12	0.12	0.03	0.32	0.32
Crit Moves:				****							****	
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.04	0.54	0.54	0.65	0.34	0.34	0.13	0.25	0.25	0.06	0.65	0.65
Delay/Veh:	12.4	17.0	17.0	26.3	14.7	14.7	14.0	14.8	14.8	13.3	20.8	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.4	17.0	17.0	26.3	14.7	14.7	14.0	14.8	14.8	13.3	20.8	20.8
LOS by Move:	B	B	B	C	B	B	B	B	B	B	C	C
HCM2kAvgQ:	0	11	11	4	6	6	1	4	4	1	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.343
Loss Time (sec):	0	Average Delay (sec/veh):	9.4
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	148	0	169	206	427	0	0	389	188
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	148	0	169	206	427	0	0	389	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	148	0	169	206	427	0	0	389	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	148	0	169	206	427	0	0	389	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	148	0	169	206	427	0	0	389	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.45	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	863	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.10	0.24	0.12	0.00	0.00	0.20	0.12
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.70	0.70	0.00	0.00	0.70	1.00
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.34	0.34	0.17	0.00	0.00	0.29	0.12
Delay/Veh:	0.0	0.0	0.0	25.3	0.0	27.4	6.4	5.3	0.0	0.0	6.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.3	0.0	27.4	6.4	5.3	0.0	0.0	6.0	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	4	3	2	0	0	5	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.588
Loss Time (sec):	0	Average Delay (sec/veh):	15.5
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	85	208	2	12	113	273	298	268	97	1	483	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	208	2	12	113	273	298	268	97	1	483	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	208	2	12	113	273	298	268	97	1	483	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	208	2	12	113	273	298	268	97	1	483	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	208	2	12	113	273	298	268	97	1	483	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.88	0.88	0.97	0.97	0.85	0.38	1.00	0.85	0.54	0.99	0.99
Lanes:	0.29	0.70	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	483	1182	11	176	1659	1615	724	1900	1615	1034	1712	163
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.07	0.07	0.17	0.41	0.14	0.06	0.00	0.28	0.28
Crit Moves:		****					****					
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.59	0.59	0.59	0.23	0.23	0.56	0.59	0.20	0.09	0.00	0.40	0.40
Delay/Veh:	31.6	31.6	31.6	26.5	26.5	31.1	9.4	5.3	4.8	4.5	6.5	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.6	31.6	31.6	26.5	26.5	31.1	9.4	5.3	4.8	4.5	6.5	6.5
LOS by Move:	C	C	C	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	8	8	8	3	3	8	6	3	1	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.674
Loss Time (sec):	0	Average Delay (sec/veh):	14.0
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	4	531	265	64	1285	16	12	35	20	301	21	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	531	265	64	1285	16	12	35	20	301	21	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	531	265	64	1285	16	12	35	20	301	21	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	531	265	64	1285	16	12	35	20	301	21	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	531	265	64	1285	16	12	35	20	301	21	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.67	0.67	0.85
Lanes:	0.01	1.99	1.00	0.09	1.89	0.02	0.18	0.52	0.30	0.93	0.07	1.00
Final Sat.:	26	3404	1615	152	3052	38	307	895	511	1188	83	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.42	0.42	0.42	0.04	0.04	0.04	0.25	0.25	0.01
Crit Moves:					****						****	
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.25	0.25	0.26	0.67	0.67	0.67	0.10	0.10	0.10	0.67	0.67	0.04
Delay/Veh:	8.4	8.4	8.6	13.1	13.1	13.1	20.4	20.4	20.4	29.9	29.9	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.4	8.4	8.6	13.1	13.1	13.1	20.4	20.4	20.4	29.9	29.9	19.8
LOS by Move:	A	A	A	B	B	B	C	C	C	C	C	B
HCM2kAvgQ:	4	4	4	15	15	15	1	1	1	9	9	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.386
Loss Time (sec):	0	Average Delay (sec/veh):	6.9
Optimal Cycle:	23	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1!	0	0
Volume Module:													
Base Vol:	117	1066	6	3	584	34	117	6	60	8	13	33	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	117	1066	6	3	584	34	117	6	60	8	13	33	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	117	1066	6	3	584	34	117	6	60	8	13	33	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	117	1066	6	3	584	34	117	6	60	8	13	33	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	117	1066	6	3	584	34	117	6	60	8	13	33	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.39	0.95	0.95	0.23	0.94	0.94	0.73	0.73	0.85	0.89	0.89	0.89	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.95	0.05	1.00	0.15	0.24	0.61	
Final Sat.:	732	3586	20	437	3384	197	1319	68	1615	250	406	1031	
Capacity Analysis Module:													
Vol/Sat:	0.16	0.30	0.30	0.01	0.17	0.17	0.09	0.09	0.04	0.03	0.03	0.03	
Crit Moves:		****						****					
Green/Cycle:	0.77	0.77	0.77	0.77	0.77	0.77	0.23	0.23	0.23	0.23	0.23	0.23	
Volume/Cap:	0.21	0.39	0.39	0.01	0.22	0.22	0.39	0.39	0.16	0.14	0.14	0.14	
Delay/Veh:	3.3	3.8	3.8	2.7	3.2	3.2	33.3	33.3	31.0	30.8	30.8	30.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	3.3	3.8	3.8	2.7	3.2	3.2	33.3	33.3	31.0	30.8	30.8	30.8	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	6	6	0	3	3	4	4	2	1	1	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.451
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	151	0	246	358	359	0	0	280	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	151	0	246	358	359	0	0	280	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	151	0	246	358	359	0	0	280	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	151	0	246	358	359	0	0	280	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	151	0	246	358	359	0	0	280	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.89	1.00	0.89	0.52	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.38	0.00	1.62	1.00	2.00	0.00	0.00	1.58	0.42
Final Sat.:	0	0	0	2335	0	2739	992	3610	0	0	2766	731
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.09	0.36	0.10	0.00	0.00	0.10	0.10
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.20	0.00	0.20	0.80	0.80	0.00	0.00	0.80	0.80
Volume/Cap:	0.00	0.00	0.00	0.32	0.00	0.45	0.45	0.12	0.00	0.00	0.13	0.13
Delay/Veh:	0.0	0.0	0.0	34.4	0.0	35.6	3.5	2.2	0.0	0.0	2.2	2.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.4	0.0	35.6	3.5	2.2	0.0	0.0	2.2	2.2
LOS by Move:	A	A	A	C	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	5	4	1	0	0	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	13.7
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	61	601	14	65	466	46	125	217	108	13	169	53
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	601	14	65	466	46	125	217	108	13	169	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	601	14	65	466	46	125	217	108	13	169	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	601	14	65	466	46	125	217	108	13	169	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	601	14	65	466	46	125	217	108	13	169	53
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.42	1.00	0.85	0.34	1.00	0.85	0.50	0.90	0.90	0.41	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.34	0.66	1.00	1.52	0.48
Final Sat.:	800	1900	1615	654	1900	1615	957	2290	1140	781	2650	831
Capacity Analysis Module:												
Vol/Sat:	0.08	0.32	0.01	0.10	0.25	0.03	0.13	0.09	0.09	0.02	0.06	0.06
Crit Moves:		****					****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.11	0.45	0.01	0.14	0.35	0.04	0.45	0.32	0.32	0.06	0.22	0.22
Delay/Veh:	4.7	6.5	4.3	4.9	5.8	4.4	29.9	27.9	27.9	25.6	26.9	26.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.7	6.5	4.3	4.9	5.8	4.4	29.9	27.9	27.9	25.6	26.9	26.9
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	8	0	1	6	0	4	4	4	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.533
Loss Time (sec):	0	Average Delay (sec/veh):	21.5
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	28	819	20	125	707	27	44	147	28	37	148	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	819	20	125	707	27	44	147	28	37	148	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	819	20	125	707	27	44	147	28	37	148	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	819	20	125	707	27	44	147	28	37	148	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	819	20	125	707	27	44	147	28	37	148	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.94	0.94	0.95	0.98	0.98	0.95	0.91	0.91
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.84	0.16	1.00	0.41	0.59
Final Sat.:	1805	3511	86	1805	3458	132	1805	1558	297	1805	716	1016
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.23	0.07	0.20	0.20	0.02	0.09	0.09	0.02	0.21	0.21
Crit Moves:		****		****			****				****	
Green/Cycle:	0.04	0.44	0.44	0.13	0.53	0.53	0.36	0.36	0.36	0.08	0.39	0.39
Volume/Cap:	0.39	0.53	0.53	0.53	0.39	0.39	0.18	0.27	0.27	0.27	0.53	0.53
Delay/Veh:	50.2	21.0	21.0	43.1	14.2	14.2	22.8	23.1	23.1	44.5	24.5	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	21.0	21.0	43.1	14.2	14.2	22.8	23.1	23.1	44.5	24.5	24.5
LOS by Move:	D	C	C	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	1	10	10	4	7	7	1	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.378
Loss Time (sec):	0	Average Delay (sec/veh):	7.7
Optimal Cycle:	23	Level Of Service:	A

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	98	0	69	0	0	0	0	830	118	88	721	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	0	69	0	0	0	0	830	118	88	721	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	0	69	0	0	0	0	830	118	88	721	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	0	69	0	0	0	0	830	118	88	721	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	0	69	0	0	0	0	830	118	88	721	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	1.00	0.80	1.00	1.00	1.00	1.00	0.93	0.93	0.26	0.95	1.00
Lanes:	0.59	0.00	0.41	0.00	0.00	0.00	0.00	1.75	0.25	1.00	2.00	0.00
Final Sat.:	887	0	624	0	0	0	0	3102	441	485	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.27	0.27	0.18	0.20	0.00
Crit Moves:	****							****				
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.71	0.00
Volume/Cap:	0.38	0.00	0.38	0.00	0.00	0.00	0.00	0.38	0.38	0.26	0.28	0.00
Delay/Veh:	28.7	0.0	28.7	0.0	0.0	0.0	0.0	5.9	5.9	5.6	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	28.7	0.0	0.0	0.0	0.0	5.9	5.9	5.6	5.4	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	4	0	4	0	0	0	0	6	6	1	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.473
Loss Time (sec):	0	Average Delay (sec/veh):	19.5
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	62	0	261	238	581	0	0	539	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	62	0	261	238	581	0	0	539	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	62	0	261	238	581	0	0	539	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	62	0	261	238	581	0	0	539	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	62	0	261	238	581	0	0	539	94
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.70	0.30
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3005	524
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.16	0.13	0.16	0.00	0.00	0.18	0.18
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.28	0.66	0.00	0.00	0.38	0.38
Volume/Cap:	0.00	0.00	0.00	0.05	0.00	0.47	0.47	0.24	0.00	0.00	0.47	0.47
Delay/Veh:	0.0	0.0	0.0	22.1	0.0	26.5	30.7	7.0	0.0	0.0	23.7	23.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.1	0.0	26.5	30.7	7.0	0.0	0.0	23.7	23.7
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	7	6	4	0	0	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.554
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	42	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	133	0	260	0	0	211	0	613	169	172	416	230
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	0	260	0	0	211	0	613	169	172	416	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	0	260	0	0	211	0	613	169	172	416	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	0	260	0	0	211	0	613	169	172	416	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	0	260	0	0	211	0	613	169	172	416	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.16	0.00	0.00	0.13	0.00	0.17	0.10	0.10	0.12	0.14
Crit Moves:			****			****		****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.23	0.00	0.31	0.31	0.17	0.48	0.48
Volume/Cap:	0.13	0.00	0.55	0.00	0.00	0.55	0.00	0.55	0.34	0.55	0.24	0.30
Delay/Veh:	26.2	0.0	31.5	0.0	0.0	35.7	0.0	29.6	27.3	40.1	15.5	16.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.2	0.0	31.5	0.0	0.0	35.7	0.0	29.6	27.3	40.1	15.5	16.1
LOS by Move:	C	A	C	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	7	0	0	6	0	9	4	6	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.536
Loss Time (sec):	0	Average Delay (sec/veh):	17.1
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	152	532	31	32	496	34	102	664	225	32	646	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	532	31	32	496	34	102	664	225	32	646	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	532	31	32	496	34	102	664	225	32	646	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	532	31	32	496	34	102	664	225	32	646	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	532	31	32	496	34	102	664	225	32	646	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.31	1.00	0.85	0.28	1.00	0.85	0.27	0.91	0.91	0.20	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.86	0.14
Final Sat.:	592	1900	1615	541	1900	1615	520	2594	879	373	3314	257
Capacity Analysis Module:												
Vol/Sat:	0.26	0.28	0.02	0.06	0.26	0.02	0.20	0.26	0.26	0.09	0.19	0.19
Crit Moves:		****						****				
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.49	0.54	0.04	0.11	0.50	0.04	0.41	0.54	0.54	0.18	0.41	0.41
Delay/Veh:	16.6	16.4	11.6	12.3	15.8	11.7	18.1	18.7	18.7	15.4	17.1	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.6	16.4	11.6	12.3	15.8	11.7	18.1	18.7	18.7	15.4	17.1	17.1
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	4	11	0	1	10	1	3	10	10	1	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	0	Average Delay (sec/veh):	20.9
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	278	637	58	54	841	49	68	255	366	85	331	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	278	637	58	54	841	49	68	255	366	85	331	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	278	637	58	54	841	49	68	255	366	85	331	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	278	637	58	54	841	49	68	255	366	85	331	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	278	637	58	54	841	49	68	255	366	85	331	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.41	0.87	0.87	0.25	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.00	1.00	1.00	1.74	0.26
Final Sat.:	1805	3610	1615	1805	3383	197	772	1645	1645	467	3074	464
Capacity Analysis Module:												
Vol/Sat:	0.15	0.18	0.04	0.03	0.25	0.25	0.09	0.15	0.22	0.18	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.64	0.55	0.55	0.49	0.40	0.40	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.50	0.32	0.07	0.11	0.63	0.63	0.25	0.44	0.63	0.51	0.30	0.30
Delay/Veh:	12.3	12.3	10.5	13.5	25.0	25.0	23.2	24.8	27.9	28.0	23.4	23.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.3	12.3	10.5	13.5	25.0	25.0	23.2	24.8	27.9	28.0	23.4	23.4
LOS by Move:	B	B	B	B	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	6	1	1	12	12	2	6	10	3	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.922
Loss Time (sec):	0	Average Delay (sec/veh):	32.8
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	119	691	211	35	1026	164	104	236	35	594	1246	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	691	211	35	1026	164	104	236	35	594	1246	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	691	211	35	1026	164	104	236	35	594	1246	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	691	211	35	1026	164	104	236	35	594	1246	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	691	211	35	1026	164	104	236	35	594	1246	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.13	1.00	0.85	0.29	1.00	0.85	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.61	0.39	1.00	3.00	1.00
Final Sat.:	250	1900	1615	556	1900	1615	1805	4429	657	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.48	0.36	0.13	0.06	0.54	0.10	0.06	0.05	0.05	0.33	0.24	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.08	0.06	0.06	0.36	0.33	0.33
Volume/Cap:	0.81	0.62	0.22	0.11	0.92	0.17	0.72	0.92	0.92	0.92	0.72	0.08
Delay/Veh:	44.2	14.6	10.0	9.3	31.1	9.7	60.8	79.7	79.7	49.7	30.6	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.2	14.6	10.0	9.3	31.1	9.7	60.8	79.7	79.7	49.7	30.6	22.9
LOS by Move:	D	B	B	A	C	A	E	E	E	D	C	C
HCM2kAvgQ:	5	14	3	1	33	2	5	6	6	22	13	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.873
Loss Time (sec):	0	Average Delay (sec/veh):	19.9
Optimal Cycle:	147	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	980	0	15	7	363	0	0	1329	955
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	980	0	15	7	363	0	0	1329	955
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	980	0	15	7	363	0	0	1329	955
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	980	0	15	7	363	0	0	1329	955
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	980	0	15	7	363	0	0	1329	955
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.28	0.00	0.01	0.00	0.07	0.00	0.00	0.26	0.59
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.32	0.00	0.32	0.00	0.68	0.00	0.00	0.68	0.68
Volume/Cap:	0.00	0.00	0.00	0.87	0.00	0.03	0.87	0.10	0.00	0.00	0.38	0.87
Delay/Veh:	0.0	0.0	0.0	39.8	0.0	23.3	285.0	5.5	0.0	0.0	7.1	20.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	39.8	0.0	23.3	285.0	5.5	0.0	0.0	7.1	20.7
LOS by Move:	A	A	A	D	A	C	F	A	A	A	A	C
HCM2kAvgQ:	0	0	0	18	0	0	1	1	0	0	6	26

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.782
Loss Time (sec):	0	Average Delay (sec/veh):	26.1
Optimal Cycle:	85	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	113	607	3	161	749	63	156	884	188	286	810	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	607	3	161	749	63	156	884	188	286	810	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	607	3	161	749	63	156	884	188	286	810	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	607	3	161	749	63	156	884	188	286	810	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	113	607	3	161	749	63	156	884	188	286	810	177
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.95	0.85	0.29	0.94	0.94	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.84	0.16	1.00	1.65	0.35	1.00	1.64	0.36
Final Sat.:	355	3610	1615	544	3291	277	1805	2899	616	1805	2883	630
Capacity Analysis Module:												
Vol/Sat:	0.32	0.17	0.00	0.30	0.23	0.23	0.09	0.30	0.30	0.16	0.28	0.28
Crit Moves:	****							****		****		
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.14	0.39	0.39	0.45	0.45	0.45
Volume/Cap:	0.78	0.41	0.00	0.73	0.56	0.56	0.62	0.78	0.78	0.65	0.62	0.62
Delay/Veh:	49.4	21.3	17.6	36.3	23.2	23.2	45.2	29.8	29.8	21.1	21.5	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	21.3	17.6	36.3	23.2	23.2	45.2	29.8	29.8	21.1	21.5	21.5
LOS by Move:	D	C	B	D	C	C	D	C	C	C	C	C
HCM2kAvgQ:	5	7	0	6	10	10	6	17	17	8	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.572
Loss Time (sec): 0 Average Delay (sec/veh): 19.7
Optimal Cycle: 43 Level Of Service: B

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	193	144	27	193	249	79	98	674	164	43	828	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	144	27	193	249	79	98	674	164	43	828	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	193	144	27	193	249	79	98	674	164	43	828	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	144	27	193	249	79	98	674	164	43	828	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	193	144	27	193	249	79	98	674	164	43	828	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.96	0.96	0.18	0.92	0.92	0.22	0.93	0.93
Lanes:	1.00	0.84	0.16	1.00	0.76	0.24	1.00	1.61	0.39	1.00	1.71	0.29
Final Sat.:	1805	1562	293	1805	1390	441	342	2818	686	427	3024	508
Capacity Analysis Module:												
Vol/Sat:	0.11	0.09	0.09	0.11	0.18	0.18	0.29	0.24	0.24	0.10	0.27	0.27
Crit Moves:	****				****		****					
Green/Cycle:	0.42	0.23	0.23	0.50	0.31	0.31	0.50	0.50	0.50	0.50	0.50	0.50
Volume/Cap:	0.38	0.40	0.40	0.29	0.57	0.57	0.57	0.48	0.48	0.20	0.55	0.55
Delay/Veh:	19.7	33.1	33.1	14.6	30.1	30.1	22.1	16.6	16.6	14.4	17.6	17.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.7	33.1	33.1	14.6	30.1	30.1	22.1	16.6	16.6	14.4	17.6	17.6
LOS by Move:	B	C	C	B	C	C	C	B	B	B	B	B
HCM2kAvgQ:	4	5	5	4	9	9	3	9	9	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.545
Loss Time (sec):	0	Average Delay (sec/veh):	18.3
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	391	114	399	621	3	1	1	1	140	2	290	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	391	114	399	621	3	1	1	1	140	2	290	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	391	114	399	621	3	1	1	1	140	2	290	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	391	114	399	621	3	1	1	1	140	2	290	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	391	114	399	621	3	1	1	1	140	2	290	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.55	0.45	1.00	1.99	0.01	0.33	0.33	0.33	0.99	0.01	1.00	
Final Sat.:	1900	2700	787	1805	3590	17	585	585	585	1385	20	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.14	0.14	0.22	0.17	0.17	0.00	0.00	0.00	0.10	0.10	0.18	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.27	0.27	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33	
Volume/Cap:	0.00	0.55	0.55	0.47	0.26	0.26	0.01	0.01	0.01	0.31	0.31	0.55	
Delay/Veh:	0.0	32.2	32.2	8.8	6.6	6.6	22.5	22.5	22.5	25.4	25.4	28.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	32.2	32.2	8.8	6.6	6.6	22.5	22.5	22.5	25.4	25.4	28.6	
LOS by Move:	A	C	C	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	7	7	6	4	4	0	0	0	3	3	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Protected					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	321	125	27		59	188	32		9	195	287		58	279	25			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	321	125	27		59	188	32		9	195	287		58	279	25			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	321	125	27		59	188	32		9	195	287		58	279	25			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	321	125	27		59	188	32		9	195	287		58	279	25			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	321	125	27		59	188	32		9	195	287		58	279	25			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.92	0.96	0.82		0.92	0.96	0.82		0.44	0.88	0.88		0.92	0.95	0.95			
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.40	0.60		1.00	0.92	0.08			
Final Sat.:	1742	1833	1558		1742	1833	1558		833	675	994		1742	1662	149			
Capacity Analysis Module:																		
Vol/Sat:	0.18	0.07	0.02		0.03	0.10	0.02		0.01	0.29	0.29		0.03	0.17	0.17			
Crit Moves:	****					****				****			****					
Green/Cycle:	0.30	0.30	0.30		0.17	0.17	0.17		0.47	0.47	0.47		0.05	0.53	0.53			
Volume/Cap:	0.61	0.23	0.06		0.20	0.61	0.12		0.02	0.61	0.61		0.61	0.32	0.32			
Delay/Veh:	31.9	26.3	24.8		36.1	42.0	35.5		14.0	20.8	20.8		57.1	13.5	13.5			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	31.9	26.3	24.8		36.1	42.0	35.5		14.0	20.8	20.8		57.1	13.5	13.5			
LOS by Move:	C	C	C		D	D	D		B	C	C		E	B	B			
HCM2kAvgQ:	9	3	1		2	6	1		0	11	11		3	5	5			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.459
Loss Time (sec):	0	Average Delay (sec/veh):	17.5
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Figueroa St						Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	16	403	158	93	728	12	14	74	10	221	98	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	403	158	93	728	12	14	74	10	221	98	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	403	158	93	728	12	14	74	10	221	98	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	403	158	93	728	12	14	74	10	221	98	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	403	158	93	728	12	14	74	10	221	98	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.91	0.91	0.33	0.95	0.95	0.93	0.93	0.93	0.76	0.76	0.76
Lanes:	1.00	1.44	0.56	1.00	1.97	0.03	0.14	0.76	0.10	0.61	0.27	0.13
Final Sat.:	456	2484	974	631	3543	58	253	1338	181	873	387	182
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.15	0.21	0.21	0.06	0.06	0.06	0.25	0.25	0.25
Crit Moves:					****						****	
Green/Cycle:	0.45	0.45	0.45	0.45	0.45	0.45	0.55	0.55	0.55	0.55	0.55	0.55
Volume/Cap:	0.08	0.36	0.36	0.33	0.46	0.46	0.10	0.10	0.10	0.46	0.46	0.46
Delay/Veh:	16.0	18.3	18.3	18.6	19.4	19.4	10.7	10.7	10.7	13.9	13.9	13.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	18.3	18.3	18.6	19.4	19.4	10.7	10.7	10.7	13.9	13.9	13.9
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	0	6	6	2	8	8	1	1	1	7	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.498
Loss Time (sec):	0	Average Delay (sec/veh):	15.4
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	204	297	34	57	431	40	28	155	353	52	233	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	204	297	34	57	431	40	28	155	353	52	233	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	204	297	34	57	431	40	28	155	353	52	233	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	204	297	34	57	431	40	28	155	353	52	233	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	204	297	34	57	431	40	28	155	353	52	233	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.38	1.00	0.85	0.48	1.00	0.85	0.48	0.85	0.85	0.37	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	730	1900	1615	920	1900	1615	909	1617	1617	709	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.28	0.16	0.02	0.06	0.23	0.02	0.03	0.10	0.22	0.07	0.12	0.09
Crit Moves:	****								****			
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.44	0.44	0.44	0.44	0.44	0.44
Volume/Cap:	0.50	0.28	0.04	0.11	0.40	0.04	0.07	0.22	0.50	0.17	0.28	0.21
Delay/Veh:	14.3	11.5	9.8	10.4	12.7	9.9	16.3	17.5	20.5	17.3	18.1	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.3	11.5	9.8	10.4	12.7	9.9	16.3	17.5	20.5	17.3	18.1	17.5
LOS by Move:	B	B	A	B	B	A	B	B	C	B	B	B
HCM2kAvgQ:	4	5	0	1	7	1	1	3	8	1	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.576
Loss Time (sec):	0	Average Delay (sec/veh):	22.3
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	73	376	80	115	911	70	47	338	138	80	195	60	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	73	376	80	115	911	70	47	338	138	80	195	60	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	73	376	80	115	911	70	47	338	138	80	195	60	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	73	376	80	115	911	70	47	338	138	80	195	60	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	73	376	80	115	911	70	47	338	138	80	195	60	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.91	0.91	0.91	0.77	0.77	0.77	
Lanes:	1.00	1.65	0.35	1.00	1.86	0.14	0.09	0.65	0.26	0.24	0.58	0.18	
Final Sat.:	1805	2898	617	1805	3317	255	156	1121	458	350	854	263	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.13	0.13	0.06	0.27	0.27	0.30	0.30	0.30	0.23	0.23	0.23	
Crit Moves:					****			****					
Green/Cycle:	0.07	0.34	0.34	0.45	0.45	0.45	0.49	0.49	0.49	0.49	0.49	0.49	
Volume/Cap:	0.62	0.38	0.38	0.27	0.62	0.62	0.62	0.62	0.62	0.47	0.47	0.47	
Delay/Veh:	54.9	25.0	25.0	17.9	21.9	21.9	20.1	20.1	20.1	17.4	17.4	17.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	54.9	25.0	25.0	17.9	21.9	21.9	20.1	20.1	20.1	17.4	17.4	17.4	
LOS by Move:	D	C	C	B	C	C	C	C	C	B	B	B	
HCM2kAvgQ:	3	6	6	2	13	13	12	12	12	7	7	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.687
Loss Time (sec):	0	Average Delay (sec/veh):	14.3
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1!	0	0
Volume Module:													
Base Vol:	9	416	184	293	1193	1	7	11	0	187	21	189	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	416	184	293	1193	1	7	11	0	187	21	189	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	416	184	293	1193	1	7	11	0	187	21	189	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	416	184	293	1193	1	7	11	0	187	21	189	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	416	184	293	1193	1	7	11	0	187	21	189	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.16	0.91	0.91	0.36	0.95	0.95	0.90	0.90	1.00	0.79	0.79	0.79	
Lanes:	1.00	1.39	0.61	1.00	2.00	0.00	0.39	0.61	0.00	0.47	0.05	0.48	
Final Sat.:	298	2388	1056	692	3607	3	664	1043	0	708	80	716	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.17	0.17	0.42	0.33	0.33	0.01	0.01	0.00	0.26	0.26	0.26	
Crit Moves:				****							****		
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.00	0.38	0.38	0.38	
Volume/Cap:	0.05	0.28	0.28	0.69	0.54	0.54	0.03	0.03	0.00	0.69	0.69	0.69	
Delay/Veh:	7.7	9.0	9.0	17.5	11.3	11.3	19.2	19.2	0.0	29.2	29.2	29.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	7.7	9.0	9.0	17.5	11.3	11.3	19.2	19.2	0.0	29.2	29.2	29.2	
LOS by Move:	A	A	A	B	B	B	B	B	A	C	C	C	
HCM2kAvgQ:	0	4	4	7	11	11	0	0	0	11	11	11	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.585
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	107	64	22	51	256	106	26	107	82	23	123	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	107	64	22	51	256	106	26	107	82	23	123	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	107	64	22	51	256	106	26	107	82	23	123	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	107	64	22	51	256	106	26	107	82	23	123	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	107	64	22	51	256	106	26	107	82	23	123	25	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.74	0.26	1.00	0.71	0.29	0.12	0.50	0.38	0.13	0.72	0.15	
Final Sat.:	513	422	145	550	437	181	72	298	228	77	411	83	
Capacity Analysis Module:													
Vol/Sat:	0.21	0.15	0.15	0.09	0.59	0.59	0.36	0.36	0.36	0.30	0.30	0.30	
Crit Moves:	****				****			****			****		
Delay/Veh:	10.9	9.6	9.6	9.7	15.5	15.5	11.4	11.4	11.4	11.0	11.0	11.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.9	9.6	9.6	9.7	15.5	15.5	11.4	11.4	11.4	11.0	11.0	11.0	
LOS by Move:	B	A	A	A	C	C	B	B	B	B	B	B	
ApproachDel:	10.4			14.8			11.4			11.0			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.4			14.8			11.4			11.0			
LOS by Appr:	B			B			B			B			
AllWayAvgQ:	0.2	0.2	0.2	0.1	1.2	1.2	0.5	0.5	0.5	0.3	0.3	0.3	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.580
Loss Time (sec):	0	Average Delay (sec/veh):	24.3
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	139	396	100	374	788	26	57	270	373	64	74	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	396	100	374	788	26	57	270	373	64	74	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	396	100	374	788	26	57	270	373	64	74	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	396	100	374	788	26	57	270	373	64	74	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	396	100	374	788	26	57	270	373	64	74	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.66	1.00	0.85	0.43	1.00	0.85
Lanes:	1.00	1.60	0.40	1.00	1.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2795	706	1805	3478	115	1259	1900	1615	817	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.14	0.14	0.21	0.23	0.23	0.05	0.14	0.23	0.08	0.04	0.06
Crit Moves:		****		****					****			
Green/Cycle:	0.15	0.24	0.24	0.45	0.45	0.45	0.40	0.40	0.40	0.40	0.40	0.40
Volume/Cap:	0.50	0.58	0.58	0.52	0.50	0.50	0.11	0.36	0.58	0.20	0.10	0.14
Delay/Veh:	40.4	34.3	34.3	19.8	19.9	19.9	19.1	21.4	24.9	19.9	18.9	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.4	34.3	34.3	19.8	19.9	19.9	19.1	21.4	24.9	19.9	18.9	19.3
LOS by Move:	D	C	C	B	B	B	B	C	C	B	B	B
HCM2kAvgQ:	5	8	8	9	9	9	1	6	9	1	1	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.439
Loss Time (sec):	0	Average Delay (sec/veh):	6.0
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	77	583	31	44	1083	272	54	27	20	56	76	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	583	31	44	1083	272	54	27	20	56	76	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	583	31	44	1083	272	54	27	20	56	76	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	583	31	44	1083	272	54	27	20	56	76	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	583	31	44	1083	272	54	27	20	56	76	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	0.94	0.94	0.40	0.92	0.92	0.54	0.94	0.94	0.57	0.85	0.85
Lanes:	1.00	1.90	0.10	1.00	1.60	0.40	1.00	0.57	0.43	1.00	2.00	1.00
Final Sat.:	348	3402	181	763	2798	703	1033	1022	757	1077	3238	1619
Capacity Analysis Module:												
Vol/Sat:	0.22	0.17	0.17	0.06	0.39	0.39	0.05	0.03	0.03	0.05	0.02	0.03
Crit Moves:					****		****					
Green/Cycle:	0.88	0.88	0.88	0.88	0.88	0.88	0.12	0.12	0.12	0.12	0.12	0.12
Volume/Cap:	0.25	0.19	0.19	0.07	0.44	0.44	0.44	0.22	0.22	0.44	0.20	0.29
Delay/Veh:	1.3	0.9	0.9	0.8	1.3	1.3	43.4	40.4	40.4	43.3	39.9	40.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	0.9	0.9	0.8	1.3	1.3	43.4	40.4	40.4	43.3	39.9	40.6
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	1	2	2	0	5	5	2	1	1	2	1	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	0	Average Delay (sec/veh):	36.2
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	302	316	206	282	1149	48	12	906	223	201	605	123	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	302	316	206	282	1149	48	12	906	223	201	605	123	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	302	316	206	282	1149	48	12	906	223	201	605	123	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	302	316	206	282	1149	48	12	906	223	201	605	123	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	302	316	206	282	1149	48	12	906	223	201	605	123	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.61	0.40	1.00	1.66	0.34	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2811	692	1805	2924	595	
Capacity Analysis Module:													
Vol/Sat:	0.17	0.09	0.13	0.16	0.32	0.03	0.01	0.32	0.32	0.11	0.21	0.21	
Crit Moves:	****				****			****					
Green/Cycle:	0.42	0.24	0.24	0.53	0.35	0.35	0.35	0.35	0.35	0.12	0.46	0.46	
Volume/Cap:	0.75	0.37	0.54	0.41	0.92	0.09	0.12	0.92	0.92	0.92	0.45	0.45	
Delay/Veh:	30.3	32.1	34.8	14.0	42.3	22.1	24.6	42.2	42.2	82.7	18.8	18.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	30.3	32.1	34.8	14.0	42.3	22.1	24.6	42.2	42.2	82.7	18.8	18.8	
LOS by Move:	C	C	C	B	D	C	C	D	D	F	B	B	
HCM2kAvgQ:	10	4	6	5	22	1	0	22	22	10	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.381
Loss Time (sec): 0 Average Delay (sec/veh): 17.4
Optimal Cycle: 30 Level Of Service: B

Street Name:	I-5 NB off-ramp						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	312	30	30	24	0	91	78	621	0	0	713	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	312	30	30	24	0	91	78	621	0	0	713	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	312	30	30	24	0	91	78	621	0	0	713	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	30	30	24	0	91	78	621	0	0	713	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	312	30	30	24	0	91	78	621	0	0	713	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.28	0.95	1.00	1.00	0.95	0.95
Lanes:	1.72	0.14	0.14	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.94	0.06
Final Sat.:	3103	250	250	1805	0	1615	531	3610	0	0	3486	108
Capacity Analysis Module:												
Vol/Sat:	0.10	0.12	0.12	0.01	0.00	0.06	0.15	0.17	0.00	0.00	0.20	0.20
Crit Moves:		****				****					****	
Green/Cycle:	0.31	0.31	0.31	0.15	0.00	0.15	0.54	0.54	0.00	0.00	0.54	0.54
Volume/Cap:	0.32	0.38	0.38	0.09	0.00	0.38	0.27	0.32	0.00	0.00	0.38	0.38
Delay/Veh:	26.3	26.9	26.9	36.9	0.0	39.5	13.1	13.0	0.0	0.0	13.6	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.3	26.9	26.9	36.9	0.0	39.5	13.1	13.0	0.0	0.0	13.6	13.6
LOS by Move:	C	C	C	D	A	D	B	B	A	A	B	B
HCM2kAvgQ:	4	5	5	1	0	3	2	6	0	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.644
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	96	261	50	81	393	109	82	905	133	74	1656	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	261	50	81	393	109	82	905	133	74	1656	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	261	50	81	393	109	82	905	133	74	1656	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	261	50	81	393	109	82	905	133	74	1656	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	96	261	50	81	393	109	82	905	133	74	1656	105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.93	0.93	0.42	0.92	0.92	0.10	0.89	0.89	0.24	0.90	0.90
Lanes:	1.00	1.68	0.32	1.00	1.57	0.43	1.00	2.62	0.38	1.00	2.82	0.18
Final Sat.:	504	2957	566	797	2734	758	181	4436	652	447	4834	307
Capacity Analysis Module:												
Vol/Sat:	0.19	0.09	0.09	0.10	0.14	0.14	0.45	0.20	0.20	0.17	0.34	0.34
Crit Moves:	****						****					
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.64	0.30	0.30	0.34	0.49	0.49	0.64	0.29	0.29	0.24	0.49	0.49
Delay/Veh:	39.9	27.4	27.4	28.5	29.3	29.3	18.8	5.5	5.5	5.6	6.8	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.9	27.4	27.4	28.5	29.3	29.3	18.8	5.5	5.5	5.6	6.8	6.8
LOS by Move:	D	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	4	4	4	2	7	7	3	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.380
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	24	355	29	0	0	0	69	170	0	0	737	190
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	355	29	0	0	0	69	170	0	0	737	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	24	355	29	0	0	0	69	170	0	0	737	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	355	29	0	0	0	69	170	0	0	737	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	24	355	29	0	0	0	69	170	0	0	737	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	1.00	1.00	1.00	0.26	0.95	1.00	1.00	0.92	0.92
Lanes:	0.12	1.74	0.14	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.59	0.41
Final Sat.:	208	3080	252	0	0	0	492	3610	0	0	2782	717
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.26	0.26
Crit Moves:		****									****	
Green/Cycle:	0.30	0.30	0.30	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.70	0.70
Volume/Cap:	0.38	0.38	0.38	0.00	0.00	0.00	0.20	0.07	0.00	0.00	0.38	0.38
Delay/Veh:	27.7	27.7	27.7	0.0	0.0	0.0	5.6	4.8	0.0	0.0	6.4	6.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	27.7	27.7	0.0	0.0	0.0	5.6	4.8	0.0	0.0	6.4	6.4
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	5	5	0	0	0	1	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.278
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	20	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 1	0 1	1	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	42	153	291	0	177	121	126	642	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	42	153	291	0	177	121	126	642	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	42	153	291	0	177	121	126	642	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	42	153	291	0	177	121	126	642	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	42	153	291	0	177	121	126	642	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.89	0.89	0.53	0.95	1.00
Lanes:	0.00	0.00	0.00	0.26	0.94	1.80	0.00	1.19	0.81	1.00	2.00	0.00
Final Sat.:	0	0	0	420	1531	2913	0	2014	1377	1015	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.10	0.10	0.00	0.09	0.09	0.12	0.18	0.00
Crit Moves:					****						****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.36	0.36	0.00	0.64	0.64	0.64	0.64	0.00
Volume/Cap:	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.14	0.14	0.19	0.28	0.00
Delay/Veh:	0.0	0.0	0.0	22.9	22.9	22.9	0.0	7.1	7.1	7.5	7.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.9	22.9	22.9	0.0	7.1	7.1	7.5	7.9	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	4	4	0	2	2	2	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 188.1 Worst Case Level Of Service: F[3086.9]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			577	1359			0	139		0		0	0		0		243
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0			577	1359			0	139		0		0	0		0		243
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0			577	1359			0	139		0		0	0		0		243
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			577	1359			0	139		0		0	0		0		243
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2513		2513	xxxxx		1834		2513		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			19		29	xxxxx		59		29		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			11		19	xxxxx		43		19		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.35	xxxx	xxxx			12.71		0.00	xxxx		0.00		0.00		0.22
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.6	xxxx	xxxxx			9.9		xxxx	xxxxx		xxxx		xxxx		0.4
Control Del:	xxxxx	xxxx	xxxxx			8.4	xxxx	xxxxx			3087		xxxx	xxxxx		xxxxx		xxxx		8.7
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			11		xxxx	xxxxx		xxxx		1091		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			5.9		xxxx	xxxxx		xxxxx		0.4		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3087		xxxx	xxxxx		xxxxx		8.7		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					3086.9							8.7		
ApproachLOS:	*					*					F							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.693
Loss Time (sec):	0	Average Delay (sec/veh):	23.3
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	46	215	370	407	366	13	100	366	97	156	185	158
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	215	370	407	366	13	100	366	97	156	185	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	215	370	407	366	13	100	366	97	156	185	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	215	370	407	366	13	100	366	97	156	185	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	215	370	407	366	13	100	366	97	156	185	158
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	1.00	0.85	0.43	0.92	0.92	0.34	0.88	0.88
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.58	0.42	1.00	1.08	0.92
Final Sat.:	1805	1634	1634	1805	1900	1615	816	2764	733	647	1813	1548
Capacity Analysis Module:												
Vol/Sat:	0.03	0.13	0.23	0.23	0.19	0.01	0.12	0.13	0.13	0.24	0.10	0.10
Crit Moves:			****	****						****		
Green/Cycle:	0.08	0.33	0.33	0.58	0.58	0.58	0.35	0.35	0.35	0.35	0.35	0.35
Volume/Cap:	0.33	0.40	0.69	0.59	0.33	0.01	0.35	0.38	0.38	0.69	0.29	0.29
Delay/Veh:	45.2	26.3	31.8	14.9	11.3	9.1	25.0	24.7	24.7	37.0	23.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.2	26.3	31.8	14.9	11.3	9.1	25.0	24.7	24.7	37.0	23.8	23.8
LOS by Move:	D	C	C	B	B	A	C	C	C	D	C	C
HCM2kAvgQ:	2	6	11	9	6	0	3	6	6	6	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	0	Average Delay (sec/veh):	25.1
Optimal Cycle:	84	Level Of Service:	C

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	1 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	6	484	41	158	628	548	155	113	9	72	768	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	484	41	158	628	548	155	113	9	72	768	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	484	41	158	628	548	155	113	9	72	768	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	484	41	158	628	548	155	113	9	72	768	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	484	41	158	628	548	155	113	9	72	768	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.99	0.99	0.31	1.00	0.85	0.17	0.94	0.94	0.86	0.86	0.86
Lanes:	1.00	0.92	0.08	1.00	1.00	1.00	1.00	1.85	0.15	0.16	1.66	0.19
Final Sat.:	455	1731	147	590	1900	1615	317	3307	263	254	2707	307
Capacity Analysis Module:												
Vol/Sat:	0.01	0.28	0.28	0.27	0.33	0.34	0.49	0.03	0.03	0.28	0.28	0.28
Crit Moves:						****	****					
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.03	0.68	0.68	0.65	0.81	0.83	0.83	0.06	0.06	0.48	0.48	0.48
Delay/Veh:	17.7	26.8	26.8	30.2	32.3	35.0	41.9	8.7	8.7	11.9	11.9	11.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.7	26.8	26.8	30.2	32.3	35.0	41.9	8.7	8.7	11.9	11.9	11.9
LOS by Move:	B	C	C	C	C	D	D	A	A	B	B	B
HCM2kAvgQ:	0	14	14	5	19	17	6	1	1	9	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.805
Loss Time (sec):	0	Average Delay (sec/veh):	20.3
Optimal Cycle:	74	Level Of Service:	C

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	157	293	27	175	464	393	30	466	224	64	1137	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	157	293	27	175	464	393	30	466	224	64	1137	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	157	293	27	175	464	393	30	466	224	64	1137	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	293	27	175	464	393	30	466	224	64	1137	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	293	27	175	464	393	30	466	224	64	1137	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.21	0.94	0.94	0.49	0.88	0.88	0.74	0.74	0.74	0.82	0.82	0.82
Lanes:	1.00	1.83	0.17	1.00	1.08	0.92	0.08	1.29	0.62	0.10	1.76	0.14
Final Sat.:	402	3263	301	937	1820	1542	117	1810	870	155	2745	215
Capacity Analysis Module:												
Vol/Sat:	0.39	0.09	0.09	0.19	0.25	0.25	0.26	0.26	0.26	0.41	0.41	0.41
Crit Moves:	****										****	
Green/Cycle:	0.49	0.49	0.49	0.49	0.49	0.49	0.51	0.51	0.51	0.51	0.51	0.51
Volume/Cap:	0.81	0.18	0.18	0.38	0.53	0.53	0.50	0.50	0.50	0.81	0.81	0.81
Delay/Veh:	42.9	14.6	14.6	16.8	18.1	18.1	16.2	16.2	16.2	23.2	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.9	14.6	14.6	16.8	18.1	18.1	16.2	16.2	16.2	23.2	23.2	23.2
LOS by Move:	D	B	B	B	B	B	B	B	B	C	C	C
HCM2kAvgQ:	6	3	3	4	10	10	8	8	8	19	19	19

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 63.2 Worst Case Level Of Service: F[642.4]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	122		1	128				0	610		0		2	1687		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	2	122		1	128				0	610		0		2	1687		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	2	122		1	128				0	610		0		2	1687		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	2	122		1	128				0	610		0		2	1687		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	305	1996		2301	844				xxxx	xxxx		xxxxx		610	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	697	36		39	311				xxxx	xxxx		xxxxx		979	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	697	36		39	311				xxxx	xxxx		xxxxx		979	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.00	3.36		0.03	0.41				xxxx	xxxx		xxxx		0.00	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	14.0		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	10.2	1294		xxxx	xxxxx				xxxxx	xxxx		xxxxx		8.7	xxxx		xxxxx	
LOS by Move:	*	*	B	F		*	*				*	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	295				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.1				xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	26.3				xxxxx	xxxx		xxxxx		8.7	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	D				*	*		*		A	*		*	
ApproachDel:	10.2			642.4							xxxxxx					xxxxxx				
ApproachLOS:	B			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.888
Loss Time (sec):	0	Average Delay (sec/veh):	865.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1849	293	410	0	0	858	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1849	293	410	0	0	858	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1849	293	410	0	0	858	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1849	293	410	0	0	858	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1849	293	410	0	0	858	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.25	1.75	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2211	3094	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.13	0.13	0.00	0.00	0.24	0.01
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.27	0.27
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	4.36	0.89	0.89	0.00	0.00	0.89	0.02
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1560	53.7	53.7	0.0	0.0	45.3	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1560	53.7	53.7	0.0	0.0	45.3	27.0
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	132	11	11	0	0	17	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.612
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	14	237	6	91	1511	65	57	198	89	111	297	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	237	6	91	1511	65	57	198	89	111	297	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	237	6	91	1511	65	57	198	89	111	297	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	237	6	91	1511	65	57	198	89	111	297	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	237	6	91	1511	65	57	198	89	111	297	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.11	0.95	0.95	0.58	0.94	0.94	0.72	0.72	0.72	0.68	0.68	0.68
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.33	1.15	0.52	0.50	1.33	0.18
Final Sat.:	203	3508	89	1094	3440	148	451	1567	704	644	1723	232
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.08	0.44	0.44	0.13	0.13	0.13	0.17	0.17	0.17
Crit Moves:					****						****	
Green/Cycle:	0.72	0.72	0.72	0.72	0.72	0.72	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.10	0.09	0.09	0.12	0.61	0.61	0.45	0.45	0.45	0.61	0.61	0.61
Delay/Veh:	4.6	4.3	4.3	4.4	7.5	7.5	29.9	29.9	29.9	32.7	32.7	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.6	4.3	4.3	4.4	7.5	7.5	29.9	29.9	29.9	32.7	32.7	32.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	13	13	5	5	5	7	7	7

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

FUTURE YEAR 2035 WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.673
Loss Time (sec):	0	Average Delay (sec/veh):	29.5
Optimal Cycle:	70	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	311	977	405	11	536	45	34	255	255	574	327	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	977	405	11	536	45	34	255	255	574	327	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	311	977	405	11	536	45	34	255	0	574	327	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	977	405	11	536	45	34	255	0	574	327	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	311	977	405	11	536	45	34	255	0	574	327	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.12	0.88	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.95	0.05
Final Sat.:	1805	3506	1453	1805	4728	397	1805	3610	1900	1805	3510	86
Capacity Analysis Module:												
Vol/Sat:	0.17	0.28	0.28	0.01	0.11	0.11	0.02	0.07	0.00	0.32	0.09	0.09
Crit Moves:		****		****				****		****		
Green/Cycle:	0.26	0.41	0.41	0.01	0.17	0.17	0.10	0.10	0.00	0.47	0.48	0.48
Volume/Cap:	0.68	0.67	0.67	0.67	0.68	0.68	0.19	0.67	0.00	0.67	0.19	0.19
Delay/Veh:	37.5	24.7	24.7	124.3	41.2	41.2	42.1	47.8	0.0	22.6	15.0	15.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.5	24.7	24.7	124.3	41.2	41.2	42.1	47.8	0.0	22.6	15.0	15.0
LOS by Move:	D	C	C	F	D	D	D	D	A	C	B	B
HCM2kAvgQ:	10	13	13	1	7	7	1	5	0	14	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A[8.6]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	16	0	2	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	16	0	2	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	16	0	2	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	16	0	2	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1014	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				8.6		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.404
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	344	1147	50	1	469	170	0	0	0	157	85	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	344	1147	50	1	469	170	0	0	0	157	85	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	344	1147	50	1	469	170	0	0	0	157	85	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	344	1147	50	1	469	170	0	0	0	157	85	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	344	1147	50	1	469	170	0	0	0	157	85	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.92	0.92	0.85
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.30	0.70	1.00
Final Sat.:	3502	3437	150	1805	3610	1615	0	0	0	2260	1224	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.33	0.33	0.00	0.13	0.11	0.00	0.00	0.00	0.07	0.07	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.36	0.83	0.83	0.00	0.47	0.47	0.00	0.00	0.00	0.17	0.17	0.17
Volume/Cap:	0.28	0.40	0.40	0.40	0.28	0.22	0.00	0.00	0.00	0.40	0.40	0.15
Delay/Veh:	23.1	2.3	2.3	132.6	16.1	15.8	0.0	0.0	0.0	37.3	37.3	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.1	2.3	2.3	132.6	16.1	15.8	0.0	0.0	0.0	37.3	37.3	35.4
LOS by Move:	C	A	A	F	B	B	A	A	A	D	D	D
HCM2kAvgQ:	4	5	5	0	5	3	0	0	0	4	4	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.514
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	886	14	0	623	0	201	93	308	20	0	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	886	14	0	623	0	201	93	308	20	0	453
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	886	14	0	623	0	201	93	308	20	0	453
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	886	14	0	623	0	201	93	308	20	0	453
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	886	14	0	623	0	201	93	308	20	0	453
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.86	0.86	0.86	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.68	0.32	1.00	0.08	0.00	1.92
Final Sat.:	0	5095	81	0	3610	0	1121	519	1639	132	0	3115
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.00	0.17	0.00	0.18	0.18	0.19	0.15	0.00	0.15
Crit Moves:		****							****	****		
Green/Cycle:	0.00	0.34	0.34	0.00	0.34	0.00	0.37	0.37	0.37	0.30	0.00	0.30
Volume/Cap:	0.00	0.51	0.51	0.00	0.51	0.00	0.49	0.49	0.51	0.51	0.00	0.49
Delay/Veh:	0.0	26.7	26.7	0.0	26.8	0.0	24.8	24.8	25.2	29.7	0.0	29.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	26.7	26.7	0.0	26.8	0.0	24.8	24.8	25.2	29.7	0.0	29.4
LOS by Move:	A	C	C	A	C	A	C	C	C	C	A	C
HCM2kAvgQ:	0	8	8	0	8	0	8	8	8	7	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.311
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	188	671	0	0	294	1161	0	0	0	67	0	10	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	188	671	0	0	294	1161	0	0	0	67	0	10	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	188	671	0	0	294	0	0	0	0	67	0	10	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	188	671	0	0	294	0	0	0	0	67	0	10	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	188	671	0	0	294	0	0	0	0	67	0	10	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1294	0	193	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.19	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.05	0.00	0.05	
Crit Moves:	****				****					****			
Green/Cycle:	0.34	0.83	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.17	0.00	0.17	
Volume/Cap:	0.31	0.22	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.31	0.00	0.31	
Delay/Veh:	24.9	1.7	0.0	0.0	15.1	0.0	0.0	0.0	0.0	37.4	0.0	37.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	24.9	1.7	0.0	0.0	15.1	0.0	0.0	0.0	0.0	37.4	0.0	37.4	
LOS by Move:	C	A	A	A	B	A	A	A	A	D	A	D	
HCM2kAvgQ:	4	2	0	0	5	0	0	0	0	2	0	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.379
Loss Time (sec):	0	Average Delay (sec/veh):	22.7
Optimal Cycle:	39	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0 1	1 0	1	0 1	0 0	1	0 1!	0 0	0	0 0	0 0	
Volume Module:													
Base Vol:	0	355	152	26	333	0	503	4	75	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	355	152	26	333	0	503	4	75	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	355	152	26	333	0	503	4	75	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	355	152	26	333	0	503	4	75	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	355	152	26	333	0	503	4	75	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.40	0.60	1.00	1.00	0.00	1.76	0.01	0.23	0.00	0.00	0.00	
Final Sat.:	0	2414	1034	1805	1900	0	2856	20	368	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.15	0.15	0.01	0.18	0.00	0.18	0.20	0.20	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.28	0.28	0.33	0.61	0.00	0.39	0.39	0.39	0.00	0.00	0.00	
Volume/Cap:	0.00	0.53	0.53	0.04	0.29	0.00	0.45	0.53	0.53	0.00	0.00	0.00	
Delay/Veh:	0.0	31.0	31.0	22.6	9.2	0.0	23.0	24.0	24.0	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	31.0	31.0	22.6	9.2	0.0	23.0	24.0	24.0	0.0	0.0	0.0	
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A	
HCM2kAvgQ:	0	7	7	1	5	0	7	8	8	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: A[8.8]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	9	1	0	0		34	63				8	0		38		0	0		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	9	1	0	0		34	63				8	0		38		0	0		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	9	1	0	0		34	63				8	0		38		0	0		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	9	1	0	0		34	63				8	0		38		0	0		0	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5		6.2	xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0		3.3	xxxxx	xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	97	xxxx	xxxxx	xxxx	xxxx	xxxxx					85	85		66	xxxx	xxxx	xxxxx			
Potent Cap.:	1509	xxxx	xxxxx	xxxx	xxxx	xxxxx					922	809		1004	xxxx	xxxx	xxxxx			
Move Cap.:	1509	xxxx	xxxxx	xxxx	xxxx	xxxxx					918	805		1004	xxxx	xxxx	xxxxx			
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx					0.01	0.00		0.04	xxxx	xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx		xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx		xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*					*	*		*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	988		xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.1		xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.8		xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*	*	*	*					*	A		*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx							8.8				xxxxxx					
ApproachLOS:	*			*							A				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[11.0]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	15	2	22	66	0	14	3	198	15	11	57	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	2	22	66	0	14	3	198	15	11	57	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	2	22	66	0	14	3	198	15	11	57	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	2	22	66	0	14	3	198	15	11	57	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	298	291	206	303	298	57	57	xxxx	xxxxx	213	xxxx	xxxxx
Potent Cap.:	659	623	840	654	617	1015	1560	xxxx	xxxxx	1369	xxxx	xxxxx
Move Cap.:	645	617	840	630	611	1015	1560	xxxx	xxxxx	1369	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.03	0.10	0.00	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	740	xxxxx	xxxx	675	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.1	xxxxx	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.1			11.0			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 16.5 Worst Case Level Of Service: E[39.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	409		0		50	0		0		0	0		43		0	0		137		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	409		0		50	0		0		0	0		43		0	0		137		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	409		0		0	0		0		0	0		43		0	0		137		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	409		0		0	0		0		0	0		43		0	0		137		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		818	xxxxx	xxxx		818	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		313	xxxxx	xxxx		313	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		235	xxxxx	xxxx		235	xxxxx						
Volume/Cap:	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.18	xxxx	xxxx		0.58	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		0.7	xxxxx	xxxx		3.3	xxxxx						
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		23.8	xxxxx	xxxxx		39.8	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		C	*	*		E	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx				23.8				39.8								
ApproachLOS:	*			*				C				E								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.797
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy									Ave 66								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			31	0			71	0	0	0			0	640			51
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Initial Bse:	0	0	0			31	0			71	0	0	0			0	640			51
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
PHF Volume:	0	0	0			31	0			71	0	0	0			0	640			51
Reduct Vol:	0	0	0			0	0			0	0	0	0			0	0			0
Reduced Vol:	0	0	0			31	0			71	0	0	0			0	640			51
PCE Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
MLF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
FinalVolume:	0	0	0			31	0			71	0	0	0			0	640			51
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
Lanes:	0.00	0.00	0.00			1.00	0.00			1.00	0.00	0.00	0.00			0.00	0.93			0.07
Final Sat.:	0	0	0			530	0			642	0	0	0			0	803			64
Capacity Analysis Module:																				
Vol/Sat:	xxxx	xxxx	xxxx			0.06	xxxx			0.11	xxxx	xxxx	xxxx			xxxx	0.80			0.80
Crit Moves:										****										****
Delay/Veh:	0.0	0.0	0.0			9.5	0.0			8.5	0.0	0.0	0.0			0.0	20.9			20.9
Delay Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00			1.00
AdjDel/Veh:	0.0	0.0	0.0			9.5	0.0			8.5	0.0	0.0	0.0			0.0	20.9			20.9
LOS by Move:	*	*	*			A	*			A	*	*	*			*	C			C
ApproachDel:	xxxxxx					8.8					xxxxxx					20.9				
Delay Adj:	xxxxx					1.00					xxxxx					1.00				
ApprAdjDel:	xxxxxx					8.8					xxxxxx					20.9				
LOS by Appr:	*					A					*					C				
AllWayAvgQ:	0.0	0.0	0.0			0.1	0.0			0.1	0.0	0.0	0.0			3.3	3.3			3.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[13.6]

Street Name:	ASP NB Exit 29									Ave 60									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	8	0	60	66	531	0	0	409	141								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	8	0	60	66	531	0	0	409	141								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	8	0	60	66	531	0	0	409	141								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	8	0	60	66	531	0	0	409	141								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1143	1143	480	550	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	223	202	590	1030	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	213	189	590	1030	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.10	0.06	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	488	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				13.6		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	9.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	15	2	4	2	2	5	6	272	9	5	76	2	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	15	2	4	2	2	5	6	272	9	5	76	2	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	15	2	4	2	2	5	6	272	9	5	76	2	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	15	2	4	2	2	5	6	272	9	5	76	2	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.71	0.10	0.19	0.22	0.22	0.56	0.02	0.95	0.03	0.06	0.92	0.02	
Final Sat.:	152	20	41	0	0	1	18	824	27	44	668	18	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.10	0.10	9.00	9.00	9.00	0.33	0.33	0.33	0.11	0.11	0.11	
Crit Moves:		****			****				****			****	
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.10	0.10	0.10	9.00	9.00	9.00	0.33	0.33	0.33	0.11	0.11	0.11	
Delay/Veh:	1.5	1.5	1.5	xxxxx	xxxx	xxxxx	3.5	3.5	3.5	1.5	1.5	1.5	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.5	1.5	1.5	xxxxx	xxxx	xxxxx	3.5	3.5	3.5	1.5	1.5	1.5	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: C[23.6]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	95	0	183	0	0	0	96	334	0	0	471	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	0	183	0	0	0	96	334	0	0	471	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	0	183	0	0	0	96	334	0	0	471	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	95	0	183	0	0	0	96	334	0	0	471	58
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1026	1055	167	xxxx	xxxx	xxxxx	529	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	262	227	882	xxxx	xxxx	xxxxx	1048	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	243	205	882	xxxx	xxxx	xxxxx	1048	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.39	0.00	0.21	xxxx	xxxx	xxxx	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	465	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.8	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	23.6	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	*	*	*
ApproachDel:		23.6		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C			*			*			*	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[8.5]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		340		8			0	0		0		0		0		66
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		340		8			0	0		0		0		0		66
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		340		8			0	0		0		0		0		66
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		340		8			0	0		0		0		0		66
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			344	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			614	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			577	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.00	xxxx		xxxx		xxxx		xxxx		0.06
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		8.5
LOS by Move:	*	*	*	*		*		*			*	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							xxxxxx							8.5		
ApproachLOS:	*					*								*				A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	11.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	90	28	69	10	339	342	2	325	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	28	69	10	339	342	2	325	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	28	69	10	339	342	2	325	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	28	69	10	339	342	2	325	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	90	28	69	10	339	342	2	325	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.48	0.15	0.37	0.03	0.97	1.00	0.01	1.92	0.07
Final Sat.:	0	512	0	285	89	219	19	634	748	7	1169	40
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.32	0.32	0.32	0.53	0.53	0.46	0.28	0.28	0.28
Crit Moves:		****		****				****		****		
Delay/Veh:	0.0	0.0	0.0	11.2	11.2	11.2	14.1	14.1	11.2	10.6	10.6	10.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.2	11.2	11.2	14.1	14.1	11.2	10.6	10.6	10.5
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			11.2			12.7			10.5		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.2			12.7			10.5		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.4	0.4	0.4	1.1	1.1	0.8	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	257	2	3		0	0	0		244	184	0		0	83	45					
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Initial Bse:	257	2	3		0	0	0		244	184	0		0	83	45					
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
PHF Volume:	257	2	3		0	0	0		244	184	0		0	83	45					
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0					
Reduced Vol:	257	2	3		0	0	0		244	184	0		0	83	45					
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
FinalVolume:	257	2	3		0	0	0		244	184	0		0	83	45					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
Lanes:	0.98	0.01	0.01		0.00	0.00	0.00		0.57	0.43	0.00		0.00	0.65	0.35					
Final Sat.:	622	5	7		0	0	0		409	309	0		0	446	242					
Capacity Analysis Module:																				
Vol/Sat:	0.41	0.41	0.41		xxxx	xxxx	xxxx		0.60	0.60	xxxx		xxxx	0.19	0.19					
Crit Moves:			****						****					****						
Delay/Veh:	11.8	11.8	11.8		0.0	0.0	0.0		14.5	14.5	0.0		0.0	9.0	9.0					
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00					
AdjDel/Veh:	11.8	11.8	11.8		0.0	0.0	0.0		14.5	14.5	0.0		0.0	9.0	9.0					
LOS by Move:	B	B	B		*	*	*		B	B	*		*	A	A					
ApproachDel:	11.8				xxxxxx				14.5					9.0						
Delay Adj:	1.00				xxxxx				1.00					1.00						
ApprAdjDel:	11.8				xxxxxx				14.5					9.0						
LOS by Appr:	B				*				B					A						
AllWayAvgQ:	0.6	0.6	0.6		0.0	0.0	0.0		1.3	1.3	1.3		0.2	0.2	0.2					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.806
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	11	26	51		83	71	141		185	279	14		47	300	99			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	11	26	51		83	71	141		185	279	14		47	300	99			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	11	26	51		83	71	141		185	279	14		47	300	99			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	11	26	51		83	71	141		185	279	14		47	300	99			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	11	26	51		83	71	141		185	279	14		47	300	99			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.13	0.30	0.58		0.28	0.24	0.48		0.39	0.58	0.03		0.11	0.67	0.22			
Final Sat.:	55	130	255		147	126	250		229	346	17		63	402	133			
Capacity Analysis Module:																		
Vol/Sat:	0.20	0.20	0.20		0.56	0.56	0.56		0.81	0.81	0.81		0.75	0.75	0.75			
Crit Moves:		****				****				****				****				
Delay/Veh:	11.2	11.2	11.2		15.9	15.9	15.9		27.5	27.5	27.5		22.6	22.6	22.6			
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	11.2	11.2	11.2		15.9	15.9	15.9		27.5	27.5	27.5		22.6	22.6	22.6			
LOS by Move:	B	B	B		C	C	C		D	D	D		C	C	C			
ApproachDel:	11.2				15.9				27.5				22.6					
Delay Adj:	1.00				1.00				1.00				1.00					
ApprAdjDel:	11.2				15.9				27.5				22.6					
LOS by Appr:	B				C				D				C					
AllWayAvgQ:	0.2	0.2	0.2		1.0	1.0	1.0		3.1	3.1	3.1		2.3	2.3	2.3			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	175	9	87	9	9	27	13	196	190	68	258	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	175	9	87	9	9	27	13	196	190	68	258	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	175	9	87	9	9	27	13	196	190	68	258	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	9	87	9	9	27	13	196	190	68	258	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	175	9	87	9	9	27	13	196	190	68	258	5
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.36	0.64	0.20	0.20	0.60	0.03	0.49	0.48	0.21	0.78	0.02
Final Sat.:	498	205	368	102	102	307	23	341	330	132	501	10
Capacity Analysis Module:												
Vol/Sat:	0.35	0.04	0.24	0.09	0.09	0.09	0.58	0.58	0.58	0.51	0.51	0.51
Crit Moves:	****				****			****			****	
Delay/Veh:	12.9	9.7	9.7	9.5	9.5	9.5	14.2	14.2	14.2	13.6	13.6	13.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	9.7	9.7	9.5	9.5	9.5	14.2	14.2	14.2	13.6	13.6	13.6
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	11.7			9.5			14.2			13.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.7			9.5			14.2			13.6		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.5	0.2	0.2	0.1	0.1	0.1	1.2	1.2	1.2	0.9	0.9	0.9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 63.0 Worst Case Level Of Service: F[482.1]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	238	0	109	0	1462	0	0	848	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	238	0	109	0	1462	0	0	848	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	238	0	109	0	1462	0	0	848	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	238	0	109	0	1462	0	0	848	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1886	2310	731	1579	2310	424	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	44	39	369	102	39	584	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	36	39	369	102	39	584	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.33	0.00	0.19	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	102	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	21.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	697.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			482.1			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.8]

Street Name:	ASP NB on-ramp									Ave 26									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	90	1047	0	0	0	0	899	85		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					984	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					710	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					710	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.13	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.760
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	163	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2
Volume Module:												
Base Vol:	0	274	156	791	724	197	83	35	17	0	0	524
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	274	156	791	724	197	83	35	17	0	0	524
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	274	156	791	724	197	83	35	17	0	0	524
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	274	156	791	724	197	83	35	17	0	0	524
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	274	156	791	724	197	83	35	17	0	0	524
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.00	1.27	0.73	2.00	0.79	0.21	0.61	0.26	0.13	0.00	0.00	2.00
Final Sat.:	0	2175	1238	3502	1446	393	1114	470	228	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.23	0.50	0.50	0.07	0.07	0.07	0.00	0.00	0.18
Crit Moves:					****				****			****
Green/Cycle:	0.00	0.14	0.14	0.57	0.71	0.71	0.08	0.08	0.08	0.00	0.00	0.77
Volume/Cap:	0.00	0.89	0.89	0.40	0.71	0.71	0.89	0.89	0.89	0.00	0.00	0.24
Delay/Veh:	0.0	44.5	44.5	7.9	7.3	7.3	70.5	70.5	70.5	0.0	0.0	2.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	44.5	44.5	7.9	7.3	7.3	70.5	70.5	70.5	0.0	0.0	2.1
LOS by Move:	A	D	D	A	A	A	E	E	E	A	A	A
HCM2kAvgQ:	0	8	8	5	12	12	6	6	6	0	0	2

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.4]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	73	933	0	0	0	1035	76			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1111	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					636	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					636	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.11	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.5]

Street Name:	ASP SB Exit 25									Casanova St							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	51	10	4	146	0	0	0	0	0	23	0	8							
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
Initial Bse:	0	51	10	4	146	0	0	0	0	23	0	8								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	51	10	4	146	0	0	0	0	23	0	8								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	51	10	4	146	0	0	0	0	23	0	8								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2								
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	61	xxxx	xxxxx	xxxx	xxxx	xxxxx	210	210	56								
Potent Cap.:	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx	xxxx	xxxx	xxxxx	783	691	1016								
Move Cap.:	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx	xxxx	xxxx	xxxxx	781	689	1016								
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.01								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT					
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	831	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx								
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*								
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.5										
ApproachLOS:	*			*			*			A										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[13.6]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	23	6	10	19	200	201	74	106	97								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	23	6	10	19	200	201	74	106	97								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	23	6	10	19	200	201	74	106	97								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	23	6	10	19	200	201	74	106	97								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	641	742	155	203	xxxx	xxxxx	401	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	442	346	897	1381	xxxx	xxxxx	1169	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	416	319	897	1381	xxxx	xxxxx	1169	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.02	0.01	0.01	xxxx	xxxx	0.06	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	8.3	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	457	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.6	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx				13.6		xxxxxx			xxxxxx										
ApproachLOS:	*				B		*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.471
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	0	263	0	0	300	0	0	0	0	184	1	35	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	263	0	0	300	0	0	0	0	184	1	35	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	263	0	0	300	0	0	0	0	184	1	35	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	263	0	0	300	0	0	0	0	184	1	35	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	263	0	0	300	0	0	0	0	184	1	35	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	583	637	0	0	637	0	0	0	0	536	576	648	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.41	xxxx	xxxx	0.47	xxxx	xxxx	xxxx	xxxx	0.34	0.00	0.05	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	11.9	0.0	0.0	13.2	0.0	0.0	0.0	0.0	12.2	8.6	8.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	11.9	0.0	0.0	13.2	0.0	0.0	0.0	0.0	12.2	8.6	8.2	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		11.9			13.2			xxxxxx			11.5		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		11.9			13.2			xxxxxx			11.5		
LOS by Appr:		B			B			*			B		
AllWayAvgQ:	0.0	0.6	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.5	0.0	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.531
Loss Time (sec):	0	Average Delay (sec/veh):	12.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	175	265	314	343	0	0	0	1	71	1	91	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	175	265	314	343	0	0	0	1	71	1	91	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	175	265	314	343	0	0	0	1	71	1	91	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	175	265	314	343	0	0	0	1	71	1	91	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	175	265	314	343	0	0	0	1	71	1	91	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.87	0.13	1.00	
Final Sat.:	0	606	690	594	646	0	0	459	504	407	60	548	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.29	0.38	0.53	0.53	xxxx	xxxx	0.00	0.00	0.17	0.02	0.17	
Crit Moves:			****		****				****	****			
Delay/Veh:	0.0	10.7	10.8	15.0	14.0	0.0	0.0	0.0	9.2	11.2	11.2	9.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.7	10.8	15.0	14.0	0.0	0.0	0.0	9.2	11.2	11.2	9.9	
LOS by Move:	*	B	B	C	B	*	*	*	A	B	B	A	
ApproachDel:	10.8			14.5			9.2			10.5			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.8			14.5			9.2			10.5			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.4	0.6	1.0	1.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.562
Loss Time (sec):	0	Average Delay (sec/veh):	6.6
Optimal Cycle:	43	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	947	65	177	939	0	0	0	0	154	0	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	947	65	177	939	0	0	0	0	154	0	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	947	65	177	939	0	0	0	0	154	0	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	947	65	177	939	0	0	0	0	154	0	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	947	65	177	939	0	0	0	0	154	0	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.62	0.62	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.87	0.13	0.32	1.68	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3344	230	371	1968	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.48	0.48	0.00	0.00	0.00	0.00	0.09	0.00	0.07
Crit Moves:					****					****		
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.33	0.33	0.56	0.56	0.00	0.00	0.00	0.00	0.56	0.00	0.49
Delay/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	42.0	0.0	40.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	42.0	0.0	40.4
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	4	4	6	6	0	0	0	0	5	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.651
Loss Time (sec):	0	Average Delay (sec/veh):	17.4
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	12	767	188	118	387	196	31	234	2	31	160	385
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	767	188	118	387	196	31	234	2	31	160	385
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	767	188	118	387	196	31	234	2	31	160	385
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	767	188	118	387	196	31	234	2	31	160	385
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	767	188	118	387	196	31	234	2	31	160	385
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	0.92	0.92	0.19	0.90	0.90	0.25	1.00	1.00	0.51	0.89	0.89
Lanes:	1.00	1.61	0.39	1.00	1.33	0.67	1.00	0.99	0.01	1.00	0.29	0.71
Final Sat.:	652	2812	689	357	2277	1153	479	1882	16	971	499	1200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.27	0.27	0.33	0.17	0.17	0.06	0.12	0.12	0.03	0.32	0.32
Crit Moves:				****							****	
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.04	0.54	0.54	0.65	0.34	0.34	0.13	0.25	0.25	0.06	0.65	0.65
Delay/Veh:	12.4	17.0	17.0	26.3	14.7	14.7	14.0	14.8	14.8	13.3	20.8	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.4	17.0	17.0	26.3	14.7	14.7	14.0	14.8	14.8	13.3	20.8	20.8
LOS by Move:	B	B	B	C	B	B	B	B	B	B	C	C
HCM2kAvgQ:	0	11	11	4	6	6	1	4	4	1	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.343
Loss Time (sec):	0	Average Delay (sec/veh):	9.4
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	148	0	169	206	427	0	0	389	188
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	148	0	169	206	427	0	0	389	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	148	0	169	206	427	0	0	389	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	148	0	169	206	427	0	0	389	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	148	0	169	206	427	0	0	389	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.45	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	863	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.10	0.24	0.12	0.00	0.00	0.20	0.12
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.70	0.70	0.00	0.00	0.70	1.00
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.34	0.34	0.17	0.00	0.00	0.29	0.12
Delay/Veh:	0.0	0.0	0.0	25.3	0.0	27.4	6.4	5.3	0.0	0.0	6.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.3	0.0	27.4	6.4	5.3	0.0	0.0	6.0	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	4	3	2	0	0	5	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.588
Loss Time (sec):	0	Average Delay (sec/veh):	15.5
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	85	208	2	12	113	273	298	268	97	1	483	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	208	2	12	113	273	298	268	97	1	483	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	208	2	12	113	273	298	268	97	1	483	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	208	2	12	113	273	298	268	97	1	483	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	208	2	12	113	273	298	268	97	1	483	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.88	0.88	0.97	0.97	0.85	0.38	1.00	0.85	0.54	0.99	0.99
Lanes:	0.29	0.70	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	483	1182	11	176	1659	1615	724	1900	1615	1034	1712	163
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.07	0.07	0.17	0.41	0.14	0.06	0.00	0.28	0.28
Crit Moves:		****					****					
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.59	0.59	0.59	0.23	0.23	0.56	0.59	0.20	0.09	0.00	0.40	0.40
Delay/Veh:	31.6	31.6	31.6	26.5	26.5	31.1	9.4	5.3	4.8	4.5	6.5	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.6	31.6	31.6	26.5	26.5	31.1	9.4	5.3	4.8	4.5	6.5	6.5
LOS by Move:	C	C	C	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	8	8	8	3	3	8	6	3	1	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.674
Loss Time (sec):	0	Average Delay (sec/veh):	14.0
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	4	531	265	64	1285	16	12	35	20	301	21	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	531	265	64	1285	16	12	35	20	301	21	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	531	265	64	1285	16	12	35	20	301	21	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	531	265	64	1285	16	12	35	20	301	21	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	531	265	64	1285	16	12	35	20	301	21	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.67	0.67	0.85
Lanes:	0.01	1.99	1.00	0.09	1.89	0.02	0.18	0.52	0.30	0.93	0.07	1.00
Final Sat.:	26	3404	1615	152	3052	38	307	895	511	1188	83	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.42	0.42	0.42	0.04	0.04	0.04	0.25	0.25	0.01
Crit Moves:					****						****	
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.25	0.25	0.26	0.67	0.67	0.67	0.10	0.10	0.10	0.67	0.67	0.04
Delay/Veh:	8.4	8.4	8.6	13.1	13.1	13.1	20.4	20.4	20.4	29.9	29.9	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.4	8.4	8.6	13.1	13.1	13.1	20.4	20.4	20.4	29.9	29.9	19.8
LOS by Move:	A	A	A	B	B	B	C	C	C	C	C	B
HCM2kAvgQ:	4	4	4	15	15	15	1	1	1	9	9	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.386
Loss Time (sec):	0	Average Delay (sec/veh):	6.9
Optimal Cycle:	23	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1!	0	0
Volume Module:													
Base Vol:	117	1066	6	3	584	34	117	6	60	8	13	33	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	117	1066	6	3	584	34	117	6	60	8	13	33	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	117	1066	6	3	584	34	117	6	60	8	13	33	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	117	1066	6	3	584	34	117	6	60	8	13	33	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	117	1066	6	3	584	34	117	6	60	8	13	33	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.39	0.95	0.95	0.23	0.94	0.94	0.73	0.73	0.85	0.89	0.89	0.89	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.95	0.05	1.00	0.15	0.24	0.61	
Final Sat.:	732	3586	20	437	3384	197	1319	68	1615	250	406	1031	
Capacity Analysis Module:													
Vol/Sat:	0.16	0.30	0.30	0.01	0.17	0.17	0.09	0.09	0.04	0.03	0.03	0.03	
Crit Moves:		****						****					
Green/Cycle:	0.77	0.77	0.77	0.77	0.77	0.77	0.23	0.23	0.23	0.23	0.23	0.23	
Volume/Cap:	0.21	0.39	0.39	0.01	0.22	0.22	0.39	0.39	0.16	0.14	0.14	0.14	
Delay/Veh:	3.3	3.8	3.8	2.7	3.2	3.2	33.3	33.3	31.0	30.8	30.8	30.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	3.3	3.8	3.8	2.7	3.2	3.2	33.3	33.3	31.0	30.8	30.8	30.8	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	6	6	0	3	3	4	4	2	1	1	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.451
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	151	0	246	358	359	0	0	280	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	151	0	246	358	359	0	0	280	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	151	0	246	358	359	0	0	280	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	151	0	246	358	359	0	0	280	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	151	0	246	358	359	0	0	280	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.89	1.00	0.89	0.52	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.38	0.00	1.62	1.00	2.00	0.00	0.00	1.58	0.42
Final Sat.:	0	0	0	2335	0	2739	992	3610	0	0	2766	731
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.09	0.36	0.10	0.00	0.00	0.10	0.10
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.20	0.00	0.20	0.80	0.80	0.00	0.00	0.80	0.80
Volume/Cap:	0.00	0.00	0.00	0.32	0.00	0.45	0.45	0.12	0.00	0.00	0.13	0.13
Delay/Veh:	0.0	0.0	0.0	34.4	0.0	35.6	3.5	2.2	0.0	0.0	2.2	2.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.4	0.0	35.6	3.5	2.2	0.0	0.0	2.2	2.2
LOS by Move:	A	A	A	C	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	5	4	1	0	0	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	13.7
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	61	601	14	65	466	46	125	217	108	13	169	53
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	601	14	65	466	46	125	217	108	13	169	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	601	14	65	466	46	125	217	108	13	169	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	601	14	65	466	46	125	217	108	13	169	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	601	14	65	466	46	125	217	108	13	169	53
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.42	1.00	0.85	0.34	1.00	0.85	0.50	0.90	0.90	0.41	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.34	0.66	1.00	1.52	0.48
Final Sat.:	800	1900	1615	654	1900	1615	957	2290	1140	781	2650	831
Capacity Analysis Module:												
Vol/Sat:	0.08	0.32	0.01	0.10	0.25	0.03	0.13	0.09	0.09	0.02	0.06	0.06
Crit Moves:		****					****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.11	0.45	0.01	0.14	0.35	0.04	0.45	0.32	0.32	0.06	0.22	0.22
Delay/Veh:	4.7	6.5	4.3	4.9	5.8	4.4	29.9	27.9	27.9	25.6	26.9	26.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.7	6.5	4.3	4.9	5.8	4.4	29.9	27.9	27.9	25.6	26.9	26.9
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	8	0	1	6	0	4	4	4	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.533
Loss Time (sec):	0	Average Delay (sec/veh):	21.5
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	28	819	20	125	707	27	44	147	28	37	148	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	819	20	125	707	27	44	147	28	37	148	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	819	20	125	707	27	44	147	28	37	148	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	819	20	125	707	27	44	147	28	37	148	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	819	20	125	707	27	44	147	28	37	148	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.94	0.94	0.95	0.98	0.98	0.95	0.91	0.91
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.84	0.16	1.00	0.41	0.59
Final Sat.:	1805	3511	86	1805	3458	132	1805	1558	297	1805	716	1016
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.23	0.07	0.20	0.20	0.02	0.09	0.09	0.02	0.21	0.21
Crit Moves:		****		****			****				****	
Green/Cycle:	0.04	0.44	0.44	0.13	0.53	0.53	0.36	0.36	0.36	0.08	0.39	0.39
Volume/Cap:	0.39	0.53	0.53	0.53	0.39	0.39	0.18	0.27	0.27	0.27	0.53	0.53
Delay/Veh:	50.2	21.0	21.0	43.1	14.2	14.2	22.8	23.1	23.1	44.5	24.5	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	21.0	21.0	43.1	14.2	14.2	22.8	23.1	23.1	44.5	24.5	24.5
LOS by Move:	D	C	C	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	1	10	10	4	7	7	1	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.378
Loss Time (sec):	0	Average Delay (sec/veh):	7.7
Optimal Cycle:	23	Level Of Service:	A

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	98	0	69	0	0	0	0	830	118	88	721	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	0	69	0	0	0	0	830	118	88	721	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	0	69	0	0	0	0	830	118	88	721	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	0	69	0	0	0	0	830	118	88	721	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	0	69	0	0	0	0	830	118	88	721	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	1.00	0.80	1.00	1.00	1.00	1.00	0.93	0.93	0.26	0.95	1.00
Lanes:	0.59	0.00	0.41	0.00	0.00	0.00	0.00	1.75	0.25	1.00	2.00	0.00
Final Sat.:	887	0	624	0	0	0	0	3102	441	485	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.27	0.27	0.18	0.20	0.00
Crit Moves:	****							****				
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.71	0.00
Volume/Cap:	0.38	0.00	0.38	0.00	0.00	0.00	0.00	0.38	0.38	0.26	0.28	0.00
Delay/Veh:	28.7	0.0	28.7	0.0	0.0	0.0	0.0	5.9	5.9	5.6	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	28.7	0.0	0.0	0.0	0.0	5.9	5.9	5.6	5.4	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	4	0	4	0	0	0	0	6	6	1	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.473
Loss Time (sec):	0	Average Delay (sec/veh):	19.5
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	62	0	261	238	581	0	0	539	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	62	0	261	238	581	0	0	539	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	62	0	261	238	581	0	0	539	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	62	0	261	238	581	0	0	539	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	62	0	261	238	581	0	0	539	94
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.70	0.30
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3005	524
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.16	0.13	0.16	0.00	0.00	0.18	0.18
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.28	0.66	0.00	0.00	0.38	0.38
Volume/Cap:	0.00	0.00	0.00	0.05	0.00	0.47	0.47	0.24	0.00	0.00	0.47	0.47
Delay/Veh:	0.0	0.0	0.0	22.1	0.0	26.5	30.7	7.0	0.0	0.0	23.7	23.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.1	0.0	26.5	30.7	7.0	0.0	0.0	23.7	23.7
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	7	6	4	0	0	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.554
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	42	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	133	0	260	0	0	211	0	613	169	172	416	230
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	0	260	0	0	211	0	613	169	172	416	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	0	260	0	0	211	0	613	169	172	416	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	0	260	0	0	211	0	613	169	172	416	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	0	260	0	0	211	0	613	169	172	416	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.16	0.00	0.00	0.13	0.00	0.17	0.10	0.10	0.12	0.14
Crit Moves:			****			****		****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.23	0.00	0.31	0.31	0.17	0.48	0.48
Volume/Cap:	0.13	0.00	0.55	0.00	0.00	0.55	0.00	0.55	0.34	0.55	0.24	0.30
Delay/Veh:	26.2	0.0	31.5	0.0	0.0	35.7	0.0	29.6	27.3	40.1	15.5	16.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.2	0.0	31.5	0.0	0.0	35.7	0.0	29.6	27.3	40.1	15.5	16.1
LOS by Move:	C	A	C	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	7	0	0	6	0	9	4	6	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.536
Loss Time (sec):	0	Average Delay (sec/veh):	17.1
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	152	532	31	32	496	34	102	664	225	32	646	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	532	31	32	496	34	102	664	225	32	646	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	532	31	32	496	34	102	664	225	32	646	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	532	31	32	496	34	102	664	225	32	646	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	532	31	32	496	34	102	664	225	32	646	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.31	1.00	0.85	0.28	1.00	0.85	0.27	0.91	0.91	0.20	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.86	0.14
Final Sat.:	592	1900	1615	541	1900	1615	520	2594	879	373	3314	257
Capacity Analysis Module:												
Vol/Sat:	0.26	0.28	0.02	0.06	0.26	0.02	0.20	0.26	0.26	0.09	0.19	0.19
Crit Moves:		****						****				
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.49	0.54	0.04	0.11	0.50	0.04	0.41	0.54	0.54	0.18	0.41	0.41
Delay/Veh:	16.6	16.4	11.6	12.3	15.8	11.7	18.1	18.7	18.7	15.4	17.1	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.6	16.4	11.6	12.3	15.8	11.7	18.1	18.7	18.7	15.4	17.1	17.1
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	4	11	0	1	10	1	3	10	10	1	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	0	Average Delay (sec/veh):	20.9
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	278	637	58	54	841	49	68	255	366	85	331	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	278	637	58	54	841	49	68	255	366	85	331	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	278	637	58	54	841	49	68	255	366	85	331	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	278	637	58	54	841	49	68	255	366	85	331	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	278	637	58	54	841	49	68	255	366	85	331	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.41	0.87	0.87	0.25	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.00	1.00	1.00	1.74	0.26
Final Sat.:	1805	3610	1615	1805	3383	197	772	1645	1645	467	3074	464
Capacity Analysis Module:												
Vol/Sat:	0.15	0.18	0.04	0.03	0.25	0.25	0.09	0.15	0.22	0.18	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.64	0.55	0.55	0.49	0.40	0.40	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.50	0.32	0.07	0.11	0.63	0.63	0.25	0.44	0.63	0.51	0.30	0.30
Delay/Veh:	12.3	12.3	10.5	13.5	25.0	25.0	23.2	24.8	27.9	28.0	23.4	23.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.3	12.3	10.5	13.5	25.0	25.0	23.2	24.8	27.9	28.0	23.4	23.4
LOS by Move:	B	B	B	B	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	6	1	1	12	12	2	6	10	3	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.922
Loss Time (sec):	0	Average Delay (sec/veh):	32.8
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	119	691	211	35	1026	164	104	236	35	594	1246	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	691	211	35	1026	164	104	236	35	594	1246	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	691	211	35	1026	164	104	236	35	594	1246	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	691	211	35	1026	164	104	236	35	594	1246	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	691	211	35	1026	164	104	236	35	594	1246	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.13	1.00	0.85	0.29	1.00	0.85	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.61	0.39	1.00	3.00	1.00
Final Sat.:	250	1900	1615	556	1900	1615	1805	4429	657	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.48	0.36	0.13	0.06	0.54	0.10	0.06	0.05	0.05	0.33	0.24	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.08	0.06	0.06	0.36	0.33	0.33
Volume/Cap:	0.81	0.62	0.22	0.11	0.92	0.17	0.72	0.92	0.92	0.92	0.72	0.08
Delay/Veh:	44.2	14.6	10.0	9.3	31.1	9.7	60.8	79.7	79.7	49.7	30.6	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.2	14.6	10.0	9.3	31.1	9.7	60.8	79.7	79.7	49.7	30.6	22.9
LOS by Move:	D	B	B	A	C	A	E	E	E	D	C	C
HCM2kAvgQ:	5	14	3	1	33	2	5	6	6	22	13	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.873
Loss Time (sec):	0	Average Delay (sec/veh):	19.9
Optimal Cycle:	147	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	980	0	15	7	363	0	0	1329	955
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	980	0	15	7	363	0	0	1329	955
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	980	0	15	7	363	0	0	1329	955
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	980	0	15	7	363	0	0	1329	955
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	980	0	15	7	363	0	0	1329	955
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.28	0.00	0.01	0.00	0.07	0.00	0.00	0.26	0.59
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.32	0.00	0.32	0.00	0.68	0.00	0.00	0.68	0.68
Volume/Cap:	0.00	0.00	0.00	0.87	0.00	0.03	0.87	0.10	0.00	0.00	0.38	0.87
Delay/Veh:	0.0	0.0	0.0	39.8	0.0	23.3	285.0	5.5	0.0	0.0	7.1	20.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	39.8	0.0	23.3	285.0	5.5	0.0	0.0	7.1	20.7
LOS by Move:	A	A	A	D	A	C	F	A	A	A	A	C
HCM2kAvgQ:	0	0	0	18	0	0	1	1	0	0	6	26

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.782
Loss Time (sec):	0	Average Delay (sec/veh):	26.1
Optimal Cycle:	85	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	113	607	3	161	749	63	156	884	188	286	810	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	607	3	161	749	63	156	884	188	286	810	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	607	3	161	749	63	156	884	188	286	810	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	607	3	161	749	63	156	884	188	286	810	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	113	607	3	161	749	63	156	884	188	286	810	177
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.95	0.85	0.29	0.94	0.94	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.84	0.16	1.00	1.65	0.35	1.00	1.64	0.36
Final Sat.:	355	3610	1615	544	3291	277	1805	2899	616	1805	2883	630
Capacity Analysis Module:												
Vol/Sat:	0.32	0.17	0.00	0.30	0.23	0.23	0.09	0.30	0.30	0.16	0.28	0.28
Crit Moves:	****							****		****		
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.14	0.39	0.39	0.45	0.45	0.45
Volume/Cap:	0.78	0.41	0.00	0.73	0.56	0.56	0.62	0.78	0.78	0.65	0.62	0.62
Delay/Veh:	49.4	21.3	17.6	36.3	23.2	23.2	45.2	29.8	29.8	21.1	21.5	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	21.3	17.6	36.3	23.2	23.2	45.2	29.8	29.8	21.1	21.5	21.5
LOS by Move:	D	C	B	D	C	C	D	C	C	C	C	C
HCM2kAvgQ:	5	7	0	6	10	10	6	17	17	8	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.572
Loss Time (sec): 0 Average Delay (sec/veh): 19.7
Optimal Cycle: 43 Level Of Service: B

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	193	144	27	193	249	79	98	674	164	43	828	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	144	27	193	249	79	98	674	164	43	828	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	193	144	27	193	249	79	98	674	164	43	828	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	144	27	193	249	79	98	674	164	43	828	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	193	144	27	193	249	79	98	674	164	43	828	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.96	0.96	0.18	0.92	0.92	0.22	0.93	0.93
Lanes:	1.00	0.84	0.16	1.00	0.76	0.24	1.00	1.61	0.39	1.00	1.71	0.29
Final Sat.:	1805	1562	293	1805	1390	441	342	2818	686	427	3024	508
Capacity Analysis Module:												
Vol/Sat:	0.11	0.09	0.09	0.11	0.18	0.18	0.29	0.24	0.24	0.10	0.27	0.27
Crit Moves:	****				****		****					
Green/Cycle:	0.42	0.23	0.23	0.50	0.31	0.31	0.50	0.50	0.50	0.50	0.50	0.50
Volume/Cap:	0.38	0.40	0.40	0.29	0.57	0.57	0.57	0.48	0.48	0.20	0.55	0.55
Delay/Veh:	19.7	33.1	33.1	14.6	30.1	30.1	22.1	16.6	16.6	14.4	17.6	17.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.7	33.1	33.1	14.6	30.1	30.1	22.1	16.6	16.6	14.4	17.6	17.6
LOS by Move:	B	C	C	B	C	C	C	B	B	B	B	B
HCM2kAvgQ:	4	5	5	4	9	9	3	9	9	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.545
Loss Time (sec):	0	Average Delay (sec/veh):	18.3
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	391	114	399	621	3	1	1	1	140	2	290	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	391	114	399	621	3	1	1	1	140	2	290	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	391	114	399	621	3	1	1	1	140	2	290	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	391	114	399	621	3	1	1	1	140	2	290	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	391	114	399	621	3	1	1	1	140	2	290	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.55	0.45	1.00	1.99	0.01	0.33	0.33	0.33	0.99	0.01	1.00	
Final Sat.:	1900	2700	787	1805	3590	17	585	585	585	1385	20	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.14	0.14	0.22	0.17	0.17	0.00	0.00	0.00	0.10	0.10	0.18	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.27	0.27	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33	
Volume/Cap:	0.00	0.55	0.55	0.47	0.26	0.26	0.01	0.01	0.01	0.31	0.31	0.55	
Delay/Veh:	0.0	32.2	32.2	8.8	6.6	6.6	22.5	22.5	22.5	25.4	25.4	28.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	32.2	32.2	8.8	6.6	6.6	22.5	22.5	22.5	25.4	25.4	28.6	
LOS by Move:	A	C	C	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	7	7	6	4	4	0	0	0	3	3	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Protected					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	321	125	27		59	188	32		9	195	287		58	279	25			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	321	125	27		59	188	32		9	195	287		58	279	25			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	321	125	27		59	188	32		9	195	287		58	279	25			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	321	125	27		59	188	32		9	195	287		58	279	25			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	321	125	27		59	188	32		9	195	287		58	279	25			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.92	0.96	0.82		0.92	0.96	0.82		0.44	0.88	0.88		0.92	0.95	0.95			
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.40	0.60		1.00	0.92	0.08			
Final Sat.:	1742	1833	1558		1742	1833	1558		833	675	994		1742	1662	149			
Capacity Analysis Module:																		
Vol/Sat:	0.18	0.07	0.02		0.03	0.10	0.02		0.01	0.29	0.29		0.03	0.17	0.17			
Crit Moves:	****					****				****			****					
Green/Cycle:	0.30	0.30	0.30		0.17	0.17	0.17		0.47	0.47	0.47		0.05	0.53	0.53			
Volume/Cap:	0.61	0.23	0.06		0.20	0.61	0.12		0.02	0.61	0.61		0.61	0.32	0.32			
Delay/Veh:	31.9	26.3	24.8		36.1	42.0	35.5		14.0	20.8	20.8		57.1	13.5	13.5			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	31.9	26.3	24.8		36.1	42.0	35.5		14.0	20.8	20.8		57.1	13.5	13.5			
LOS by Move:	C	C	C		D	D	D		B	C	C		E	B	B			
HCM2kAvgQ:	9	3	1		2	6	1		0	11	11		3	5	5			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.459
Loss Time (sec):	0	Average Delay (sec/veh):	17.5
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Figueroa St						Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	16	403	158	93	728	12	14	74	10	221	98	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	403	158	93	728	12	14	74	10	221	98	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	403	158	93	728	12	14	74	10	221	98	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	403	158	93	728	12	14	74	10	221	98	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	403	158	93	728	12	14	74	10	221	98	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.91	0.91	0.33	0.95	0.95	0.93	0.93	0.93	0.76	0.76	0.76
Lanes:	1.00	1.44	0.56	1.00	1.97	0.03	0.14	0.76	0.10	0.61	0.27	0.13
Final Sat.:	456	2484	974	631	3543	58	253	1338	181	873	387	182
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.15	0.21	0.21	0.06	0.06	0.06	0.25	0.25	0.25
Crit Moves:					****						****	
Green/Cycle:	0.45	0.45	0.45	0.45	0.45	0.45	0.55	0.55	0.55	0.55	0.55	0.55
Volume/Cap:	0.08	0.36	0.36	0.33	0.46	0.46	0.10	0.10	0.10	0.46	0.46	0.46
Delay/Veh:	16.0	18.3	18.3	18.6	19.4	19.4	10.7	10.7	10.7	13.9	13.9	13.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	18.3	18.3	18.6	19.4	19.4	10.7	10.7	10.7	13.9	13.9	13.9
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	0	6	6	2	8	8	1	1	1	7	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.498
Loss Time (sec):	0	Average Delay (sec/veh):	15.4
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	204	297	34	57	431	40	28	155	353	52	233	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	204	297	34	57	431	40	28	155	353	52	233	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	204	297	34	57	431	40	28	155	353	52	233	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	204	297	34	57	431	40	28	155	353	52	233	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	204	297	34	57	431	40	28	155	353	52	233	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.38	1.00	0.85	0.48	1.00	0.85	0.48	0.85	0.85	0.37	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	730	1900	1615	920	1900	1615	909	1617	1617	709	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.28	0.16	0.02	0.06	0.23	0.02	0.03	0.10	0.22	0.07	0.12	0.09
Crit Moves:	****								****			
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.44	0.44	0.44	0.44	0.44	0.44
Volume/Cap:	0.50	0.28	0.04	0.11	0.40	0.04	0.07	0.22	0.50	0.17	0.28	0.21
Delay/Veh:	14.3	11.5	9.8	10.4	12.7	9.9	16.3	17.5	20.5	17.3	18.1	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.3	11.5	9.8	10.4	12.7	9.9	16.3	17.5	20.5	17.3	18.1	17.5
LOS by Move:	B	B	A	B	B	A	B	B	C	B	B	B
HCM2kAvgQ:	4	5	0	1	7	1	1	3	8	1	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.576
Loss Time (sec):	0	Average Delay (sec/veh):	22.3
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	73	376	80	115	911	70	47	338	138	80	195	60	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	73	376	80	115	911	70	47	338	138	80	195	60	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	73	376	80	115	911	70	47	338	138	80	195	60	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	73	376	80	115	911	70	47	338	138	80	195	60	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	73	376	80	115	911	70	47	338	138	80	195	60	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.91	0.91	0.91	0.77	0.77	0.77	
Lanes:	1.00	1.65	0.35	1.00	1.86	0.14	0.09	0.65	0.26	0.24	0.58	0.18	
Final Sat.:	1805	2898	617	1805	3317	255	156	1121	458	350	854	263	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.13	0.13	0.06	0.27	0.27	0.30	0.30	0.30	0.23	0.23	0.23	
Crit Moves:					****			****					
Green/Cycle:	0.07	0.34	0.34	0.45	0.45	0.45	0.49	0.49	0.49	0.49	0.49	0.49	
Volume/Cap:	0.62	0.38	0.38	0.27	0.62	0.62	0.62	0.62	0.62	0.47	0.47	0.47	
Delay/Veh:	54.9	25.0	25.0	17.9	21.9	21.9	20.1	20.1	20.1	17.4	17.4	17.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	54.9	25.0	25.0	17.9	21.9	21.9	20.1	20.1	20.1	17.4	17.4	17.4	
LOS by Move:	D	C	C	B	C	C	C	C	C	B	B	B	
HCM2kAvgQ:	3	6	6	2	13	13	12	12	12	7	7	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.687
Loss Time (sec):	0	Average Delay (sec/veh):	14.3
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1!	0	0
Volume Module:													
Base Vol:	9	416	184	293	1193	1	7	11	0	187	21	189	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	416	184	293	1193	1	7	11	0	187	21	189	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	416	184	293	1193	1	7	11	0	187	21	189	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	416	184	293	1193	1	7	11	0	187	21	189	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	416	184	293	1193	1	7	11	0	187	21	189	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.16	0.91	0.91	0.36	0.95	0.95	0.90	0.90	1.00	0.79	0.79	0.79	
Lanes:	1.00	1.39	0.61	1.00	2.00	0.00	0.39	0.61	0.00	0.47	0.05	0.48	
Final Sat.:	298	2388	1056	692	3607	3	664	1043	0	708	80	716	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.17	0.17	0.42	0.33	0.33	0.01	0.01	0.00	0.26	0.26	0.26	
Crit Moves:				****							****		
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.00	0.38	0.38	0.38	
Volume/Cap:	0.05	0.28	0.28	0.69	0.54	0.54	0.03	0.03	0.00	0.69	0.69	0.69	
Delay/Veh:	7.7	9.0	9.0	17.5	11.3	11.3	19.2	19.2	0.0	29.2	29.2	29.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	7.7	9.0	9.0	17.5	11.3	11.3	19.2	19.2	0.0	29.2	29.2	29.2	
LOS by Move:	A	A	A	B	B	B	B	B	A	C	C	C	
HCM2kAvgQ:	0	4	4	7	11	11	0	0	0	11	11	11	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.585
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	107	64	22	51	256	106	26	107	82	23	123	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	107	64	22	51	256	106	26	107	82	23	123	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	107	64	22	51	256	106	26	107	82	23	123	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	107	64	22	51	256	106	26	107	82	23	123	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	107	64	22	51	256	106	26	107	82	23	123	25	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.74	0.26	1.00	0.71	0.29	0.12	0.50	0.38	0.13	0.72	0.15	
Final Sat.:	513	422	145	550	437	181	72	298	228	77	411	83	
Capacity Analysis Module:													
Vol/Sat:	0.21	0.15	0.15	0.09	0.59	0.59	0.36	0.36	0.36	0.30	0.30	0.30	
Crit Moves:	****				****			****			****		
Delay/Veh:	10.9	9.6	9.6	9.7	15.5	15.5	11.4	11.4	11.4	11.0	11.0	11.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.9	9.6	9.6	9.7	15.5	15.5	11.4	11.4	11.4	11.0	11.0	11.0	
LOS by Move:	B	A	A	A	C	C	B	B	B	B	B	B	
ApproachDel:	10.4			14.8			11.4			11.0			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.4			14.8			11.4			11.0			
LOS by Appr:	B			B			B			B			
AllWayAvgQ:	0.2	0.2	0.2	0.1	1.2	1.2	0.5	0.5	0.5	0.3	0.3	0.3	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.580
Loss Time (sec):	0	Average Delay (sec/veh):	24.3
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	139	396	100	374	788	26	57	270	373	64	74	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	396	100	374	788	26	57	270	373	64	74	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	396	100	374	788	26	57	270	373	64	74	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	396	100	374	788	26	57	270	373	64	74	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	396	100	374	788	26	57	270	373	64	74	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.66	1.00	0.85	0.43	1.00	0.85
Lanes:	1.00	1.60	0.40	1.00	1.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2795	706	1805	3478	115	1259	1900	1615	817	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.14	0.14	0.21	0.23	0.23	0.05	0.14	0.23	0.08	0.04	0.06
Crit Moves:		****		****					****			
Green/Cycle:	0.15	0.24	0.24	0.45	0.45	0.45	0.40	0.40	0.40	0.40	0.40	0.40
Volume/Cap:	0.50	0.58	0.58	0.52	0.50	0.50	0.11	0.36	0.58	0.20	0.10	0.14
Delay/Veh:	40.4	34.3	34.3	19.8	19.9	19.9	19.1	21.4	24.9	19.9	18.9	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.4	34.3	34.3	19.8	19.9	19.9	19.1	21.4	24.9	19.9	18.9	19.3
LOS by Move:	D	C	C	B	B	B	B	C	C	B	B	B
HCM2kAvgQ:	5	8	8	9	9	9	1	6	9	1	1	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.439
Loss Time (sec):	0	Average Delay (sec/veh):	6.0
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	77	583	31	44	1083	272	54	27	20	56	76	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	583	31	44	1083	272	54	27	20	56	76	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	583	31	44	1083	272	54	27	20	56	76	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	583	31	44	1083	272	54	27	20	56	76	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	583	31	44	1083	272	54	27	20	56	76	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	0.94	0.94	0.40	0.92	0.92	0.54	0.94	0.94	0.57	0.85	0.85
Lanes:	1.00	1.90	0.10	1.00	1.60	0.40	1.00	0.57	0.43	1.00	2.00	1.00
Final Sat.:	348	3402	181	763	2798	703	1033	1022	757	1077	3238	1619
Capacity Analysis Module:												
Vol/Sat:	0.22	0.17	0.17	0.06	0.39	0.39	0.05	0.03	0.03	0.05	0.02	0.03
Crit Moves:					****		****					
Green/Cycle:	0.88	0.88	0.88	0.88	0.88	0.88	0.12	0.12	0.12	0.12	0.12	0.12
Volume/Cap:	0.25	0.19	0.19	0.07	0.44	0.44	0.44	0.22	0.22	0.44	0.20	0.29
Delay/Veh:	1.3	0.9	0.9	0.8	1.3	1.3	43.4	40.4	40.4	43.3	39.9	40.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	0.9	0.9	0.8	1.3	1.3	43.4	40.4	40.4	43.3	39.9	40.6
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	1	2	2	0	5	5	2	1	1	2	1	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	0	Average Delay (sec/veh):	36.2
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	302	316	206	282	1149	48	12	906	223	201	605	123	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	302	316	206	282	1149	48	12	906	223	201	605	123	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	302	316	206	282	1149	48	12	906	223	201	605	123	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	302	316	206	282	1149	48	12	906	223	201	605	123	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	302	316	206	282	1149	48	12	906	223	201	605	123	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.61	0.40	1.00	1.66	0.34	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2811	692	1805	2924	595	
Capacity Analysis Module:													
Vol/Sat:	0.17	0.09	0.13	0.16	0.32	0.03	0.01	0.32	0.32	0.11	0.21	0.21	
Crit Moves:	****				****			****					
Green/Cycle:	0.42	0.24	0.24	0.53	0.35	0.35	0.35	0.35	0.35	0.12	0.46	0.46	
Volume/Cap:	0.75	0.37	0.54	0.41	0.92	0.09	0.12	0.92	0.92	0.92	0.45	0.45	
Delay/Veh:	30.3	32.1	34.8	14.0	42.3	22.1	24.6	42.2	42.2	82.7	18.8	18.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	30.3	32.1	34.8	14.0	42.3	22.1	24.6	42.2	42.2	82.7	18.8	18.8	
LOS by Move:	C	C	C	B	D	C	C	D	D	F	B	B	
HCM2kAvgQ:	10	4	6	5	22	1	0	22	22	10	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.381
Loss Time (sec): 0 Average Delay (sec/veh): 17.4
Optimal Cycle: 30 Level Of Service: B

Street Name:	I-5 NB off-ramp						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	312	30	30	24	0	91	78	621	0	0	713	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	312	30	30	24	0	91	78	621	0	0	713	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	312	30	30	24	0	91	78	621	0	0	713	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	30	30	24	0	91	78	621	0	0	713	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	312	30	30	24	0	91	78	621	0	0	713	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.28	0.95	1.00	1.00	0.95	0.95
Lanes:	1.72	0.14	0.14	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.94	0.06
Final Sat.:	3103	250	250	1805	0	1615	531	3610	0	0	3486	108
Capacity Analysis Module:												
Vol/Sat:	0.10	0.12	0.12	0.01	0.00	0.06	0.15	0.17	0.00	0.00	0.20	0.20
Crit Moves:		****				****					****	
Green/Cycle:	0.31	0.31	0.31	0.15	0.00	0.15	0.54	0.54	0.00	0.00	0.54	0.54
Volume/Cap:	0.32	0.38	0.38	0.09	0.00	0.38	0.27	0.32	0.00	0.00	0.38	0.38
Delay/Veh:	26.3	26.9	26.9	36.9	0.0	39.5	13.1	13.0	0.0	0.0	13.6	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.3	26.9	26.9	36.9	0.0	39.5	13.1	13.0	0.0	0.0	13.6	13.6
LOS by Move:	C	C	C	D	A	D	B	B	A	A	B	B
HCM2kAvgQ:	4	5	5	1	0	3	2	6	0	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.644
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	96	261	50	81	393	109	82	905	133	74	1656	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	261	50	81	393	109	82	905	133	74	1656	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	261	50	81	393	109	82	905	133	74	1656	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	261	50	81	393	109	82	905	133	74	1656	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	96	261	50	81	393	109	82	905	133	74	1656	105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.93	0.93	0.42	0.92	0.92	0.10	0.89	0.89	0.24	0.90	0.90
Lanes:	1.00	1.68	0.32	1.00	1.57	0.43	1.00	2.62	0.38	1.00	2.82	0.18
Final Sat.:	504	2957	566	797	2734	758	181	4436	652	447	4834	307
Capacity Analysis Module:												
Vol/Sat:	0.19	0.09	0.09	0.10	0.14	0.14	0.45	0.20	0.20	0.17	0.34	0.34
Crit Moves:	****						****					
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.64	0.30	0.30	0.34	0.49	0.49	0.64	0.29	0.29	0.24	0.49	0.49
Delay/Veh:	39.9	27.4	27.4	28.5	29.3	29.3	18.8	5.5	5.5	5.6	6.8	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.9	27.4	27.4	28.5	29.3	29.3	18.8	5.5	5.5	5.6	6.8	6.8
LOS by Move:	D	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	4	4	4	2	7	7	3	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.380
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	24	355	29	0	0	0	69	170	0	0	737	190
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	355	29	0	0	0	69	170	0	0	737	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	24	355	29	0	0	0	69	170	0	0	737	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	355	29	0	0	0	69	170	0	0	737	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	24	355	29	0	0	0	69	170	0	0	737	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	1.00	1.00	1.00	0.26	0.95	1.00	1.00	0.92	0.92
Lanes:	0.12	1.74	0.14	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.59	0.41
Final Sat.:	208	3080	252	0	0	0	492	3610	0	0	2782	717
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.26	0.26
Crit Moves:		****									****	
Green/Cycle:	0.30	0.30	0.30	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.70	0.70
Volume/Cap:	0.38	0.38	0.38	0.00	0.00	0.00	0.20	0.07	0.00	0.00	0.38	0.38
Delay/Veh:	27.7	27.7	27.7	0.0	0.0	0.0	5.6	4.8	0.0	0.0	6.4	6.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	27.7	27.7	0.0	0.0	0.0	5.6	4.8	0.0	0.0	6.4	6.4
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	5	5	0	0	0	1	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.278
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	20	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 1	0 1	1	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	42	153	291	0	177	121	126	642	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	42	153	291	0	177	121	126	642	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	42	153	291	0	177	121	126	642	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	42	153	291	0	177	121	126	642	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	42	153	291	0	177	121	126	642	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.89	0.89	0.53	0.95	1.00
Lanes:	0.00	0.00	0.00	0.26	0.94	1.80	0.00	1.19	0.81	1.00	2.00	0.00
Final Sat.:	0	0	0	420	1531	2913	0	2014	1377	1015	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.10	0.10	0.00	0.09	0.09	0.12	0.18	0.00
Crit Moves:					****						****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.36	0.36	0.00	0.64	0.64	0.64	0.64	0.00
Volume/Cap:	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.14	0.14	0.19	0.28	0.00
Delay/Veh:	0.0	0.0	0.0	22.9	22.9	22.9	0.0	7.1	7.1	7.5	7.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.9	22.9	22.9	0.0	7.1	7.1	7.5	7.9	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	4	4	0	2	2	2	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 188.1 Worst Case Level Of Service: F[3086.9]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			577	1359			0	139		0		0	0		0		243
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0			577	1359			0	139		0		0	0		0		243
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0			577	1359			0	139		0		0	0		0		243
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			577	1359			0	139		0		0	0		0		243
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2513		2513	xxxxx		1834		2513		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			19		29	xxxxx		59		29		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			11		19	xxxxx		43		19		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.35	xxxx	xxxx			12.71		0.00	xxxx		0.00		0.00		0.22
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.6	xxxx	xxxxx			9.9		xxxx	xxxxx		xxxx		xxxx		0.4
Control Del:	xxxxx	xxxx	xxxxx			8.4	xxxx	xxxxx			3087		xxxx	xxxxx		xxxxx		xxxx		8.7
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			11		xxxx	xxxxx		xxxx		1091		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			5.9		xxxx	xxxxx		xxxxx		0.4		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3087		xxxx	xxxxx		xxxxx		8.7		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					3086.9							8.7		
ApproachLOS:	*					*					F							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.693
Loss Time (sec):	0	Average Delay (sec/veh):	23.3
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	46	215	370	407	366	13	100	366	97	156	185	158
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	215	370	407	366	13	100	366	97	156	185	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	215	370	407	366	13	100	366	97	156	185	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	215	370	407	366	13	100	366	97	156	185	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	215	370	407	366	13	100	366	97	156	185	158
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	1.00	0.85	0.43	0.92	0.92	0.34	0.88	0.88
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.58	0.42	1.00	1.08	0.92
Final Sat.:	1805	1634	1634	1805	1900	1615	816	2764	733	647	1813	1548
Capacity Analysis Module:												
Vol/Sat:	0.03	0.13	0.23	0.23	0.19	0.01	0.12	0.13	0.13	0.24	0.10	0.10
Crit Moves:			****	****						****		
Green/Cycle:	0.08	0.33	0.33	0.58	0.58	0.58	0.35	0.35	0.35	0.35	0.35	0.35
Volume/Cap:	0.33	0.40	0.69	0.59	0.33	0.01	0.35	0.38	0.38	0.69	0.29	0.29
Delay/Veh:	45.2	26.3	31.8	14.9	11.3	9.1	25.0	24.7	24.7	37.0	23.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.2	26.3	31.8	14.9	11.3	9.1	25.0	24.7	24.7	37.0	23.8	23.8
LOS by Move:	D	C	C	B	B	A	C	C	C	D	C	C
HCM2kAvgQ:	2	6	11	9	6	0	3	6	6	6	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	0	Average Delay (sec/veh):	25.1
Optimal Cycle:	84	Level Of Service:	C

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	1 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	6	484	41	158	628	548	155	113	9	72	768	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	484	41	158	628	548	155	113	9	72	768	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	484	41	158	628	548	155	113	9	72	768	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	484	41	158	628	548	155	113	9	72	768	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	484	41	158	628	548	155	113	9	72	768	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.99	0.99	0.31	1.00	0.85	0.17	0.94	0.94	0.86	0.86	0.86
Lanes:	1.00	0.92	0.08	1.00	1.00	1.00	1.00	1.85	0.15	0.16	1.66	0.19
Final Sat.:	455	1731	147	590	1900	1615	317	3307	263	254	2707	307
Capacity Analysis Module:												
Vol/Sat:	0.01	0.28	0.28	0.27	0.33	0.34	0.49	0.03	0.03	0.28	0.28	0.28
Crit Moves:						****	****					
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.03	0.68	0.68	0.65	0.81	0.83	0.83	0.06	0.06	0.48	0.48	0.48
Delay/Veh:	17.7	26.8	26.8	30.2	32.3	35.0	41.9	8.7	8.7	11.9	11.9	11.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.7	26.8	26.8	30.2	32.3	35.0	41.9	8.7	8.7	11.9	11.9	11.9
LOS by Move:	B	C	C	C	C	D	D	A	A	B	B	B
HCM2kAvgQ:	0	14	14	5	19	17	6	1	1	9	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.805
Loss Time (sec):	0	Average Delay (sec/veh):	20.3
Optimal Cycle:	74	Level Of Service:	C

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	157	293	27	175	464	393	30	466	224	64	1137	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	157	293	27	175	464	393	30	466	224	64	1137	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	157	293	27	175	464	393	30	466	224	64	1137	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	293	27	175	464	393	30	466	224	64	1137	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	293	27	175	464	393	30	466	224	64	1137	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.21	0.94	0.94	0.49	0.88	0.88	0.74	0.74	0.74	0.82	0.82	0.82
Lanes:	1.00	1.83	0.17	1.00	1.08	0.92	0.08	1.29	0.62	0.10	1.76	0.14
Final Sat.:	402	3263	301	937	1820	1542	117	1810	870	155	2745	215
Capacity Analysis Module:												
Vol/Sat:	0.39	0.09	0.09	0.19	0.25	0.25	0.26	0.26	0.26	0.41	0.41	0.41
Crit Moves:	****										****	
Green/Cycle:	0.49	0.49	0.49	0.49	0.49	0.49	0.51	0.51	0.51	0.51	0.51	0.51
Volume/Cap:	0.81	0.18	0.18	0.38	0.53	0.53	0.50	0.50	0.50	0.81	0.81	0.81
Delay/Veh:	42.9	14.6	14.6	16.8	18.1	18.1	16.2	16.2	16.2	23.2	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.9	14.6	14.6	16.8	18.1	18.1	16.2	16.2	16.2	23.2	23.2	23.2
LOS by Move:	D	B	B	B	B	B	B	B	B	C	C	C
HCM2kAvgQ:	6	3	3	4	10	10	8	8	8	19	19	19

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 63.2 Worst Case Level Of Service: F[642.4]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	122		1	128				0	610		0		2	1687		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	2	122		1	128				0	610		0		2	1687		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	2	122		1	128				0	610		0		2	1687		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	2	122		1	128				0	610		0		2	1687		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	305	1996		2301	844				xxxx	xxxx		xxxxx		610	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	697	36		39	311				xxxx	xxxx		xxxxx		979	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	697	36		39	311				xxxx	xxxx		xxxxx		979	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.00	3.36		0.03	0.41				xxxx	xxxx		xxxx		0.00	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	14.0		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	10.2	1294		xxxx	xxxxx				xxxxx	xxxx		xxxxx		8.7	xxxx		xxxxx	
LOS by Move:	*	*	B	F		*	*				*	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	295				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.1				xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	26.3				xxxxx	xxxx		xxxxx		8.7	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	D				*	*		*		A	*		*	
ApproachDel:	10.2			642.4							xxxxxx					xxxxxx				
ApproachLOS:	B			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.888
Loss Time (sec):	0	Average Delay (sec/veh):	865.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1849	293	410	0	0	858	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1849	293	410	0	0	858	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1849	293	410	0	0	858	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1849	293	410	0	0	858	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1849	293	410	0	0	858	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.25	1.75	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2211	3094	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.13	0.13	0.00	0.00	0.24	0.01
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.27	0.27
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	4.36	0.89	0.89	0.00	0.00	0.89	0.02
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1560	53.7	53.7	0.0	0.0	45.3	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1560	53.7	53.7	0.0	0.0	45.3	27.0
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	132	11	11	0	0	17	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.612
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	14	237	6	91	1511	65	57	198	89	111	297	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	237	6	91	1511	65	57	198	89	111	297	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	237	6	91	1511	65	57	198	89	111	297	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	237	6	91	1511	65	57	198	89	111	297	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	237	6	91	1511	65	57	198	89	111	297	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.11	0.95	0.95	0.58	0.94	0.94	0.72	0.72	0.72	0.68	0.68	0.68
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.33	1.15	0.52	0.50	1.33	0.18
Final Sat.:	203	3508	89	1094	3440	148	451	1567	704	644	1723	232
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.08	0.44	0.44	0.13	0.13	0.13	0.17	0.17	0.17
Crit Moves:					****						****	
Green/Cycle:	0.72	0.72	0.72	0.72	0.72	0.72	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.10	0.09	0.09	0.12	0.61	0.61	0.45	0.45	0.45	0.61	0.61	0.61
Delay/Veh:	4.6	4.3	4.3	4.4	7.5	7.5	29.9	29.9	29.9	32.7	32.7	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.6	4.3	4.3	4.4	7.5	7.5	29.9	29.9	29.9	32.7	32.7	32.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	13	13	5	5	5	7	7	7

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 1
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	0	Average Delay (sec/veh):	27.7
Optimal Cycle:	63	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	200	994	362	19	599	60	39	258	156	515	348	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	994	362	19	599	60	39	258	156	515	348	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	200	994	362	19	599	60	39	258	0	515	348	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	994	362	19	599	60	39	258	0	515	348	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	200	994	362	19	599	60	39	258	0	515	348	13
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.20	0.80	1.00	2.73	0.27	1.00	2.00	1.00	1.00	1.93	0.07
Final Sat.:	1805	3650	1329	1805	4649	466	1805	3610	1900	1805	3463	129
Capacity Analysis Module:												
Vol/Sat:	0.11	0.27	0.27	0.01	0.13	0.13	0.02	0.07	0.00	0.29	0.10	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.20	0.43	0.43	0.02	0.24	0.24	0.10	0.11	0.00	0.45	0.46	0.46
Volume/Cap:	0.54	0.64	0.64	0.64	0.54	0.54	0.22	0.64	0.00	0.64	0.22	0.22
Delay/Veh:	37.2	23.3	23.3	87.4	33.9	33.9	42.1	45.9	0.0	23.2	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.2	23.3	23.3	87.4	33.9	33.9	42.1	45.9	0.0	23.2	16.3	16.3
LOS by Move:	D	C	C	F	C	C	D	D	A	C	B	B
HCM2kAvgQ:	6	13	13	2	7	7	1	5	0	13	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 7.9 Worst Case Level Of Service: A[9.1]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	118	0	2	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	118	0	2	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	118	0	2	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	118	0	2	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.12	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1006	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				9.1		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.506
Loss Time (sec):	0	Average Delay (sec/veh):	10.4
Optimal Cycle:	46	Level Of Service:	B

****

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	161	1443	49	1	858	132	0	0	0	252	58	75
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1443	49	1	858	132	0	0	0	252	58	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1443	49	1	858	132	0	0	0	252	58	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1443	49	1	858	132	0	0	0	252	58	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1443	49	1	858	132	0	0	0	252	58	75
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.85	1.00	1.00	1.00	0.90	0.90	0.85
Lanes:	2.00	1.93	0.07	1.00	2.00	1.00	0.00	0.00	0.00	1.63	0.37	1.00
Final Sat.:	3502	3474	118	1805	3610	1615	0	0	0	2786	641	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.42	0.42	0.00	0.24	0.08	0.00	0.00	0.00	0.09	0.09	0.05
Crit Moves:		****		****						****		
Green/Cycle:	0.13	0.82	0.82	0.00	0.69	0.69	0.00	0.00	0.00	0.18	0.18	0.18
Volume/Cap:	0.35	0.51	0.51	0.51	0.35	0.12	0.00	0.00	0.00	0.51	0.51	0.26
Delay/Veh:	39.8	2.9	2.9	184.1	6.5	5.3	0.0	0.0	0.0	37.8	37.8	35.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.8	2.9	2.9	184.1	6.5	5.3	0.0	0.0	0.0	37.8	37.8	35.9
LOS by Move:	D	A	A	F	A	A	A	A	A	D	D	D
HCM2kAvgQ:	3	8	8	0	6	1	0	0	0	5	5	2

****

Note: Queue reported is the number of cars per lane.

****

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.565
Loss Time (sec):	0	Average Delay (sec/veh):	20.0
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	997	16	0	1107	0	188	91	70	5	0	468
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	997	16	0	1107	0	188	91	70	5	0	468
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	997	16	0	1107	0	188	91	70	5	0	468
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	997	16	0	1107	0	188	91	70	5	0	468
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	997	16	0	1107	0	188	91	70	5	0	468
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.90	0.90	0.90	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	1.00	0.57	0.43	0.02	0.00	1.98
Final Sat.:	0	5093	82	0	3610	0	1705	964	741	34	0	3201
Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.20	0.00	0.31	0.00	0.11	0.09	0.09	0.15	0.00	0.15
Crit Moves:					****		****			****		
Green/Cycle:	0.00	0.54	0.54	0.00	0.54	0.00	0.20	0.20	0.20	0.26	0.00	0.26
Volume/Cap:	0.00	0.36	0.36	0.00	0.56	0.00	0.56	0.48	0.48	0.56	0.00	0.56
Delay/Veh:	0.0	13.1	13.1	0.0	15.4	0.0	37.6	36.3	36.3	32.9	0.0	32.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.1	13.1	0.0	15.4	0.0	37.6	36.3	36.3	32.9	0.0	32.8
LOS by Move:	A	B	B	A	B	A	D	D	D	C	A	C
HCM2kAvgQ:	0	6	6	0	12	0	6	5	5	7	0	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.338
Loss Time (sec):	0	Average Delay (sec/veh):	11.1
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Orange Grove Bl						ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	1 0	1	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	135	758	0	0	355	1180	0	0	0	95	0	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	135	758	0	0	355	1180	0	0	0	95	0	18
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	135	758	0	0	355	0	0	0	0	95	0	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	758	0	0	355	0	0	0	0	95	0	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	135	758	0	0	355	0	0	0	0	95	0	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.77	1.00	0.77
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.84	0.00	0.16
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1236	0	234
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Crit Moves:	****				****					****		
Green/Cycle:	0.22	0.77	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.23	0.00	0.23
Volume/Cap:	0.34	0.27	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.34	0.00	0.34
Delay/Veh:	33.3	3.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	33.0	0.0	33.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.3	3.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	33.0	0.0	33.0
LOS by Move:	C	A	A	A	B	A	A	A	A	C	A	C
HCM2kAvgQ:	4	4	0	0	6	0	0	0	0	3	0	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.421
Loss Time (sec):	0	Average Delay (sec/veh):	23.4
Optimal Cycle:	45	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	419	142	23	426	0	473	3	80	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	419	142	23	426	0	473	3	80	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	419	142	23	426	0	473	3	80	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	419	142	23	426	0	473	3	80	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	419	142	23	426	0	473	3	80	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	1.74	0.01	0.25	0.00	0.00	0.00
Final Sat.:	0	2594	879	1805	1900	0	2822	15	406	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.01	0.22	0.00	0.17	0.20	0.20	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.28	0.28	0.38	0.66	0.00	0.34	0.34	0.34	0.00	0.00	0.00
Volume/Cap:	0.00	0.58	0.58	0.03	0.34	0.00	0.50	0.58	0.58	0.00	0.00	0.00
Delay/Veh:	0.0	32.1	32.1	19.2	7.5	0.0	26.7	28.2	28.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	32.1	32.1	19.2	7.5	0.0	26.7	28.2	28.2	0.0	0.0	0.0
LOS by Move:	A	C	C	B	A	A	C	C	C	A	A	A
HCM2kAvgQ:	0	8	8	0	6	0	7	9	9	0	0	0

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: A[8.8]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	37		6		0	0		29		6	3		0		83	0		0		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	37		6		0	0		29		6	3		0		83	0		0		0
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	37		6		0	0		29		6	3		0		83	0		0		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	37		6		0	0		29		6	3		0		83	0		0		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4		6.5		6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5		4.0		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	35	xxxx	xxxxx	xxxx	xxxx	xxxxx					112		112		32	xxxx	xxxx	xxxxx		
Potent Cap.:	1589	xxxx	xxxxx	xxxx	xxxx	xxxxx					890		782		1048	xxxx	xxxx	xxxxx		
Move Cap.:	1589	xxxx	xxxxx	xxxx	xxxx	xxxxx					873		763		1048	xxxx	xxxx	xxxxx		
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx					0.00		0.00		0.08	xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A		*		*	*		*			*		*			*		*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	1040	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.3	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.8	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	A		*		*	*		*			*	A				*		*		
ApproachDel:	xxxxxx					xxxxxx						8.8				xxxxxx				
ApproachLOS:			*					*				A						*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: B[12.5]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	10	15	20	103	0	17	11	108	108	64	20	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	15	20	103	0	17	11	108	108	64	20	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	15	20	103	0	17	11	108	108	64	20	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	10	15	20	103	0	17	11	108	108	64	20	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	341	332	162	350	386	20	20	xxxx	xxxxx	216	xxxx	xxxxx
Potent Cap.:	617	591	888	609	551	1064	1609	xxxx	xxxxx	1366	xxxx	xxxxx
Move Cap.:	582	558	888	559	521	1064	1609	xxxx	xxxxx	1366	xxxx	xxxxx
Volume/Cap:	0.02	0.03	0.02	0.18	0.00	0.02	0.01	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	676	xxxxx	xxxx	599	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.7	xxxxx	xxxxx	12.5	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.7			12.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 20.6 Worst Case Level Of Service: F[50.3]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	438		0		79	0		0		0	0		93		0	0		141		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
Initial Bse:	438		0		79	0		0		0	0		93		0	0		141		0
User Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Volume:	438		0		0	0		0		0	0		93		0	0		141		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	438		0		0	0		0		0	0		93		0	0		141		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				6.5	xxxxx	xxxxx			6.5	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				4.0	xxxxx	xxxxx			4.0	xxxxx			
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		876	xxxxx		xxxx		876	xxxxx		xxxx	
Potent Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		290	xxxxx		xxxx		290	xxxxx		xxxx	
Move Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		212	xxxxx		xxxx		212	xxxxx		xxxx	
Volume/Cap:	0.27	xxxx		xxxx		xxxx	xxxx		xxxx		0.44		xxxx		xxxx	0.67		xxxx		
Level Of Service Module:																				
2Way95thQ:	1.1	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		2.1	xxxxx		xxxx		4.1	xxxxx		xxxx	
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				34.6	xxxxx	xxxxx			50.3	xxxxx			
LOS by Move:	A	*		*		*	*		*		D		*		*	F		*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	xxxxx		xxxx		xxxx	xxxxx		xxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*		*		*	*		*		*	*		*		*	*		*		
ApproachDel:	xxxxxx				xxxxxx						34.6					50.3				
ApproachLOS:	*				*						D					F				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.821
Loss Time (sec):	0	Average Delay (sec/veh):	21.3
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy						Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	81	0	12	0	0	0	0	657	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	81	0	12	0	0	0	0	657	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	81	0	12	0	0	0	0	657	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	81	0	12	0	0	0	0	657	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	81	0	12	0	0	0	0	657	54
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92	0.08
Final Sat.:	0	0	0	530	0	642	0	0	0	0	800	66
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.15	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	0.82	0.82
Crit Moves:				****							****	
Delay/Veh:	0.0	0.0	0.0	10.3	0.0	8.1	0.0	0.0	0.0	0.0	22.8	22.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.3	0.0	8.1	0.0	0.0	0.0	0.0	22.8	22.8
LOS by Move:	*	*	*	B	*	A	*	*	*	*	C	C
ApproachDel:	xxxxxx			10.0			xxxxxx			22.8		
Delay Adj:	xxxxx			1.00			xxxxx			1.00		
ApprAdjDel:	xxxxxx			10.0			xxxxxx			22.8		
LOS by Appr:	*			A			*			C		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: C[15.3]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	10	0	52	69	610	0	0	432	196								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	10	0	52	69	610	0	0	432	196								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	10	0	52	69	610	0	0	432	196								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	10	0	52	69	610	0	0	432	196								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1278	1278	530	628	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	185	168	553	964	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	175	156	553	964	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.00	0.09	0.07	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	410	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	15.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				15.3		xxxxxx				xxxxxx									
ApproachLOS:	*				C		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	6.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L - T - R			L - T - R			L - T - R			L - T - R			
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	13	1	2	1	1	4	5	224	8	4	96	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	1	2	1	1	4	5	224	8	4	96	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	1	2	1	1	4	5	224	8	4	96	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	13	1	2	1	1	4	5	224	8	4	96	1
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.81	0.06	0.13	0.17	0.17	0.67	0.02	0.95	0.03	0.04	0.95	0.01
Final Sat.:	194	15	30	0	0	1	18	790	28	29	697	7
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	6.00	6.00	6.00	0.28	0.28	0.28	0.14	0.14	0.14
Crit Moves:			****			****	****			****		
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume/Cap:	0.07	0.07	0.07	6.00	6.00	6.00	0.28	0.28	0.28	0.14	0.14	0.14
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	2.9	2.9	2.9	1.7	1.7	1.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	2.9	2.9	2.9	1.7	1.7	1.7
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 7.0 Worst Case Level Of Service: D[29.5]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	95	0	214	0	0	0	68	409	0	0	558	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	0	214	0	0	0	68	409	0	0	558	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	0	214	0	0	0	68	409	0	0	558	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	95	0	214	0	0	0	68	409	0	0	558	46
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1126	1149	205	xxxx	xxxx	xxxxx	604	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	229	200	841	xxxx	xxxx	xxxxx	984	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	216	186	841	xxxx	xxxx	xxxxx	984	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.44	0.00	0.25	xxxx	xxxx	xxxx	0.07	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	445	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	5.2	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	29.5	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	*	*	A	*	*	*	*	*
ApproachDel:		29.5		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		D			*			*			*	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.7]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		395		6			1	0		0		0		0		59
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		395		6			1	0		0		0		0		59
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		395		6			1	0		0		0		0		59
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		395		6			1	0		0		0		0		59
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			398	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			566	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			535	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.00	xxxx		xxxx		xxxx		xxxx		0.05
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			0.0	xxxx		xxxxx		xxxx		xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			11.7	xxxx		xxxxx		xxxxx		xxxx		8.5
LOS by Move:	*	*	*	*		*		*			B	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							11.7							8.5		
ApproachLOS:	*			*							B							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.504
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	157	28	44	10	311	217	7	294	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	157	28	44	10	311	217	7	294	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	157	28	44	10	311	217	7	294	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	157	28	44	10	311	217	7	294	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	157	28	44	10	311	217	7	294	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.69	0.12	0.19	0.03	0.97	1.00	0.04	1.88	0.07
Final Sat.:	0	519	0	411	73	115	20	617	726	27	1145	43
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.38	0.38	0.38	0.50	0.50	0.30	0.26	0.26	0.26
Crit Moves:		****			****			****			****	
Delay/Veh:	0.0	0.0	0.0	11.9	11.9	11.9	13.6	13.6	9.5	10.4	10.3	10.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.9	11.9	11.9	13.6	13.6	9.5	10.4	10.3	10.3
LOS by Move:	*	*	*	B	B	B	B	B	A	B	B	B
ApproachDel:	xxxxxx			11.9			11.9			10.3		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.9			11.9			10.3		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.5	0.5	0.5	0.9	0.9	0.4	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.639
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	205	2	7		0	0	0		186	281	0		0	109	92			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	205	2	7		0	0	0		186	281	0		0	109	92			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	205	2	7		0	0	0		186	281	0		0	109	92			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	205	2	7		0	0	0		186	281	0		0	109	92			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	205	2	7		0	0	0		186	281	0		0	109	92			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.96	0.01	0.03		0.00	0.00	0.00		0.40	0.60	0.00		0.00	0.54	0.46			
Final Sat.:	580	6	20		0	0	0		291	440	0		0	389	328			
Capacity Analysis Module:																		
Vol/Sat:	0.35	0.35	0.35		xxxx	xxxx	xxxx		0.64	0.64	xxxx		xxxx	0.28	0.28			
Crit Moves:	****								****					****				
Delay/Veh:	11.3	11.3	11.3		0.0	0.0	0.0		15.6	15.6	0.0		0.0	9.5	9.5			
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	11.3	11.3	11.3		0.0	0.0	0.0		15.6	15.6	0.0		0.0	9.5	9.5			
LOS by Move:	B	B	B		*	*	*		C	C	*		*	A	A			
ApproachDel:	11.3				xxxxxx				15.6				9.5					
Delay Adj:	1.00				xxxxx				1.00				1.00					
ApprAdjDel:	11.3				xxxxxx				15.6				9.5					
LOS by Appr:	B				*				C				A					
AllWayAvgQ:	0.5	0.5	0.5		0.0	0.0	0.0		1.6	1.6	1.6		0.3	0.3	0.3			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.733
Loss Time (sec):	0	Average Delay (sec/veh):	17.6
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43					
Approach:	North Bound				South Bound				East Bound				West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R					
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0			
Volume Module:															
Base Vol:	8	23	46	77	60	103	177	273	13	48	263	108			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	8	23	46	77	60	103	177	273	13	48	263	108			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	8	23	46	77	60	103	177	273	13	48	263	108			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	8	23	46	77	60	103	177	273	13	48	263	108			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
FinalVolume:	8	23	46	77	60	103	177	273	13	48	263	108			
Saturation Flow Module:															
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Lanes:	0.10	0.30	0.60	0.32	0.25	0.43	0.38	0.59	0.03	0.11	0.63	0.26			
Final Sat.:	48	139	278	173	135	231	242	373	18	73	401	165			
Capacity Analysis Module:															
Vol/Sat:	0.17	0.17	0.17	0.45	0.45	0.45	0.73	0.73	0.73	0.66	0.66	0.66			
Crit Moves:	****			****			****				****				
Delay/Veh:	10.4	10.4	10.4	13.2	13.2	13.2	21.2	21.2	21.2	17.4	17.4	17.4			
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	10.4	10.4	10.4	13.2	13.2	13.2	21.2	21.2	21.2	17.4	17.4	17.4			
LOS by Move:	B	B	B	B	B	B	C	C	C	C	C	C			
ApproachDel:	10.4			13.2			21.2			17.4					
Delay Adj:	1.00			1.00			1.00			1.00					
ApprAdjDel:	10.4			13.2			21.2			17.4					
LOS by Appr:	B			B			C			C					
AllWayAvgQ:	0.1	0.1	0.1	0.6	0.6	0.6	2.2	2.2	2.2	1.6	1.6	1.6			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.528
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	147	4	48	5	4	26	13	245	130	27	249	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	4	48	5	4	26	13	245	130	27	249	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	147	4	48	5	4	26	13	245	130	27	249	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	4	48	5	4	26	13	245	130	27	249	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	4	48	5	4	26	13	245	130	27	249	2
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.52	0.48	0.14	0.11	0.74	0.03	0.63	0.34	0.10	0.90	0.01
Final Sat.:	514	302	281	81	65	421	25	464	246	66	612	5
Capacity Analysis Module:												
Vol/Sat:	0.29	0.01	0.17	0.06	0.06	0.06	0.53	0.53	0.53	0.41	0.41	0.41
Crit Moves:	****			****				****			****	
Delay/Veh:	11.7	9.0	9.0	8.8	8.8	8.8	12.7	12.7	12.7	11.3	11.3	11.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.7	9.0	9.0	8.8	8.8	8.8	12.7	12.7	12.7	11.3	11.3	11.3
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	11.0			8.8			12.7			11.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.0			8.8			12.7			11.3		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.3	0.1	0.1	0.0	0.0	0.0	1.0	1.0	1.0	0.6	0.6	0.6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 95.0 Worst Case Level Of Service: F[839.3]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	235	0	106	0	1672	0	0	999	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	235	0	106	0	1672	0	0	999	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	235	0	106	0	1672	0	0	999	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	235	0	106	0	1672	0	0	999	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2172	2671	836	1835	2671	500	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	27	23	315	69	23	522	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	21	23	315	69	23	522	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	3.41	0.00	0.20	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.8	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	69	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	24.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	1212	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			839.3			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.7]

****

Street Name:	ASP NB on-ramp									Ave 26									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	87	1201	0	0	0	1048	81			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	87	1201	0	0	0	1048	81			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	87	1201	0	0	0	1048	81			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	87	1201	0	0	0	1048	81			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1129	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	626	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	626	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.14	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx					xxxxxx					xxxxxx					
ApproachLOS:	*			*					*					*					

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.790
Loss Time (sec):	0	Average Delay (sec/veh):	16.5
Optimal Cycle:	180	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2
Volume Module:												
Base Vol:	0	273	160	828	756	210	85	37	18	0	0	533
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	273	160	828	756	210	85	37	18	0	0	533
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	273	160	828	756	210	85	37	18	0	0	533
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	273	160	828	756	210	85	37	18	0	0	533
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	273	160	828	756	210	85	37	18	0	0	533
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.00	1.26	0.74	2.00	0.78	0.22	0.61	0.26	0.13	0.00	0.00	2.00
Final Sat.:	0	2150	1260	3502	1438	400	1100	479	233	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.24	0.53	0.53	0.08	0.08	0.08	0.00	0.00	0.19
Crit Moves:					****		****					****
Green/Cycle:	0.00	0.14	0.14	0.57	0.71	0.71	0.08	0.08	0.08	0.00	0.00	0.78
Volume/Cap:	0.00	0.92	0.92	0.41	0.74	0.74	0.92	0.92	0.92	0.00	0.00	0.24
Delay/Veh:	0.0	50.0	50.0	7.8	7.9	7.9	78.2	78.2	78.2	0.0	0.0	2.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	50.0	50.0	7.8	7.9	7.9	78.2	78.2	78.2	0.0	0.0	2.0
LOS by Move:	A	D	D	A	A	A	E	E	E	A	A	A
HCM2kAvgQ:	0	8	8	5	13	13	6	6	6	0	0	2

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[12.1]

Street Name:	ASP NB on-ramp									San Fernando Rd									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	75	1121	0	0	0	1147	72			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	75	1121	0	0	0	1147	72			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	75	1121	0	0	0	1147	72			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	75	1121	0	0	0	1147	72			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1219	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					579	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					579	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.13	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[9.9]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	29		8		7	232		0		0		0		0	26		0		7
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	29		8		7	232		0		0		0		0	26		0		7
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	29		8		7	232		0		0		0		0	26		0		7
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	29		8		7	232		0		0		0		0	26		0		7
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	6.4		6.5		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		xxxxx	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		37	xxxx		xxxxx		xxxx		xxxx		xxxxx	279		279		33
Potent Cap.:	xxxx	xxxx		xxxxx		1587	xxxx		xxxxx		xxxx		xxxx		xxxxx	715		632		1046
Move Cap.:	xxxx	xxxx		xxxxx		1587	xxxx		xxxxx		xxxx		xxxx		xxxxx	713		630		1046
Volume/Cap:	xxxx	xxxx		xxxx		0.00	xxxx		xxxx		xxxx		xxxx		xxxx	0.04		0.00		0.01
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx		7.3	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*	*		*		A	*		*		*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		764		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		0.1		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		7.3	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		9.9		xxxxx
Shared LOS:	*	*		*		A	*		*		*		*		*	*		A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							9.9		
ApproachLOS:	*					*					*							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[14.0]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0			19	8			14	27	174			278	75	118			104
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			19	8			14	27	174			278	75	118			104
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			19	8			14	27	174			278	75	118			104
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			19	8			14	27	174			278	75	118			104
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			687	826			170	222	xxxx	xxxxx			452	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			416	310			879	1359	xxxx	xxxxx			1119	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			388	282			879	1359	xxxx	xxxxx			1119	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.05	0.03			0.02	0.02	xxxx	xxxx			0.07	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx			xxxxx	0.1	xxxx	xxxxx			0.2	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx			xxxxx	7.7	xxxx	xxxxx			8.4	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*			*	A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	439			xxxxx	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.3			xxxxx	0.1	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	14.0			xxxxx	7.7	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	B			*	A	*	*			*	*	*		
ApproachDel:	xxxxxx					14.0					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.499
Loss Time (sec):	0	Average Delay (sec/veh):	12.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	0	278	0	0	316	0	0	0	0	172	1	56	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	278	0	0	316	0	0	0	0	172	1	56	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	278	0	0	316	0	0	0	0	172	1	56	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	278	0	0	316	0	0	0	0	172	1	56	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	278	0	0	316	0	0	0	0	172	1	56	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	580	634	0	0	634	0	0	0	0	528	569	639	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.44	xxxx	xxxx	0.50	xxxx	xxxx	xxxx	xxxx	0.33	0.00	0.09	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	12.3	0.0	0.0	13.8	0.0	0.0	0.0	0.0	12.1	8.7	8.5	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	12.3	0.0	0.0	13.8	0.0	0.0	0.0	0.0	12.1	8.7	8.5	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		12.3			13.8			xxxxxx			11.2		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		12.3			13.8			xxxxxx			11.2		
LOS by Appr:		B			B			*			B		
AllWayAvgQ:	0.0	0.7	0.0	0.9	0.9	0.9	0.0	0.0	0.0	0.4	0.0	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.538
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	184	263	314	346	0	0	0	1	71	1	96	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	184	263	314	346	0	0	0	1	71	1	96	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	184	263	314	346	0	0	0	1	71	1	96	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	184	263	314	346	0	0	0	1	71	1	96	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	184	263	314	346	0	0	0	1	71	1	96	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.85	0.15	1.00	
Final Sat.:	0	604	686	591	643	0	0	456	501	394	72	546	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.30	0.38	0.53	0.54	xxxx	xxxx	0.00	0.00	0.18	0.01	0.18	
Crit Moves:			****		****				****	****			
Delay/Veh:	0.0	10.9	10.8	15.2	14.3	0.0	0.0	0.0	9.2	11.2	11.2	10.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.9	10.8	15.2	14.3	0.0	0.0	0.0	9.2	11.2	11.2	10.0	
LOS by Move:	*	B	B	C	B	*	*	*	A	B	B	B	
ApproachDel:	10.9			14.7			9.2			10.5			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.9			14.7			9.2			10.5			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.4	0.6	1.1	1.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	7.5
Optimal Cycle:	55	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1088	76	175	1084	0	0	0	0	192	0	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.60	0.60	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.87	0.13	0.28	1.72	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3341	233	316	1955	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.33	0.55	0.55	0.00	0.00	0.00	0.00	0.11	0.00	0.08
Crit Moves:					****					****		
Green/Cycle:	0.00	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.16	0.00	0.16
Volume/Cap:	0.00	0.39	0.39	0.66	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.48
Delay/Veh:	0.0	2.0	2.0	3.8	3.8	0.0	0.0	0.0	0.0	44.9	0.0	39.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	2.0	2.0	3.8	3.8	0.0	0.0	0.0	0.0	44.9	0.0	39.6
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	5	5	9	9	0	0	0	0	7	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1088	179	43	698	194	45	228	8	66	187	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1088	179	43	698	194	45	228	8	66	187	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1088	179	43	698	194	45	228	8	66	187	249
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.93	0.93	0.13	0.92	0.92	0.28	1.00	1.00	0.47	0.91	0.91
Lanes:	1.00	1.72	0.28	1.00	1.57	0.43	1.00	0.97	0.03	1.00	0.43	0.57
Final Sat.:	454	3035	499	245	2732	759	524	1826	64	901	745	992
Capacity Analysis Module:												
Vol/Sat:	0.07	0.36	0.36	0.18	0.26	0.26	0.09	0.12	0.12	0.07	0.25	0.25
Crit Moves:		****									****	
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.12	0.61	0.61	0.30	0.43	0.43	0.21	0.30	0.30	0.18	0.61	0.61
Delay/Veh:	9.3	13.8	13.8	11.5	11.5	11.5	19.4	20.0	20.0	18.9	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.3	13.8	13.8	11.5	11.5	11.5	19.4	20.0	20.0	18.9	24.6	24.6
LOS by Move:	A	B	B	B	B	B	B	B	B	B	C	C
HCM2kAvgQ:	1	13	13	1	8	8	1	5	5	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.270
Loss Time (sec):	0	Average Delay (sec/veh):	8.5
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	106	0	128	155	388	0	0	363	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	106	0	128	155	388	0	0	363	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	106	0	128	155	388	0	0	363	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	128	155	388	0	0	363	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	106	0	128	155	388	0	0	363	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.47	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	901	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.17	0.11	0.00	0.00	0.19	0.09
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.29	0.00	0.29	0.71	0.71	0.00	0.00	0.71	1.00
Volume/Cap:	0.00	0.00	0.00	0.10	0.00	0.27	0.24	0.15	0.00	0.00	0.27	0.09
Delay/Veh:	0.0	0.0	0.0	25.8	0.0	27.4	5.4	4.8	0.0	0.0	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.8	0.0	27.4	5.4	4.8	0.0	0.0	5.4	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	2	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	89	257	3	16	173	230	238	276	118	2	492	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	257	3	16	173	230	238	276	118	2	492	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	257	3	16	173	230	238	276	118	2	492	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	257	3	16	173	230	238	276	118	2	492	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	257	3	16	173	230	238	276	118	2	492	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.96	0.96	0.85	0.34	1.00	0.85	0.52	0.99	0.99
Lanes:	0.25	0.74	0.01	0.08	0.92	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	422	1217	14	155	1674	1615	648	1900	1615	993	1683	188
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.10	0.10	0.14	0.37	0.15	0.07	0.00	0.29	0.29
Crit Moves:		****					****					
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.63	0.63	0.63	0.63	0.63	0.63
Volume/Cap:	0.58	0.58	0.58	0.28	0.28	0.39	0.58	0.23	0.12	0.00	0.46	0.46
Delay/Veh:	26.9	26.9	26.9	22.7	22.7	23.9	12.6	7.9	7.2	6.7	9.7	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.9	26.9	26.9	22.7	22.7	23.9	12.6	7.9	7.2	6.7	9.7	9.7
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	9	9	9	4	4	5	5	4	1	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	70	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	622	295	108	1330	19	18	49	17	353	28	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	622	295	108	1330	19	18	49	17	353	28	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	622	295	108	1330	19	18	49	17	353	28	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	622	295	108	1330	19	18	49	17	353	28	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	622	295	108	1330	19	18	49	17	353	28	47
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.79	0.79	0.79	0.89	0.89	0.89	0.65	0.65	0.85
Lanes:	0.01	1.99	1.00	0.15	1.82	0.03	0.21	0.59	0.20	0.93	0.07	1.00
Final Sat.:	16	3413	1615	223	2746	39	361	982	341	1142	91	1615
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.48	0.48	0.48	0.05	0.05	0.05	0.31	0.31	0.03
Crit Moves:					****						****	
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.30	0.30	0.30	0.79	0.79	0.79	0.13	0.13	0.13	0.79	0.79	0.07
Delay/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.7	19.7	19.7	35.8	35.8	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.7	19.7	19.7	35.8	35.8	19.2
LOS by Move:	A	A	A	B	B	B	B	B	B	D	D	B
HCM2kAvgQ:	5	5	4	19	19	19	2	2	2	12	12	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	0	Average Delay (sec/veh):	9.6
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0	1!	0	0
Volume Module:													
Base Vol:	176	1336	8	5	907	61	180	10	95	13	23	49	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	1336	8	5	907	61	180	10	95	13	23	49	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	1336	8	5	907	61	180	10	95	13	23	49	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	1336	8	5	907	61	180	10	95	13	23	49	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	1336	8	5	907	61	180	10	95	13	23	49	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.95	0.95	0.15	0.94	0.94	0.65	0.65	0.85	0.88	0.88	0.88	
Lanes:	1.00	1.99	0.01	1.00	1.87	0.13	0.95	0.05	1.00	0.15	0.27	0.58	
Final Sat.:	471	3585	21	283	3352	225	1166	65	1615	257	454	967	
Capacity Analysis Module:													
Vol/Sat:	0.37	0.37	0.37	0.02	0.27	0.27	0.15	0.15	0.06	0.05	0.05	0.05	
Crit Moves:		****						****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.53	0.53	0.53	0.02	0.38	0.38	0.53	0.53	0.20	0.17	0.17	0.17	
Delay/Veh:	8.4	7.0	7.0	4.4	6.0	6.0	31.0	31.0	26.8	26.5	26.5	26.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.4	7.0	7.0	4.4	6.0	6.0	31.0	31.0	26.8	26.5	26.5	26.5	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	3	10	10	0	6	6	5	5	2	2	2	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.544
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	41	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	193	0	301	392	400	0	0	345	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	193	0	301	392	400	0	0	345	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	193	0	301	392	400	0	0	345	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	193	0	301	392	400	0	0	345	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	193	0	301	392	400	0	0	345	94
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.89	1.00	0.89	0.48	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.39	0.00	1.61	1.00	2.00	0.00	0.00	1.57	0.43
Final Sat.:	0	0	0	2355	0	2725	903	3610	0	0	2746	748
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.11	0.43	0.11	0.00	0.00	0.13	0.13
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.20	0.00	0.20	0.80	0.80	0.00	0.00	0.80	0.80
Volume/Cap:	0.00	0.00	0.00	0.40	0.00	0.54	0.54	0.14	0.00	0.00	0.16	0.16
Delay/Veh:	0.0	0.0	0.0	34.8	0.0	36.4	4.5	2.3	0.0	0.0	2.4	2.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.8	0.0	36.4	4.5	2.3	0.0	0.0	2.4	2.4
LOS by Move:	A	A	A	C	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	6	5	1	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.526
Loss Time (sec):	0	Average Delay (sec/veh):	14.8
Optimal Cycle:	30	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	53	679	21	121	584	50	136	310	104	21	235	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	679	21	121	584	50	136	310	104	21	235	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	679	21	121	584	50	136	310	104	21	235	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	679	21	121	584	50	136	310	104	21	235	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	679	21	121	584	50	136	310	104	21	235	96
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.29	1.00	0.85	0.42	0.91	0.91	0.36	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.50	0.50	1.00	1.42	0.58
Final Sat.:	648	1900	1615	543	1900	1615	806	2601	873	682	2452	1001
Capacity Analysis Module:												
Vol/Sat:	0.08	0.36	0.01	0.22	0.31	0.03	0.17	0.12	0.12	0.03	0.10	0.10
Crit Moves:		****					****					
Green/Cycle:	0.68	0.68	0.68	0.68	0.68	0.68	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.12	0.53	0.02	0.33	0.45	0.05	0.53	0.37	0.37	0.10	0.30	0.30
Delay/Veh:	5.7	8.4	5.2	7.1	7.7	5.3	29.8	26.4	26.4	24.0	25.7	25.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.7	8.4	5.2	7.1	7.7	5.3	29.8	26.4	26.4	24.0	25.7	25.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	11	0	2	8	1	4	5	5	1	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.565
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	69	973	27	86	965	35	62	227	87	58	217	149
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	973	27	86	965	35	62	227	87	58	217	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	973	27	86	965	35	62	227	87	58	217	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	973	27	86	965	35	62	227	87	58	217	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	973	27	86	965	35	62	227	87	58	217	149
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.95	0.94	0.94
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.72	0.28	1.00	0.59	0.41
Final Sat.:	1805	3498	97	1805	3466	126	1805	1316	505	1805	1058	726
Capacity Analysis Module:												
Vol/Sat:	0.04	0.28	0.28	0.05	0.28	0.28	0.03	0.17	0.17	0.03	0.21	0.21
Crit Moves:		****		****			****				****	
Green/Cycle:	0.07	0.49	0.49	0.08	0.51	0.51	0.36	0.36	0.36	0.07	0.36	0.36
Volume/Cap:	0.55	0.57	0.57	0.57	0.55	0.55	0.25	0.48	0.48	0.48	0.57	0.57
Delay/Veh:	50.1	18.3	18.3	48.9	17.2	17.2	23.3	25.5	25.5	48.0	26.7	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.1	18.3	18.3	48.9	17.2	17.2	23.3	25.5	25.5	48.0	26.7	26.7
LOS by Move:	D	B	B	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	3	12	12	3	11	11	2	8	8	2	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.480
Loss Time (sec):	0	Average Delay (sec/veh):	12.8
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	168	0	123	0	0	0	0	888	120	91	756	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	168	0	123	0	0	0	0	888	120	91	756	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	168	0	123	0	0	0	0	888	120	91	756	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	168	0	123	0	0	0	0	888	120	91	756	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	168	0	123	0	0	0	0	888	120	91	756	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.78	1.00	0.78	1.00	1.00	1.00	1.00	0.93	0.93	0.20	0.95	1.00
Lanes:	0.58	0.00	0.42	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00
Final Sat.:	858	0	628	0	0	0	0	3124	422	385	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.28	0.28	0.24	0.21	0.00
Crit Moves:	****							****				
Green/Cycle:	0.41	0.00	0.41	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.59	0.00
Volume/Cap:	0.48	0.00	0.48	0.00	0.00	0.00	0.00	0.48	0.48	0.40	0.35	0.00
Delay/Veh:	22.4	0.0	22.4	0.0	0.0	0.0	0.0	11.8	11.8	12.0	10.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.4	0.0	22.4	0.0	0.0	0.0	0.0	11.8	11.8	12.0	10.6	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	7	0	7	0	0	0	0	9	9	2	6	0

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.582
Loss Time (sec):	0	Average Delay (sec/veh):	20.9
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	94	0	329	288	732	0	0	639	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	94	0	329	288	732	0	0	639	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	94	0	329	288	732	0	0	639	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	94	0	329	288	732	0	0	639	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	94	0	329	288	732	0	0	639	130
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.66	0.34
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	2924	595
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.20	0.16	0.20	0.00	0.00	0.22	0.22
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.27	0.65	0.00	0.00	0.38	0.38
Volume/Cap:	0.00	0.00	0.00	0.08	0.00	0.58	0.58	0.31	0.00	0.00	0.58	0.58
Delay/Veh:	0.0	0.0	0.0	21.7	0.0	28.1	33.1	7.8	0.0	0.0	25.6	25.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.7	0.0	28.1	33.1	7.8	0.0	0.0	25.6	25.6
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	9	8	5	0	0	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
Loss Time (sec):	0	Average Delay (sec/veh):	31.0
Optimal Cycle:	63	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	146	0	295	0	0	311	0	718	265	241	419	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	0	295	0	0	311	0	718	265	241	419	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	0	295	0	0	311	0	718	265	241	419	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	0	295	0	0	311	0	718	265	241	419	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	146	0	295	0	0	311	0	718	265	241	419	294
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.18	0.00	0.00	0.19	0.00	0.20	0.16	0.13	0.12	0.18
Crit Moves:			****			****		****		****		
Green/Cycle:	0.26	0.00	0.26	0.00	0.00	0.27	0.00	0.28	0.28	0.19	0.47	0.47
Volume/Cap:	0.16	0.00	0.70	0.00	0.00	0.70	0.00	0.70	0.58	0.70	0.25	0.39
Delay/Veh:	28.7	0.0	38.9	0.0	0.0	38.1	0.0	34.4	32.7	44.4	15.8	17.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	38.9	0.0	0.0	38.1	0.0	34.4	32.7	44.4	15.8	17.4
LOS by Move:	C	A	D	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	10	0	0	10	0	12	8	8	4	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.618
Loss Time (sec):	0	Average Delay (sec/veh):	18.5
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	154	590	40	51	588	43	107	821	202	36	770	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	590	40	51	588	43	107	821	202	36	770	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	590	40	51	588	43	107	821	202	36	770	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	590	40	51	588	43	107	821	202	36	770	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	590	40	51	588	43	107	821	202	36	770	65
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	1.00	0.85	0.25	1.00	0.85	0.21	0.92	0.92	0.15	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.61	0.39	1.00	1.84	0.16
Final Sat.:	472	1900	1615	469	1900	1615	405	2811	692	279	3290	278
Capacity Analysis Module:												
Vol/Sat:	0.33	0.31	0.02	0.11	0.31	0.03	0.26	0.29	0.29	0.13	0.23	0.23
Crit Moves:	****							****				
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	0.62	0.59	0.05	0.21	0.59	0.05	0.56	0.62	0.62	0.27	0.50	0.50
Delay/Veh:	21.2	17.1	11.5	12.9	17.1	11.5	22.6	20.4	20.4	17.1	18.4	18.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.2	17.1	11.5	12.9	17.1	11.5	22.6	20.4	20.4	17.1	18.4	18.4
LOS by Move:	C	B	B	B	B	B	C	C	C	B	B	B
HCM2kAvgQ:	4	13	1	1	13	1	3	13	13	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.889
Loss Time (sec):	0	Average Delay (sec/veh):	29.2
Optimal Cycle:	167	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	406	833	71	56	1164	61	78	273	524	95	334	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	406	833	71	56	1164	61	78	273	524	95	334	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	406	833	71	56	1164	61	78	273	524	95	334	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	406	833	71	56	1164	61	78	273	524	95	334	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	406	833	71	56	1164	61	78	273	524	95	334	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.41	0.86	0.86	0.16	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.76	0.24
Final Sat.:	1805	3610	1615	1805	3405	178	781	1627	1627	305	3125	421
Capacity Analysis Module:												
Vol/Sat:	0.22	0.23	0.04	0.03	0.34	0.34	0.10	0.17	0.32	0.31	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.64	0.56	0.56	0.46	0.38	0.38	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.76	0.41	0.08	0.15	0.89	0.89	0.28	0.46	0.89	0.86	0.30	0.30
Delay/Veh:	31.7	12.6	10.1	15.2	36.2	36.2	23.1	24.6	40.8	74.5	22.9	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.7	12.6	10.1	15.2	36.2	36.2	23.1	24.6	40.8	74.5	22.9	22.9
LOS by Move:	C	B	B	B	D	D	C	C	D	E	C	C
HCM2kAvgQ:	11	8	1	1	22	22	2	7	19	5	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.473
Loss Time (sec):	0	Average Delay (sec/veh):	117.0
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	112	663	333	65	1049	184	182	681	55	761	1758	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	663	333	65	1049	184	182	681	55	761	1758	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	112	663	333	65	1049	184	182	681	55	761	1758	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	663	333	65	1049	184	182	681	55	761	1758	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	112	663	333	65	1049	184	182	681	55	761	1758	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.06	1.00	0.85	0.26	1.00	0.85	0.95	0.90	0.90	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	3.00	1.00
Final Sat.:	123	1900	1615	493	1900	1615	1805	4746	383	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.91	0.35	0.21	0.13	0.55	0.11	0.10	0.14	0.14	0.42	0.34	0.04
Crit Moves:	****							****		****		
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.09	0.10	0.10	0.29	0.30	0.30
Volume/Cap:	1.47	0.57	0.33	0.21	0.90	0.18	1.15	1.47	1.47	1.47	1.15	0.13
Delay/Veh:	290.1	11.9	9.5	8.8	25.6	8.4	161.9	269	268.8	259.1	109	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	290.1	11.9	9.5	8.8	25.6	8.4	161.9	269	268.8	259.1	109	26.0
LOS by Move:	F	B	A	A	C	A	F	F	F	F	F	C
HCM2kAvgQ:	10	12	5	1	31	2	11	21	21	55	33	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.046
Loss Time (sec):	0	Average Delay (sec/veh):	43.5
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	858	0	628	438	529	0	0	1414	860
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	858	0	628	438	529	0	0	1414	860
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	858	0	628	438	529	0	0	1414	860
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	858	0	628	438	529	0	0	1414	860
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	858	0	628	438	529	0	0	1414	860
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.25	0.00	0.39	0.13	0.10	0.00	0.00	0.27	0.53
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.37	0.00	0.37	0.12	0.63	0.00	0.00	0.51	0.51
Volume/Cap:	0.00	0.00	0.00	0.66	0.00	1.05	1.05	0.16	0.00	0.00	0.54	1.05
Delay/Veh:	0.0	0.0	0.0	27.4	0.0	80.9	100.8	7.7	0.0	0.0	16.8	68.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.4	0.0	80.9	100.8	7.7	0.0	0.0	16.8	68.8
LOS by Move:	A	A	A	C	A	F	F	A	A	A	B	E
HCM2kAvgQ:	0	0	0	12	0	28	12	2	0	0	11	37

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.905
Loss Time (sec):	0	Average Delay (sec/veh):	29.6
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	136	708	3	181	894	71	152	888	201	302	801	170
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	708	3	181	894	71	152	888	201	302	801	170
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	708	3	181	894	71	152	888	201	302	801	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	708	3	181	894	71	152	888	201	302	801	170
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	708	3	181	894	71	152	888	201	302	801	170
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.17	0.95	0.85	0.27	0.94	0.94	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.85	0.15	1.00	1.63	0.37	1.00	1.65	0.35
Final Sat.:	318	3610	1615	506	3308	263	1805	2862	648	1805	2900	615
Capacity Analysis Module:												
Vol/Sat:	0.43	0.20	0.00	0.36	0.27	0.27	0.08	0.31	0.31	0.17	0.28	0.28
Crit Moves:	****							****		****		
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.12	0.34	0.34	0.40	0.40	0.40
Volume/Cap:	0.91	0.42	0.00	0.76	0.57	0.57	0.68	0.91	0.91	0.74	0.68	0.68
Delay/Veh:	70.8	17.5	13.9	34.7	19.5	19.5	50.4	41.2	41.2	28.2	25.9	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.8	17.5	13.9	34.7	19.5	19.5	50.4	41.2	41.2	28.2	25.9	25.9
LOS by Move:	E	B	B	C	B	B	D	D	D	C	C	C
HCM2kAvgQ:	7	7	0	6	11	11	6	21	21	10	14	14

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 0 Average Delay (sec/veh): 19.3
Optimal Cycle: 45 Level Of Service: B

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	160	134	26	229	269	82	99	705	156	46	859	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	160	134	26	229	269	82	99	705	156	46	859	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	160	134	26	229	269	82	99	705	156	46	859	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	134	26	229	269	82	99	705	156	46	859	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	160	134	26	229	269	82	99	705	156	46	859	162
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.17	0.92	0.92	0.23	0.93	0.93
Lanes:	1.00	0.84	0.16	1.00	0.77	0.23	1.00	1.64	0.36	1.00	1.68	0.32
Final Sat.:	1805	1552	301	1805	1405	428	325	2876	636	428	2965	559
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.09	0.13	0.19	0.19	0.30	0.25	0.25	0.11	0.29	0.29
Crit Moves:	****				****		****					
Green/Cycle:	0.35	0.19	0.19	0.48	0.33	0.33	0.52	0.52	0.52	0.52	0.52	0.52
Volume/Cap:	0.36	0.45	0.45	0.35	0.58	0.58	0.58	0.47	0.47	0.21	0.56	0.56
Delay/Veh:	24.1	36.4	36.4	16.3	29.5	29.5	21.7	15.4	15.4	13.3	16.5	16.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.1	36.4	36.4	16.3	29.5	29.5	21.7	15.4	15.4	13.3	16.5	16.5
LOS by Move:	C	D	D	B	C	C	C	B	B	B	B	B
HCM2kAvgQ:	4	5	5	5	9	9	3	9	9	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.597
Loss Time (sec):	0	Average Delay (sec/veh):	18.5
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	519	108	412	790	4	1	1	1	130	2	308	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	519	108	412	790	4	1	1	1	130	2	308	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	519	108	412	790	4	1	1	1	130	2	308	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	519	108	412	790	4	1	1	1	130	2	308	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	519	108	412	790	4	1	1	1	130	2	308	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.93	0.93	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.66	0.34	1.00	1.99	0.01	0.33	0.33	0.33	0.98	0.02	1.00	
Final Sat.:	1900	2911	606	1805	3589	18	585	585	585	1389	21	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.18	0.18	0.23	0.22	0.22	0.00	0.00	0.00	0.09	0.09	0.19	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.30	0.30	0.68	0.68	0.68	0.32	0.32	0.32	0.32	0.32	0.32	
Volume/Cap:	0.00	0.60	0.60	0.52	0.32	0.32	0.01	0.01	0.01	0.29	0.29	0.60	
Delay/Veh:	0.0	30.9	30.9	11.2	6.6	6.6	23.2	23.2	23.2	25.9	25.9	30.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	30.9	30.9	11.2	6.6	6.6	23.2	23.2	23.2	25.9	25.9	30.5	
LOS by Move:	A	C	C	B	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	9	9	7	5	5	0	0	0	3	3	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.727
Loss Time (sec): 0 Average Delay (sec/veh): 30.8
Optimal Cycle: 68 Level Of Service: C

Street Name:	Monterey Rd						Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	351	161	33	96	276	46	11	242	321	68	321	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	351	161	33	96	276	46	11	242	321	68	321	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	351	161	33	96	276	46	11	242	321	68	321	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	351	161	33	96	276	46	11	242	321	68	321	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	351	161	33	96	276	46	11	242	321	68	321	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.96	0.82	0.92	0.96	0.82	0.39	0.88	0.88	0.92	0.95	0.95
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.43	0.57	1.00	0.90	0.10
Final Sat.:	1742	1833	1558	1742	1833	1558	743	721	956	1742	1634	173
Capacity Analysis Module:												
Vol/Sat:	0.20	0.09	0.02	0.06	0.15	0.03	0.01	0.34	0.34	0.04	0.20	0.20
Crit Moves:	****				****			****		****		
Green/Cycle:	0.28	0.28	0.28	0.21	0.21	0.21	0.46	0.46	0.46	0.05	0.52	0.52
Volume/Cap:	0.73	0.32	0.08	0.27	0.73	0.14	0.03	0.73	0.73	0.73	0.38	0.38
Delay/Veh:	38.2	29.0	26.8	33.7	43.9	32.6	14.7	25.3	25.3	71.3	14.9	14.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.2	29.0	26.8	33.7	43.9	32.6	14.7	25.3	25.3	71.3	14.9	14.9
LOS by Move:	D	C	C	C	D	C	B	C	C	E	B	B
HCM2kAvgQ:	11	4	1	3	9	1	0	15	15	4	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.529
Loss Time (sec):	0	Average Delay (sec/veh):	17.9
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	14	492	173	131	841	13	16	74	8	243	100	68	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	14	492	173	131	841	13	16	74	8	243	100	68	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	14	492	173	131	841	13	16	74	8	243	100	68	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	14	492	173	131	841	13	16	74	8	243	100	68	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	14	492	173	131	841	13	16	74	8	243	100	68	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.20	0.91	0.91	0.28	0.95	0.95	0.92	0.92	0.92	0.76	0.76	0.76	
Lanes:	1.00	1.48	0.52	1.00	1.97	0.03	0.16	0.76	0.08	0.59	0.24	0.17	
Final Sat.:	382	2567	903	536	3547	55	286	1321	143	853	351	239	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.19	0.19	0.24	0.24	0.24	0.06	0.06	0.06	0.28	0.28	0.28	
Crit Moves:				****							****		
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.54	0.54	0.54	0.54	0.54	0.54	
Volume/Cap:	0.08	0.41	0.41	0.53	0.51	0.51	0.10	0.10	0.10	0.53	0.53	0.53	
Delay/Veh:	15.2	18.1	18.1	21.3	19.2	19.2	11.4	11.4	11.4	15.6	15.6	15.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	15.2	18.1	18.1	21.3	19.2	19.2	11.4	11.4	11.4	15.6	15.6	15.6	
LOS by Move:	B	B	B	C	B	B	B	B	B	B	B	B	
HCM2kAvgQ:	0	7	7	4	10	10	1	1	1	8	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
Loss Time (sec):	0	Average Delay (sec/veh):	16.8
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	243	345	23	60	529	72	49	162	435	36	239	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	243	345	23	60	529	72	49	162	435	36	239	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	243	345	23	60	529	72	49	162	435	36	239	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	243	345	23	60	529	72	49	162	435	36	239	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	243	345	23	60	529	72	49	162	435	36	239	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	1.00	0.85	0.46	1.00	0.85	0.46	0.85	0.85	0.31	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	625	1900	1615	873	1900	1615	868	1608	1608	592	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.39	0.18	0.01	0.07	0.28	0.04	0.06	0.10	0.27	0.06	0.13	0.09
Crit Moves:	****								****			
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.66	0.31	0.02	0.12	0.47	0.08	0.14	0.25	0.66	0.15	0.31	0.22
Delay/Veh:	18.1	10.5	8.6	9.1	12.0	8.9	18.6	19.4	25.6	18.8	20.1	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.1	10.5	8.6	9.1	12.0	8.9	18.6	19.4	25.6	18.8	20.1	19.3
LOS by Move:	B	B	A	A	B	A	B	B	C	B	C	B
HCM2kAvgQ:	6	5	0	1	9	1	1	3	12	1	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.611
Loss Time (sec):	0	Average Delay (sec/veh):	22.7
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Figueroa St						Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	95	412	66	75	1002	73	52	282	194	78	182	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	412	66	75	1002	73	52	282	194	78	182	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	412	66	75	1002	73	52	282	194	78	182	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	412	66	75	1002	73	52	282	194	78	182	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	412	66	75	1002	73	52	282	194	78	182	47
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.90	0.90	0.90	0.75	0.75	0.75
Lanes:	1.00	1.72	0.28	1.00	1.86	0.14	0.10	0.53	0.37	0.25	0.59	0.15
Final Sat.:	1805	3047	488	1805	3331	243	168	909	626	364	850	220
Capacity Analysis Module:												
Vol/Sat:	0.05	0.14	0.14	0.04	0.30	0.30	0.31	0.31	0.31	0.21	0.21	0.21
Crit Moves:					****			****				
Green/Cycle:	0.08	0.41	0.41	0.45	0.45	0.45	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	0.66	0.33	0.33	0.19	0.66	0.66	0.66	0.66	0.66	0.46	0.46	0.46
Delay/Veh:	55.9	20.4	20.4	17.1	22.4	22.4	22.7	22.7	22.7	18.6	18.6	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.9	20.4	20.4	17.1	22.4	22.4	22.7	22.7	22.7	18.6	18.6	18.6
LOS by Move:	E	C	C	B	C	C	C	C	C	B	B	B
HCM2kAvgQ:	4	5	5	1	14	14	13	13	13	7	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.663
Loss Time (sec):	0	Average Delay (sec/veh):	11.2
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1!	0	0
Volume Module:													
Base Vol:	12	489	150	312	1339	1	8	10	0	125	21	174	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	12	489	150	312	1339	1	8	10	0	125	21	174	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	12	489	150	312	1339	1	8	10	0	125	21	174	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	12	489	150	312	1339	1	8	10	0	125	21	174	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	12	489	150	312	1339	1	8	10	0	125	21	174	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.14	0.92	0.92	0.36	0.95	0.95	0.89	0.89	1.00	0.81	0.81	0.81	
Lanes:	1.00	1.53	0.47	1.00	2.00	0.00	0.44	0.56	0.00	0.39	0.07	0.54	
Final Sat.:	274	2665	818	685	3607	3	751	939	0	602	101	839	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.18	0.18	0.46	0.37	0.37	0.01	0.01	0.00	0.21	0.21	0.21	
Crit Moves:				****							****		
Green/Cycle:	0.69	0.69	0.69	0.69	0.69	0.69	0.31	0.31	0.00	0.31	0.31	0.31	
Volume/Cap:	0.06	0.27	0.27	0.66	0.54	0.54	0.03	0.03	0.00	0.66	0.66	0.66	
Delay/Veh:	5.3	6.1	6.1	12.5	8.0	8.0	23.9	23.9	0.0	33.2	33.2	33.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	5.3	6.1	6.1	12.5	8.0	8.0	23.9	23.9	0.0	33.2	33.2	33.2	
LOS by Move:	A	A	A	B	A	A	C	C	A	C	C	C	
HCM2kAvgQ:	0	4	4	7	11	11	0	0	0	10	10	10	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.494
Loss Time (sec):	0	Average Delay (sec/veh):	13.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av									Ave 43								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	37	55	119			259	222			34	8	202			27	57	111			55
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	37	55	119			259	222			34	8	202			27	57	111			55
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	37	55	119			259	222			34	8	202			27	57	111			55
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
Reduced Vol:	37	55	119			259	222			34	8	202			27	57	111			55
PCE Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
MLF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
FinalVolume:	37	55	119			259	222			34	8	202			27	57	111			55
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Lanes:	1.00	0.32	0.68			1.00	0.87			0.13	0.03	0.85			0.11	0.26	0.50			0.25
Final Sat.:	475	172	373			525	498			76	19	473			63	141	275			136
Capacity Analysis Module:																				
Vol/Sat:	0.08	0.32	0.32			0.49	0.45			0.45	0.43	0.43			0.43	0.40	0.40			0.40
Crit Moves:			****			****					****									****
Delay/Veh:	10.4	11.4	11.4			15.4	13.4			13.4	13.1	13.1			13.1	12.8	12.8			12.8
Delay Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
AdjDel/Veh:	10.4	11.4	11.4			15.4	13.4			13.4	13.1	13.1			13.1	12.8	12.8			12.8
LOS by Move:	B	B	B			C	B			B	B	B			B	B	B			B
ApproachDel:	11.3					14.4					13.1					12.8				
Delay Adj:	1.00					1.00					1.00					1.00				
ApprAdjDel:	11.3					14.4					13.1					12.8				
LOS by Appr:	B					B					B					B				
AllWayAvgQ:	0.1	0.4	0.4			0.9	0.7			0.7	0.6	0.6			0.6	0.6	0.6			0.6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.614
Loss Time (sec):	0	Average Delay (sec/veh):	24.2
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	127	398	103	419	824	26	62	299	386	82	90	122
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	127	398	103	419	824	26	62	299	386	82	90	122
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	127	398	103	419	824	26	62	299	386	82	90	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	398	103	419	824	26	62	299	386	82	90	122
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	127	398	103	419	824	26	62	299	386	82	90	122
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.64	1.00	0.85	0.39	1.00	0.85
Lanes:	1.00	1.59	0.41	1.00	1.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2779	719	1805	3483	110	1215	1900	1615	747	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.14	0.14	0.23	0.24	0.24	0.05	0.16	0.24	0.11	0.05	0.08
Crit Moves:		****		****					****			
Green/Cycle:	0.14	0.23	0.23	0.47	0.47	0.47	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.50	0.61	0.61	0.55	0.50	0.50	0.13	0.40	0.61	0.28	0.12	0.19
Delay/Veh:	41.4	35.7	35.7	19.1	18.6	18.6	19.8	22.5	26.3	21.5	19.7	20.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.4	35.7	35.7	19.1	18.6	18.6	19.8	22.5	26.3	21.5	19.7	20.3
LOS by Move:	D	D	D	B	B	B	B	C	C	C	B	C
HCM2kAvgQ:	4	8	8	10	10	10	1	7	10	2	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	7.7
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	136	585	37	26	1207	235	69	42	57	84	89	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	585	37	26	1207	235	69	42	57	84	89	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	585	37	26	1207	235	69	42	57	84	89	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	585	37	26	1207	235	69	42	57	84	89	37
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	585	37	26	1207	235	69	42	57	84	89	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.16	0.94	0.94	0.39	0.93	0.93	0.59	0.91	0.91	0.47	0.87	0.87
Lanes:	1.00	1.88	0.12	1.00	1.67	0.33	1.00	0.42	0.58	1.00	2.12	0.88
Final Sat.:	297	3365	213	744	2948	574	1128	736	999	892	3502	1456
Capacity Analysis Module:												
Vol/Sat:	0.46	0.17	0.17	0.03	0.41	0.41	0.06	0.06	0.06	0.09	0.03	0.03
Crit Moves:	****									****		
Green/Cycle:	0.83	0.83	0.83	0.83	0.83	0.83	0.17	0.17	0.17	0.17	0.17	0.17
Volume/Cap:	0.55	0.21	0.21	0.04	0.49	0.49	0.36	0.33	0.33	0.55	0.15	0.15
Delay/Veh:	5.4	1.8	1.8	1.5	2.6	2.6	37.8	37.2	37.2	42.3	35.4	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.4	1.8	1.8	1.5	2.6	2.6	37.8	37.2	37.2	42.3	35.4	35.4
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	7	7	2	3	3	3	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	0	Average Delay (sec/veh):	38.5
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	271	345	221	401	1256	57	14	982	185	212	693	172	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	271	345	221	401	1256	57	14	982	185	212	693	172	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	271	345	221	401	1256	57	14	982	185	212	693	172	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	271	345	221	401	1256	57	14	982	185	212	693	172	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	271	345	221	401	1256	57	14	982	185	212	693	172	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.93	0.93	0.95	0.92	0.92	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.68	0.32	1.00	1.60	0.40	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2965	559	1805	2806	696	
Capacity Analysis Module:													
Vol/Sat:	0.15	0.10	0.14	0.22	0.35	0.04	0.01	0.33	0.33	0.12	0.25	0.25	
Crit Moves:	****				****			****					
Green/Cycle:	0.36	0.20	0.20	0.53	0.37	0.37	0.35	0.35	0.35	0.12	0.46	0.46	
Volume/Cap:	0.75	0.48	0.68	0.57	0.95	0.10	0.14	0.95	0.95	0.95	0.54	0.54	
Delay/Veh:	34.5	35.8	42.9	16.2	44.6	20.8	24.4	46.3	46.3	88.7	19.8	19.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	34.5	35.8	42.9	16.2	44.6	20.8	24.4	46.3	46.3	88.7	19.8	19.8	
LOS by Move:	C	D	D	B	D	C	C	D	D	F	B	B	
HCM2kAvgQ:	9	5	8	9	25	1	0	23	23	10	10	10	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	0	Average Delay (sec/veh):	17.5
Optimal Cycle:	33	Level Of Service:	B

****

Street Name:	I-5 NB off-ramp						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	0	1	0	0	0 1	1	0	2 0	0
	0	0	1	1	0							
Volume Module:												
Base Vol:	331	34	36	31	0	106	92	761	0	0	822	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	331	34	36	31	0	106	92	761	0	0	822	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	331	34	36	31	0	106	92	761	0	0	822	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	331	34	36	31	0	106	92	761	0	0	822	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	331	34	36	31	0	106	92	761	0	0	822	28
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.24	0.95	1.00	1.00	0.95	0.95
Lanes:	1.70	0.14	0.15	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.93	0.07
Final Sat.:	3065	260	275	1805	0	1615	454	3610	0	0	3474	118
Capacity Analysis Module:												
Vol/Sat:	0.11	0.13	0.13	0.02	0.00	0.07	0.20	0.21	0.00	0.00	0.24	0.24
Crit Moves:			****			****					****	
Green/Cycle:	0.30	0.30	0.30	0.15	0.00	0.15	0.55	0.55	0.00	0.00	0.55	0.55
Volume/Cap:	0.36	0.43	0.43	0.11	0.00	0.43	0.37	0.39	0.00	0.00	0.43	0.43
Delay/Veh:	27.5	28.3	28.3	36.8	0.0	39.8	13.8	13.2	0.0	0.0	13.6	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.5	28.3	28.3	36.8	0.0	39.8	13.8	13.2	0.0	0.0	13.6	13.6
LOS by Move:	C	C	C	D	A	D	B	B	A	A	B	B
HCM2kAvgQ:	5	6	6	1	0	3	2	7	0	0	8	8

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.772
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	63	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	114	298	59	80	463	108	85	970	169	90	1708	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	114	298	59	80	463	108	85	970	169	90	1708	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	114	298	59	80	463	108	85	970	169	90	1708	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	298	59	80	463	108	85	970	169	90	1708	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	114	298	59	80	463	108	85	970	169	90	1708	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	0.93	0.93	0.40	0.92	0.92	0.08	0.89	0.89	0.20	0.90	0.90
Lanes:	1.00	1.67	0.33	1.00	1.62	0.38	1.00	2.55	0.45	1.00	2.83	0.17
Final Sat.:	468	2939	582	762	2844	663	161	4319	752	388	4847	295
Capacity Analysis Module:												
Vol/Sat:	0.24	0.10	0.10	0.10	0.16	0.16	0.53	0.22	0.22	0.23	0.35	0.35
Crit Moves:	****						****					
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.68	0.68	0.68	0.68	0.68	0.68
Volume/Cap:	0.77	0.32	0.32	0.33	0.52	0.52	0.77	0.33	0.33	0.34	0.52	0.52
Delay/Veh:	52.7	26.2	26.2	27.0	28.4	28.4	38.4	6.5	6.5	7.3	7.8	7.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.7	26.2	26.2	27.0	28.4	28.4	38.4	6.5	6.5	7.3	7.8	7.8
LOS by Move:	D	C	C	C	C	C	D	A	A	A	A	A
HCM2kAvgQ:	5	4	4	2	8	8	4	5	5	2	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.383
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	30	333	37	0	0	0	55	179	0	0	797	152
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	333	37	0	0	0	55	179	0	0	797	152
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	333	37	0	0	0	55	179	0	0	797	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	333	37	0	0	0	55	179	0	0	797	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	333	37	0	0	0	55	179	0	0	797	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	1.00	1.00	1.00	0.25	0.95	1.00	1.00	0.93	0.93
Lanes:	0.15	1.67	0.19	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.68	0.32
Final Sat.:	264	2930	326	0	0	0	483	3610	0	0	2959	564
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.00	0.00	0.00	0.11	0.05	0.00	0.00	0.27	0.27
Crit Moves:		****									****	
Green/Cycle:	0.30	0.30	0.30	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.70	0.70
Volume/Cap:	0.38	0.38	0.38	0.00	0.00	0.00	0.16	0.07	0.00	0.00	0.38	0.38
Delay/Veh:	28.1	28.1	28.1	0.0	0.0	0.0	5.2	4.6	0.0	0.0	6.1	6.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.1	28.1	28.1	0.0	0.0	0.0	5.2	4.6	0.0	0.0	6.1	6.1
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	5	5	0	0	0	1	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.276
Loss Time (sec):	0	Average Delay (sec/veh):	10.2
Optimal Cycle:	20	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	1 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	27	90	236	0	186	117	105	730	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	27	90	236	0	186	117	105	730	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	27	90	236	0	186	117	105	730	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	27	90	236	0	186	117	105	730	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	27	90	236	0	186	117	105	730	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.89	0.89	0.54	0.95	1.00
Lanes:	0.00	0.00	0.00	0.23	0.77	2.00	0.00	1.23	0.77	1.00	2.00	0.00
Final Sat.:	0	0	0	370	1235	3211	0	2088	1313	1031	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.09	0.09	0.10	0.20	0.00
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.27	0.27	0.27	0.00	0.73	0.73	0.73	0.73	0.00
Volume/Cap:	0.00	0.00	0.00	0.27	0.27	0.28	0.00	0.12	0.12	0.14	0.28	0.00
Delay/Veh:	0.0	0.0	0.0	29.1	29.1	29.1	0.0	3.9	3.9	4.0	4.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.1	29.1	29.1	0.0	3.9	3.9	4.0	4.5	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	3	3	0	1	1	1	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 319.8 Worst Case Level Of Service: F[6364.3]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			744	1304			0	126		0		0	0		0		365
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0			744	1304			0	126		0		0	0		0		365
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0			744	1304			0	126		0		0	0		0		365
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			744	1304			0	126		0		0	0		0		365
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2792		2792	xxxxx		2140		2792		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			12		19	xxxxx		36		19		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			5		10	xxxxx		23		10		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.45	xxxx	xxxx			24.23		0.00	xxxx		0.00		0.00		0.33
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			2.4	xxxx	xxxxx			9.7		xxxx	xxxxx		xxxx		xxxx		0.6
Control Del:	xxxxx	xxxx	xxxxx			9.0	xxxx	xxxxx			6364		xxxx	xxxxx		xxxxx		xxxx		9.0
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			5		xxxx	xxxxx		xxxx		1091		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			5.7		xxxx	xxxxx		xxxxx		0.6		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6364		xxxx	xxxxx		xxxxx		9.0		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					6364.3							9.0		
ApproachLOS:	*					*					F							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.822
Loss Time (sec):	0	Average Delay (sec/veh):	26.2
Optimal Cycle:	104	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	67	204	407	430	374	18	116	497	127	174	281	156
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	204	407	430	374	18	116	497	127	174	281	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	67	204	407	430	374	18	116	497	127	174	281	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	204	407	430	374	18	116	497	127	174	281	156
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	67	204	407	430	374	18	116	497	127	174	281	156
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	1.00	0.85	0.39	0.92	0.92	0.28	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.59	0.41	1.00	1.29	0.71
Final Sat.:	1805	1625	1625	1805	1900	1615	738	2788	712	523	2197	1220
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.25	0.24	0.20	0.01	0.16	0.18	0.18	0.33	0.13	0.13
Crit Moves:			****	****						****		
Green/Cycle:	0.09	0.30	0.30	0.50	0.50	0.50	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.39	0.41	0.82	0.72	0.39	0.02	0.39	0.44	0.44	0.82	0.32	0.32
Delay/Veh:	44.1	27.8	39.5	24.4	15.8	12.6	21.8	21.8	21.8	48.5	20.4	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.1	27.8	39.5	24.4	15.8	12.6	21.8	21.8	21.8	48.5	20.4	20.4
LOS by Move:	D	C	D	C	B	B	C	C	C	D	C	C
HCM2kAvgQ:	2	5	15	12	7	0	3	7	7	7	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.855
Loss Time (sec):	0	Average Delay (sec/veh):	21.6
Optimal Cycle:	99	Level Of Service:	C

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	1 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	9	570	62	136	785	491	127	118	13	103	789	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	570	62	136	785	491	127	118	13	103	789	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	570	62	136	785	491	127	118	13	103	789	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	570	62	136	785	491	127	118	13	103	789	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	570	62	136	785	491	127	118	13	103	789	68
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.09	0.99	0.99	0.13	1.00	0.85	0.21	0.94	0.94	0.84	0.84	0.84
Lanes:	1.00	0.90	0.10	1.00	1.00	1.00	1.00	1.80	0.20	0.21	1.64	0.14
Final Sat.:	171	1688	184	256	1900	1615	392	3203	353	344	2638	227
Capacity Analysis Module:												
Vol/Sat:	0.05	0.34	0.34	0.53	0.41	0.30	0.32	0.04	0.04	0.30	0.30	0.30
Crit Moves:				****			****					
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.08	0.54	0.54	0.86	0.66	0.49	0.86	0.10	0.10	0.79	0.79	0.79
Delay/Veh:	7.9	11.3	11.3	49.1	13.7	10.7	64.1	20.1	20.1	31.1	31.1	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.9	11.3	11.3	49.1	13.7	10.7	64.1	20.1	20.1	31.1	31.1	31.1
LOS by Move:	A	B	B	D	B	B	E	C	C	C	C	C
HCM2kAvgQ:	0	11	11	6	16	8	6	1	1	16	16	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.049
Loss Time (sec):	0	Average Delay (sec/veh):	38.2
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	187	352	33	182	597	409	34	523	312	82	1174	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	352	33	182	597	409	34	523	312	82	1174	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	352	33	182	597	409	34	523	312	82	1174	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	352	33	182	597	409	34	523	312	82	1174	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	352	33	182	597	409	34	523	312	82	1174	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	0.94	0.94	0.46	0.89	0.89	0.67	0.67	0.67	0.71	0.71	0.71
Lanes:	1.00	1.83	0.17	1.00	1.19	0.81	0.08	1.20	0.72	0.12	1.74	0.14
Final Sat.:	339	3258	305	881	2012	1378	99	1527	911	165	2362	185
Capacity Analysis Module:												
Vol/Sat:	0.55	0.11	0.11	0.21	0.30	0.30	0.34	0.34	0.34	0.50	0.50	0.50
Crit Moves:	****										****	
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	1.05	0.21	0.21	0.39	0.56	0.56	0.72	0.72	0.72	1.05	1.05	1.05
Delay/Veh:	104.7	12.6	12.6	14.7	16.4	16.4	23.2	23.2	23.2	65.3	65.3	65.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	104.7	12.6	12.6	14.7	16.4	16.4	23.2	23.2	23.2	65.3	65.3	65.3
LOS by Move:	F	B	B	B	B	B	C	C	C	E	E	E
HCM2kAvgQ:	11	3	3	4	11	11	13	13	13	31	31	31

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 118.0 Worst Case Level Of Service: F[1200.6]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	148		1	124				0	731		0		2	1770		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	2	148		1	124				0	731		0		2	1770		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	2	148		1	124				0	731		0		2	1770		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	2	148		1	124				0	731		0		2	1770		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	366	2140		2505	885				xxxx	xxxx		xxxxx		731	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	637	28		29	292				xxxx	xxxx		xxxxx		883	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	637	28		29	292				xxxx	xxxx		xxxxx		883	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.00	5.25		0.03	0.42				xxxx	xxxx		xxxx		0.00	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	18.0		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	10.7	2190		xxxx	xxxxx				xxxxx	xxxx		xxxxx		9.1	xxxx		xxxxx	
LOS by Move:	*	*	B	F		*	*				*	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	272				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.3				xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	29.0				xxxxx	xxxx		xxxxx		9.1	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	D				*	*		*		A	*		*	
ApproachDel:	10.7			1200.6							xxxxxx					xxxxxx				
ApproachLOS:	B			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.891
Loss Time (sec):	0	Average Delay (sec/veh):	750.0
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1839	293	479	0	0	882	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1839	293	479	0	0	882	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1839	293	479	0	0	882	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1839	293	479	0	0	882	6
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1839	293	479	0	0	882	6
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.14	1.86	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2017	3297	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.15	0.15	0.00	0.00	0.24	0.00
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.27	0.27
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	3.97	0.89	0.89	0.00	0.00	0.89	0.01
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1383	52.4	52.4	0.0	0.0	45.1	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1383	52.4	52.4	0.0	0.0	45.1	26.5
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	128	11	11	0	0	17	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.617
Loss Time (sec):	0	Average Delay (sec/veh):	14.3
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	15	252	7	92	1513	65	59	203	91	113	304	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	252	7	92	1513	65	59	203	91	113	304	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	252	7	92	1513	65	59	203	91	113	304	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	252	7	92	1513	65	59	203	91	113	304	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	252	7	92	1513	65	59	203	91	113	304	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.10	0.95	0.95	0.57	0.94	0.94	0.71	0.71	0.71	0.68	0.68	0.68
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.33	1.15	0.52	0.49	1.33	0.18
Final Sat.:	199	3498	97	1075	3440	148	452	1554	697	638	1716	231
Capacity Analysis Module:												
Vol/Sat:	0.08	0.07	0.07	0.09	0.44	0.44	0.13	0.13	0.13	0.18	0.18	0.18
Crit Moves:					****						****	
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.11	0.10	0.10	0.12	0.62	0.62	0.45	0.45	0.45	0.62	0.62	0.62
Delay/Veh:	4.8	4.5	4.5	4.6	7.8	7.8	29.7	29.7	29.7	32.5	32.5	32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.8	4.5	4.5	4.6	7.8	7.8	29.7	29.7	29.7	32.5	32.5	32.5
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	13	13	5	5	5	7	7	7

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 1
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 8.5 Worst Case Level Of Service: A[9.9]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0			233	0			8	0	13			0	0	26			0
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			233	0			8	0	13			0	0	26			0
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			233	0			8	0	13			0	0	26			0
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			233	0			8	0	13			0	0	26			0
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			39	39			26	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			978	857			1056	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			978	857			1056	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.24	0.00			0.01	xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	980	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	1.0	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	9.9	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	A	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					9.9		xxxxxx			xxxxxx					xxxxxx				
ApproachLOS:	*					A		*			*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.495
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	208	1338	105	11	964	194	0	0	0	251	35	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	1338	105	11	964	194	0	0	0	251	35	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	208	1338	105	11	964	194	0	0	0	251	35	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	1338	105	11	964	194	0	0	0	251	35	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	208	1338	105	11	964	194	0	0	0	251	35	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.89	0.89	0.85
Lanes:	2.00	1.85	0.15	1.00	2.00	1.00	0.00	0.00	0.00	1.76	0.24	1.00
Final Sat.:	3502	3311	260	1805	3610	1615	0	0	0	2956	412	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.40	0.40	0.01	0.27	0.12	0.00	0.00	0.00	0.08	0.08	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.15	0.82	0.82	0.01	0.68	0.68	0.00	0.00	0.00	0.17	0.17	0.17
Volume/Cap:	0.39	0.50	0.50	0.50	0.39	0.18	0.00	0.00	0.00	0.50	0.50	0.16
Delay/Veh:	38.8	3.0	3.0	65.4	7.2	6.0	0.0	0.0	0.0	38.2	38.2	35.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	3.0	3.0	65.4	7.2	6.0	0.0	0.0	0.0	38.2	38.2	35.6
LOS by Move:	D	A	A	E	A	A	A	A	A	D	D	D
HCM2kAvgQ:	3	7	7	1	7	2	0	0	0	5	5	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.603
Loss Time (sec):	0	Average Delay (sec/veh):	19.5
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2 1	0	0 0	2 0	0	0 1	0 1	0	0 0	1! 0	1
Volume Module:												
Base Vol:	0	1155	33	0	1222	0	213	323	73	5	0	279
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1155	33	0	1222	0	213	323	73	5	0	279
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1155	33	0	1222	0	213	323	73	5	0	279
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1155	33	0	1222	0	213	323	73	5	0	279
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1155	33	0	1222	0	213	323	73	5	0	279
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.92	0.92	0.92	0.85	1.00	0.85
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.70	1.06	0.24	0.03	0.00	1.97
Final Sat.:	0	5022	143	0	3610	0	1219	1848	418	56	0	3181
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.23	0.00	0.34	0.00	0.17	0.17	0.17	0.09	0.00	0.09
Crit Moves:					****				****	****		
Green/Cycle:	0.00	0.56	0.56	0.00	0.56	0.00	0.29	0.29	0.29	0.15	0.00	0.15
Volume/Cap:	0.00	0.41	0.41	0.00	0.60	0.00	0.60	0.60	0.60	0.60	0.00	0.59
Delay/Veh:	0.0	12.6	12.6	0.0	15.0	0.0	31.6	31.6	31.6	42.0	0.0	41.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.6	12.6	0.0	15.0	0.0	31.6	31.6	31.6	42.0	0.0	41.7
LOS by Move:	A	B	B	A	B	A	C	C	C	D	A	D
HCM2kAvgQ:	0	8	8	0	13	0	9	9	9	5	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.512
Loss Time (sec):	0	Average Delay (sec/veh):	17.6
Optimal Cycle:	66	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	0	0 0	1 0	1	0 0	0 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	138	1127	0	0	395	593	0	0	0	254	0	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	138	1127	0	0	395	593	0	0	0	254	0	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	138	1127	0	0	395	0	0	0	0	254	0	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	138	1127	0	0	395	0	0	0	0	254	0	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	138	1127	0	0	395	0	0	0	0	254	0	25	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	1.00	0.74	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.91	0.00	0.09	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1273	0	125	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.31	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.20	0.00	0.20	
Crit Moves:		****								****			
Green/Cycle:	0.43	0.72	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.28	0.00	0.28	
Volume/Cap:	0.18	0.43	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.72	0.00	0.72	
Delay/Veh:	17.5	5.7	0.0	0.0	36.5	0.0	0.0	0.0	0.0	39.1	0.0	39.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	17.5	5.7	0.0	0.0	36.5	0.0	0.0	0.0	0.0	39.1	0.0	39.1	
LOS by Move:	B	A	A	A	D	A	A	A	A	D	A	D	
HCM2kAvgQ:	3	7	0	0	12	0	0	0	0	9	0	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
Loss Time (sec):	0	Average Delay (sec/veh):	28.1
Optimal Cycle:	114	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	1 0	1	0 0	1 0	1!	0 0	0 0	0	0 0
Volume Module:												
Base Vol:	0	379	147	42	605	0	883	6	146	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	379	147	42	605	0	883	6	146	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	379	147	42	605	0	883	6	146	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	379	147	42	605	0	883	6	146	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	379	147	42	605	0	883	6	146	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.44	0.56	1.00	1.00	0.00	1.74	0.01	0.25	0.00	0.00	0.00
Final Sat.:	0	2492	967	1805	1900	0	2828	16	399	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.15	0.02	0.32	0.00	0.31	0.37	0.37	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.18	0.18	0.38	0.56	0.00	0.44	0.44	0.44	0.00	0.00	0.00
Volume/Cap:	0.00	0.84	0.84	0.06	0.57	0.00	0.71	0.84	0.84	0.00	0.00	0.00
Delay/Veh:	0.0	49.0	49.0	19.7	14.8	0.0	24.7	30.1	30.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	49.0	49.0	19.7	14.8	0.0	24.7	30.1	30.1	0.0	0.0	0.0
LOS by Move:	A	D	D	B	B	A	C	C	C	A	A	A
HCM2kAvgQ:	0	11	11	1	12	0	14	19	19	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.8 Worst Case Level Of Service: A[8.8]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	28		0		0	0		34		33	5		0		56	0		0		0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28		0		0	0		34		33	5		0		56	0		0		0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28		0		0	0		34		33	5		0		56	0		0		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	28		0		0	0		34		33	5		0		56	0		0		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4		6.5		6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5		4.0		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	67	xxxx	xxxxx	xxxx	xxxx	xxxxx					107		107		51	xxxx	xxxx	xxxxx		
Potent Cap.:	1547	xxxx	xxxxx	xxxx	xxxx	xxxxx					896		787		1023	xxxx	xxxx	xxxxx		
Move Cap.:	1547	xxxx	xxxxx	xxxx	xxxx	xxxxx					884		773		1023	xxxx	xxxx	xxxxx		
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx					0.01		0.00		0.05	xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*	*	*	*					*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	1010	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.2	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.8	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*					*	A	*			*	*	*		
ApproachDel:	xxxxxx			xxxxxx							8.8					xxxxxx				
ApproachLOS:	*			*							A					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[12.2]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	9	3	2	62	5	9	4	96	11	14	243	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	3	2	62	5	9	4	96	11	14	243	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	3	2	62	5	9	4	96	11	14	243	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	2	62	5	9	4	96	11	14	243	29
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	402	410	102	398	401	258	272	xxxx	xxxxx	107	xxxx	xxxxx
Potent Cap.:	562	535	959	566	541	786	1303	xxxx	xxxxx	1497	xxxx	xxxxx
Move Cap.:	547	528	959	557	534	786	1303	xxxx	xxxxx	1497	xxxx	xxxxx
Volume/Cap:	0.02	0.01	0.00	0.11	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	578	xxxxx	xxxx	575	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.4	xxxxx	xxxxx	12.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.4			12.2			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	0	Average Delay (sec/veh):	27.7
Optimal Cycle:	63	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	200	994	362	19	599	60	39	258	156	515	348	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	994	362	19	599	60	39	258	156	515	348	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	200	994	362	19	599	60	39	258	0	515	348	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	994	362	19	599	60	39	258	0	515	348	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	200	994	362	19	599	60	39	258	0	515	348	13
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.20	0.80	1.00	2.73	0.27	1.00	2.00	1.00	1.00	1.93	0.07
Final Sat.:	1805	3650	1329	1805	4649	466	1805	3610	1900	1805	3463	129
Capacity Analysis Module:												
Vol/Sat:	0.11	0.27	0.27	0.01	0.13	0.13	0.02	0.07	0.00	0.29	0.10	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.20	0.43	0.43	0.02	0.24	0.24	0.10	0.11	0.00	0.45	0.46	0.46
Volume/Cap:	0.54	0.64	0.64	0.64	0.54	0.54	0.22	0.64	0.00	0.64	0.22	0.22
Delay/Veh:	37.2	23.3	23.3	87.4	33.9	33.9	42.1	45.9	0.0	23.2	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.2	23.3	23.3	87.4	33.9	33.9	42.1	45.9	0.0	23.2	16.3	16.3
LOS by Move:	D	C	C	F	C	C	D	D	A	C	B	B
HCM2kAvgQ:	6	13	13	2	7	7	1	5	0	13	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 293.3 Worst Case Level Of Service: F[941.0]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	684		0		312	0		0		0	0		161		0	0		246		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
Initial Bse:	684		0		312	0		0		0	0		161		0	0		246		0
User Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Volume:	684		0		0	0		0		0	0		161		0	0		246		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	684		0		0	0		0		0	0		161		0	0		246		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				6.5	xxxxx	xxxxx			6.5	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				4.0	xxxxx	xxxxx			4.0	xxxxx			
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		1368	xxxxx		xxxx		1368	xxxxx		xxxx	
Potent Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		148	xxxxx		xxxx		148	xxxxx		xxxx	
Move Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		86	xxxxx		xxxx		86	xxxxx		xxxx	
Volume/Cap:	0.42	xxxx		xxxx	xxxx	xxxx		xxxx	xxxx		1.87		xxxx		xxxx	2.85		xxxx		
Level Of Service Module:																				
2Way95thQ:	2.1	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		13.7	xxxxx		xxxx		23.8	xxxxx		xxxx	
Control Del:	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				513	xxxxx	xxxxx			941	xxxxx			
LOS by Move:	A		*		*	*		*		*	F		*		*	F		*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx					
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*		*		*	*		*		*	*		*		*	*		*		
ApproachDel:	xxxxxx				xxxxxx						512.6					941.0				
ApproachLOS:	*				*						F					F				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.694
Loss Time (sec):	0	Average Delay (sec/veh):	14.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	La Riba Wy							Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0			
Volume Module:													
Base Vol:	0	0	0	160	0	16	0	0	0	0	385	200	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	160	0	16	0	0	0	0	385	200	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	160	0	16	0	0	0	0	385	200	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	160	0	16	0	0	0	0	385	200	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	160	0	16	0	0	0	0	385	200	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66	0.34	
Final Sat.:	0	0	0	545	0	666	0	0	0	0	555	288	
Capacity Analysis Module:													
Vol/Sat:	xxxx	xxxx	xxxx	0.29	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	0.69	0.69	
Crit Moves:				****							****		
Delay/Veh:	0.0	0.0	0.0	11.3	0.0	7.9	0.0	0.0	0.0	0.0	15.9	15.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	11.3	0.0	7.9	0.0	0.0	0.0	0.0	15.9	15.9	
LOS by Move:	*	*	*	B	*	A	*	*	*	*	C	C	
ApproachDel:	xxxxxx			11.0			xxxxxx			15.9			
Delay Adj:	xxxxx			1.00			xxxxx			1.00			
ApprAdjDel:	xxxxxx			11.0			xxxxxx			15.9			
LOS by Appr:	*			B			*			C			
AllWayAvgQ:	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: C[17.3]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	23		0	71				76	441		0		0	469		177	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0	23		0	71				76	441		0		0	469		177	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0	23		0	71				76	441		0		0	469		177	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	0	23		0	71				76	441		0		0	469		177	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4		6.5	6.2				4.1	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5		4.0	3.3				2.2	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1151		1151	558				646	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx	221		200	533				949	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx	207		184	533				949	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx	0.11		0.00	0.13				0.08	xxxx	xxxx	xxxx		xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx				0.3	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx				9.1	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
LOS by Move:	*	*	*	*		*	*				A	*	*	*		*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		385	xxxxx				xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		0.9	xxxxx				xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		17.3	xxxxx				xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Shared LOS:	*	*	*	*		C	*				*	*		*		*	*			
ApproachDel:	xxxxxx					17.3					xxxxxx					xxxxxx				
ApproachLOS:	*					C					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	18.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L - T - R			L - T - R			L - T - R			L - T - R			
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	11	1	2	5	2	11	14	143	16	7	134	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	1	2	5	2	11	14	143	16	7	134	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	1	2	5	2	11	14	143	16	7	134	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	1	2	5	2	11	14	143	16	7	134	2
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.79	0.07	0.14	0.28	0.11	0.61	0.08	0.83	0.09	0.05	0.94	0.01
Final Sat.:	167	15	30	0	0	1	68	698	78	40	773	12
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	18.00	18.00	18.00	0.20	0.20	0.20	0.17	0.17	0.17
Crit Moves:			****		****		****					****
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume/Cap:	0.07	0.07	0.07	18.00	18.00	18.00	0.20	0.20	0.20	0.17	0.17	0.17
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	2.2	2.2	2.2	1.9	1.9	1.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	2.2	2.2	2.2	1.9	1.9	1.9
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: C[22.8]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	76	0	383	0	0	0	20	346	0	0	545	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	0	383	0	0	0	20	346	0	0	545	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	76	0	383	0	0	0	20	346	0	0	545	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	76	0	383	0	0	0	20	346	0	0	545	65
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	964	996	173	xxxx	xxxx	xxxxx	610	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	286	246	876	xxxx	xxxx	xxxxx	979	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	281	241	876	xxxx	xxxx	xxxxx	979	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.27	0.00	0.44	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	649	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	5.8	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	22.8	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	*	*	*
ApproachDel:	22.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	C			*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: B[12.9]

Street Name:	Ave 57											ASP SB Exit 28B/Carlota Bl											
Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		299		3			61	0		0		0		0		235
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		299		3			61	0		0		0		0		235
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		299		3			61	0		0		0		0		235
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		299		3			61	0		0		0		0		235
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			301	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			656	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			514	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.12	xxxx		xxxx		xxxx		xxxx		0.22
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			0.4	xxxx		xxxxx		xxxx		xxxx		0.8
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			12.9	xxxx		xxxxx		xxxxx		xxxx		9.2
LOS by Move:	*	*	*	*		*		*			B	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							12.9							9.2		
ApproachLOS:	*			*							B							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.556
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	173	11	142	12	224	219	28	556	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	11	142	12	224	219	28	556	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	173	11	142	12	224	219	28	556	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	173	11	142	12	224	219	28	556	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	173	11	142	12	224	219	28	556	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.53	0.03	0.44	0.05	0.95	1.00	0.09	1.85	0.06
Final Sat.:	0	453	0	311	20	255	28	528	625	54	1075	33
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.56	0.56	0.56	0.42	0.42	0.35	0.52	0.52	0.51
Crit Moves:		****				****		****		****		
Delay/Veh:	0.0	0.0	0.0	15.6	15.6	15.6	13.4	13.4	11.1	15.1	14.9	14.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.6	15.6	15.6	13.4	13.4	11.1	15.1	14.9	14.8
LOS by Move:	*	*	*	C	C	C	B	B	B	C	B	B
ApproachDel:	xxxxxx			15.6			12.3			14.9		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			15.6			12.3			14.9		
LOS by Appr:	*			C			B			B		
AllWayAvgQ:	0.0	0.0	0.0	1.1	1.1	1.1	0.7	0.7	0.5	1.0	1.0	1.0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.711
Loss Time (sec):	0	Average Delay (sec/veh):	17.4
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	423	2	9		0	0	0		117	274	0		0	183	77			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	423	2	9		0	0	0		117	274	0		0	183	77			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	423	2	9		0	0	0		117	274	0		0	183	77			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	423	2	9		0	0	0		117	274	0		0	183	77			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	423	2	9		0	0	0		117	274	0		0	183	77			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.97	0.00	0.02		0.00	0.00	0.00		0.30	0.70	0.00		0.00	0.70	0.30			
Final Sat.:	595	3	13		0	0	0		185	432	0		0	427	180			
Capacity Analysis Module:																		
Vol/Sat:	0.71	0.71	0.71		xxxx	xxxx	xxxx		0.63	0.63	xxxx		xxxx	0.43	0.43			
Crit Moves:		****							****					****				
Delay/Veh:	20.5	20.5	20.5		0.0	0.0	0.0		17.2	17.2	0.0		0.0	12.4	12.4			
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	20.5	20.5	20.5		0.0	0.0	0.0		17.2	17.2	0.0		0.0	12.4	12.4			
LOS by Move:	C	C	C		*	*	*		C	C	*		*	B	B			
ApproachDel:		20.5				xxxxxx				17.2				12.4				
Delay Adj:		1.00				xxxxx				1.00				1.00				
ApprAdjDel:		20.5				xxxxxx				17.2				12.4				
LOS by Appr:		C				*				C				B				
AllWayAvgQ:	2.0	2.0	2.0		0.0	0.0	0.0		1.5	1.5	1.5		0.6	0.6	0.6			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	14	31	16	4	11	67	157	119	35	38	393	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	31	16	4	11	67	157	119	35	38	393	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	31	16	4	11	67	157	119	35	38	393	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	31	16	4	11	67	157	119	35	38	393	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	31	16	4	11	67	157	119	35	38	393	26
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.23	0.51	0.26	0.05	0.13	0.82	0.50	0.38	0.11	0.08	0.86	0.06
Final Sat.:	129	286	148	30	81	496	365	277	81	63	655	43
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.14	0.14	0.14	0.43	0.43	0.43	0.60	0.60	0.60
Crit Moves:		****			****		****				****	
Delay/Veh:	9.2	9.2	9.2	8.9	8.9	8.9	11.2	11.2	11.2	14.0	14.0	14.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.2	9.2	9.2	8.9	8.9	8.9	11.2	11.2	11.2	14.0	14.0	14.0
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	9.2			8.9			11.2			14.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.2			8.9			11.2			14.0		
LOS by Appr:	A			A			B			B		
AllWayAvgQ:	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.7	0.7	1.4	1.4	1.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.359
Loss Time (sec):	0	Average Delay (sec/veh):	9.8
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	219	22	68	1	1	2	8	77	51	23	140	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	219	22	68	1	1	2	8	77	51	23	140	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	219	22	68	1	1	2	8	77	51	23	140	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	219	22	68	1	1	2	8	77	51	23	140	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	219	22	68	1	1	2	8	77	51	23	140	13
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.56	0.44	0.25	0.25	0.50	0.06	0.57	0.38	0.13	0.80	0.07
Final Sat.:	610	396	311	170	170	341	43	412	273	93	566	53
Capacity Analysis Module:												
Vol/Sat:	0.36	0.06	0.22	0.01	0.01	0.01	0.19	0.19	0.19	0.25	0.25	0.25
Crit Moves:	****				****			****			****	
Delay/Veh:	11.5	8.3	8.3	7.9	7.9	7.9	8.7	8.7	8.7	9.3	9.3	9.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.5	8.3	8.3	7.9	7.9	7.9	8.7	8.7	8.7	9.3	9.3	9.3
LOS by Move:	B	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	10.6			7.9			8.7			9.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.6			7.9			8.7			9.3		
LOS by Appr:	B			A			A			A		
AllWayAvgQ:	0.5	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 47.3 Worst Case Level Of Service: F[436.5]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	163	0	138	0	1236	0	0	1239	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	163	0	138	0	1236	0	0	1239	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	163	0	138	0	1236	0	0	1239	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	163	0	138	0	1236	0	0	1239	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1856	2475	618	1857	2475	620	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	47	30	437	67	30	436	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	32	30	437	67	30	436	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.45	0.00	0.32	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	17.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	67	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	15.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	791.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			436.5			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[14.4]

Street Name:	ASP NB on-ramp																							
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Yield Sign						Yield Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	0	0	0		0	1	2	0	0		0	0	1	1	0	
Volume Module:																								
Base Vol:	0	0	0	0	0	0	111	931	0	0	1287	114												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	0	0	0	0	0	0	111	931	0	0	1287	114												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Volume:	0	0	0	0	0	0	111	931	0	0	1287	114												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
FinalVolume:	0	0	0	0	0	0	111	931	0	0	1287	114												
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	494	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	494	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.22	xxxx	xxxx	xxxx	xxxx	xxxx												
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	14.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	14.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx														
ApproachLOS:	*			*			*			*														

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.591
Loss Time (sec):	0	Average Delay (sec/veh):	16.0
Optimal Cycle:	45	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	2	0 0	1 0	0	0 1!	0 0	0	0 0	0 2
Volume Module:												
Base Vol:	2	590	62	472	296	145	104	24	13	0	0	528
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	590	62	472	296	145	104	24	13	0	0	528
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	590	62	472	296	145	104	24	13	0	0	528
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	590	62	472	296	145	104	24	13	0	0	528
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	590	62	472	296	145	104	24	13	0	0	528
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.92	0.95	0.95	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.01	1.80	0.19	2.00	0.67	0.33	0.74	0.17	0.09	0.00	0.00	2.00
Final Sat.:	10	3063	322	3502	1212	594	1335	308	167	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.13	0.24	0.24	0.08	0.08	0.08	0.00	0.00	0.19
Crit Moves:		****		****					****			****
Green/Cycle:	0.33	0.33	0.33	0.23	0.55	0.55	0.13	0.13	0.13	0.00	0.00	0.54
Volume/Cap:	0.59	0.59	0.59	0.59	0.44	0.44	0.59	0.59	0.59	0.00	0.00	0.34
Delay/Veh:	18.9	18.9	18.9	23.2	8.7	8.7	30.1	30.1	30.1	0.0	0.0	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.9	18.9	18.9	23.2	8.7	8.7	30.1	30.1	30.1	0.0	0.0	8.4
LOS by Move:	B	B	B	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	6	6	6	5	5	5	4	4	4	0	0	4

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[13.1]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	29	712	0	0	0	1371	73			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	29	712	0	0	0	1371	73			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	29	712	0	0	0	1371	73			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	29	712	0	0	0	1371	73			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1444	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					476	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					476	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.06	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					13.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					13.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.6]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	106		7		6	167		0		0		0		0	6		0		5
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	106		7		6	167		0		0		0		0	6		0		5
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	106		7		6	167		0		0		0		0	6		0		5
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	106		7		6	167		0		0		0		0	6		0		5
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	6.4		6.5		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		xxxxx	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		113	xxxx		xxxxx		xxxx		xxxx		xxxxx	289		289		110
Potent Cap.:	xxxx	xxxx		xxxxx		1489	xxxx		xxxxx		xxxx		xxxx		xxxxx	706		625		950
Move Cap.:	xxxx	xxxx		xxxxx		1489	xxxx		xxxxx		xxxx		xxxx		xxxxx	704		622		950
Volume/Cap:	xxxx	xxxx		xxxx		0.00	xxxx		xxxx		xxxx		xxxx		xxxx	0.01		0.00		0.01
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx		7.4	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*	*		*		A	*		*		*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		798		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		0.0		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		7.4	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		9.6		xxxxx
Shared LOS:	*	*		*		A	*		*		*		*		*	*		A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							9.6		
ApproachLOS:	*					*					*							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.5]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	22	3	5	6	140	110	16	196	21								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	22	3	5	6	140	110	16	196	21								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	22	3	5	6	140	110	16	196	21								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	22	3	5	6	140	110	16	196	21								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	446	501	207	217	xxxx	xxxxx	250	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	574	475	839	1365	xxxx	xxxxx	1327	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	567	467	839	1365	xxxx	xxxxx	1327	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	7.7	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	586	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.5	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx				11.5		xxxxxx			xxxxxx										
ApproachLOS:	*				B		*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.823
Loss Time (sec):	0	Average Delay (sec/veh):	21.0
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 0 1 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	2	543	0	0	309	2	0	0	0	138	4	29	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	543	0	0	309	2	0	0	0	138	4	29	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	543	0	0	309	2	0	0	0	138	4	29	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	543	0	0	309	2	0	0	0	138	4	29	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	543	0	0	309	2	0	0	0	138	4	29	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	600	660	0	0	605	4	0	0	0	483	517	574	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.82	xxxx	xxxx	0.51	0.51	xxxx	xxxx	xxxx	0.29	0.01	0.05	
Crit Moves:		****			****					****			
Delay/Veh:	8.6	27.6	0.0	0.0	14.5	14.5	0.0	0.0	0.0	12.3	9.3	8.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.6	27.6	0.0	0.0	14.5	14.5	0.0	0.0	0.0	12.3	9.3	8.9	
LOS by Move:	A	D	*	*	B	B	*	*	*	B	A	A	
ApproachDel:		27.6			14.5			xxxxxx			11.7		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		27.6			14.5			xxxxxx			11.7		
LOS by Appr:		D			B			*			B		
AllWayAvgQ:	0.0	3.6	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.3	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.743
Loss Time (sec):	0	Average Delay (sec/veh):	16.0
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1	0 1	0	0 1	0 1	0	
Volume Module:													
Base Vol:	0	505	73	113	357	0	0	4	2	32	0	55	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	505	73	113	357	0	0	4	2	32	0	55	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	505	73	113	357	0	0	4	2	32	0	55	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	505	73	113	357	0	0	4	2	32	0	55	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	505	73	113	357	0	0	4	2	32	0	55	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.33	0.67	0.74	0.26	1.00	
Final Sat.:	0	680	768	607	668	0	0	635	332	343	123	541	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.74	0.10	0.19	0.53	xxxx	xxxx	0.01	0.01	0.09	0.00	0.10	
Crit Moves:		****			****			****				****	
Delay/Veh:	0.0	21.3	7.7	9.8	13.8	0.0	0.0	9.6	9.2	10.3	10.3	9.4	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	21.3	7.7	9.8	13.8	0.0	0.0	9.6	9.2	10.3	10.3	9.4	
LOS by Move:	*	C	A	A	B	*	*	A	A	B	B	A	
ApproachDel:		19.6			12.8			9.5			9.7		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		19.6			12.8			9.5			9.7		
LOS by Appr:		C			B			A			A		
AllWayAvgQ:	0.0	2.5	0.1	0.2	1.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.661
Loss Time (sec):	0	Average Delay (sec/veh):	7.5
Optimal Cycle:	55	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1088	76	175	1084	0	0	0	0	192	0	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1088	76	175	1084	0	0	0	0	192	0	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1088	76	175	1084	0	0	0	0	192	0	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.60	0.60	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.87	0.13	0.28	1.72	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3341	233	316	1955	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.33	0.55	0.55	0.00	0.00	0.00	0.00	0.11	0.00	0.08
Crit Moves:					****					****		
Green/Cycle:	0.00	0.84	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.16	0.00	0.16
Volume/Cap:	0.00	0.39	0.39	0.66	0.66	0.00	0.00	0.00	0.00	0.66	0.00	0.48
Delay/Veh:	0.0	2.0	2.0	3.8	3.8	0.0	0.0	0.0	0.0	44.9	0.0	39.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	2.0	2.0	3.8	3.8	0.0	0.0	0.0	0.0	44.9	0.0	39.6
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	5	5	9	9	0	0	0	0	7	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1088	179	43	698	194	45	228	8	66	187	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1088	179	43	698	194	45	228	8	66	187	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1088	179	43	698	194	45	228	8	66	187	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1088	179	43	698	194	45	228	8	66	187	249
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	0.93	0.93	0.13	0.92	0.92	0.28	1.00	1.00	0.47	0.91	0.91
Lanes:	1.00	1.72	0.28	1.00	1.57	0.43	1.00	0.97	0.03	1.00	0.43	0.57
Final Sat.:	454	3035	499	245	2732	759	524	1826	64	901	745	992
Capacity Analysis Module:												
Vol/Sat:	0.07	0.36	0.36	0.18	0.26	0.26	0.09	0.12	0.12	0.07	0.25	0.25
Crit Moves:		****									****	
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.12	0.61	0.61	0.30	0.43	0.43	0.21	0.30	0.30	0.18	0.61	0.61
Delay/Veh:	9.3	13.8	13.8	11.5	11.5	11.5	19.4	20.0	20.0	18.9	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.3	13.8	13.8	11.5	11.5	11.5	19.4	20.0	20.0	18.9	24.6	24.6
LOS by Move:	A	B	B	B	B	B	B	B	B	B	C	C
HCM2kAvgQ:	1	13	13	1	8	8	1	5	5	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.270
Loss Time (sec):	0	Average Delay (sec/veh):	8.5
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	106	0	128	155	388	0	0	363	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	106	0	128	155	388	0	0	363	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	106	0	128	155	388	0	0	363	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	128	155	388	0	0	363	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	106	0	128	155	388	0	0	363	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.47	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	901	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.17	0.11	0.00	0.00	0.19	0.09
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.29	0.00	0.29	0.71	0.71	0.00	0.00	0.71	1.00
Volume/Cap:	0.00	0.00	0.00	0.10	0.00	0.27	0.24	0.15	0.00	0.00	0.27	0.09
Delay/Veh:	0.0	0.0	0.0	25.8	0.0	27.4	5.4	4.8	0.0	0.0	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.8	0.0	27.4	5.4	4.8	0.0	0.0	5.4	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	2	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	89	257	3	16	173	230	238	276	118	2	492	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	257	3	16	173	230	238	276	118	2	492	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	257	3	16	173	230	238	276	118	2	492	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	257	3	16	173	230	238	276	118	2	492	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	257	3	16	173	230	238	276	118	2	492	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.96	0.96	0.85	0.34	1.00	0.85	0.52	0.99	0.99
Lanes:	0.25	0.74	0.01	0.08	0.92	1.00	1.00	1.00	1.00	1.00	0.90	0.10
Final Sat.:	422	1217	14	155	1674	1615	648	1900	1615	993	1683	188
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.10	0.10	0.14	0.37	0.15	0.07	0.00	0.29	0.29
Crit Moves:		****					****					
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.63	0.63	0.63	0.63	0.63	0.63
Volume/Cap:	0.58	0.58	0.58	0.28	0.28	0.39	0.58	0.23	0.12	0.00	0.46	0.46
Delay/Veh:	26.9	26.9	26.9	22.7	22.7	23.9	12.6	7.9	7.2	6.7	9.7	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.9	26.9	26.9	22.7	22.7	23.9	12.6	7.9	7.2	6.7	9.7	9.7
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	9	9	9	4	4	5	5	4	1	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	70	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	622	295	108	1330	19	18	49	17	353	28	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	622	295	108	1330	19	18	49	17	353	28	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	622	295	108	1330	19	18	49	17	353	28	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	622	295	108	1330	19	18	49	17	353	28	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	622	295	108	1330	19	18	49	17	353	28	47
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.79	0.79	0.79	0.89	0.89	0.89	0.65	0.65	0.85
Lanes:	0.01	1.99	1.00	0.15	1.82	0.03	0.21	0.59	0.20	0.93	0.07	1.00
Final Sat.:	16	3413	1615	223	2746	39	361	982	341	1142	91	1615
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.48	0.48	0.48	0.05	0.05	0.05	0.31	0.31	0.03
Crit Moves:					****						****	
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.30	0.30	0.30	0.79	0.79	0.79	0.13	0.13	0.13	0.79	0.79	0.07
Delay/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.7	19.7	19.7	35.8	35.8	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.7	19.7	19.7	35.8	35.8	19.2
LOS by Move:	A	A	A	B	B	B	B	B	B	D	D	B
HCM2kAvgQ:	5	5	4	19	19	19	2	2	2	12	12	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	0	Average Delay (sec/veh):	9.6
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0	1!	0	0
Volume Module:													
Base Vol:	176	1336	8	5	907	61	180	10	95	13	23	49	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	1336	8	5	907	61	180	10	95	13	23	49	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	1336	8	5	907	61	180	10	95	13	23	49	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	1336	8	5	907	61	180	10	95	13	23	49	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	1336	8	5	907	61	180	10	95	13	23	49	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.95	0.95	0.15	0.94	0.94	0.65	0.65	0.85	0.88	0.88	0.88	
Lanes:	1.00	1.99	0.01	1.00	1.87	0.13	0.95	0.05	1.00	0.15	0.27	0.58	
Final Sat.:	471	3585	21	283	3352	225	1166	65	1615	257	454	967	
Capacity Analysis Module:													
Vol/Sat:	0.37	0.37	0.37	0.02	0.27	0.27	0.15	0.15	0.06	0.05	0.05	0.05	
Crit Moves:		****						****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.53	0.53	0.53	0.02	0.38	0.38	0.53	0.53	0.20	0.17	0.17	0.17	
Delay/Veh:	8.4	7.0	7.0	4.4	6.0	6.0	31.0	31.0	26.8	26.5	26.5	26.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.4	7.0	7.0	4.4	6.0	6.0	31.0	31.0	26.8	26.5	26.5	26.5	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	3	10	10	0	6	6	5	5	2	2	2	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	52	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	192	0	467	356	463	0	0	503	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	192	0	467	356	463	0	0	503	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	192	0	467	356	463	0	0	503	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	192	0	467	356	463	0	0	503	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	192	0	467	356	463	0	0	503	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.39	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	1.29	0.00	1.71	1.00	2.00	0.00	0.00	1.70	0.30
Final Sat.:	0	0	0	2161	0	2860	747	3610	0	0	2992	535
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.16	0.48	0.13	0.00	0.00	0.17	0.17
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.74	0.74	0.00	0.00	0.74	0.74
Volume/Cap:	0.00	0.00	0.00	0.35	0.00	0.64	0.64	0.17	0.00	0.00	0.23	0.23
Delay/Veh:	0.0	0.0	0.0	30.5	0.0	34.5	8.7	3.8	0.0	0.0	4.0	4.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.5	0.0	34.5	8.7	3.8	0.0	0.0	4.0	4.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	8	6	2	0	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	85	654	22	171	666	63	142	447	101	37	406	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	654	22	171	666	63	142	447	101	37	406	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	654	22	171	666	63	142	447	101	37	406	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	654	22	171	666	63	142	447	101	37	406	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	654	22	171	666	63	142	447	101	37	406	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	1.00	0.85	0.26	1.00	0.85	0.33	0.92	0.92	0.31	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.63	0.37	1.00	1.58	0.42
Final Sat.:	481	1900	1615	495	1900	1615	632	2863	647	592	2768	729
Capacity Analysis Module:												
Vol/Sat:	0.18	0.34	0.01	0.35	0.35	0.04	0.22	0.16	0.16	0.06	0.15	0.15
Crit Moves:					****		****					
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.29	0.56	0.02	0.57	0.58	0.06	0.58	0.40	0.40	0.16	0.38	0.38
Delay/Veh:	9.8	12.3	7.7	14.2	12.5	8.0	27.3	22.2	22.2	20.1	21.9	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.8	12.3	7.7	14.2	12.5	8.0	27.3	22.2	22.2	20.1	21.9	21.9
LOS by Move:	A	B	A	B	B	A	C	C	C	C	C	C
HCM2kAvgQ:	2	12	0	4	12	1	4	6	6	1	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.682
Loss Time (sec):	0	Average Delay (sec/veh):	28.3
Optimal Cycle:	85	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	132	1116	47	89	1118	46	105	344	152	111	292	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	132	1116	47	89	1118	46	105	344	152	111	292	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	1116	47	89	1118	46	105	344	152	111	292	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	1116	47	89	1118	46	105	344	152	111	292	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	1116	47	89	1118	46	105	344	152	111	292	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.96	0.96
Lanes:	1.00	1.92	0.08	1.00	1.92	0.08	1.00	0.69	0.31	1.00	0.71	0.29
Final Sat.:	1805	3443	145	1805	3447	142	1805	1257	555	1805	1291	526
Capacity Analysis Module:												
Vol/Sat:	0.07	0.32	0.32	0.05	0.32	0.32	0.06	0.27	0.27	0.06	0.23	0.23
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.47	0.47	0.07	0.44	0.44	0.37	0.37	0.37	0.08	0.36	0.36
Volume/Cap:	0.73	0.69	0.69	0.69	0.73	0.73	0.43	0.73	0.73	0.73	0.62	0.62
Delay/Veh:	58.0	21.9	21.9	59.9	24.8	24.8	25.8	31.1	31.1	61.4	28.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.0	21.9	21.9	59.9	24.8	24.8	25.8	31.1	31.1	61.4	28.0	28.0
LOS by Move:	E	C	C	E	C	C	C	C	C	E	C	C
HCM2kAvgQ:	6	15	15	4	17	17	3	14	14	5	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	0	Average Delay (sec/veh):	15.5
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	77	0	358	0	0	0	0	808	150	142	1070	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	0	358	0	0	0	0	808	150	142	1070	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	0	358	0	0	0	0	808	150	142	1070	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	0	358	0	0	0	0	808	150	142	1070	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	0	358	0	0	0	0	808	150	142	1070	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.93	0.93	0.21	0.95	1.00
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.69	0.31	1.00	2.00	0.00
Final Sat.:	284	0	1319	0	0	0	0	2973	552	401	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.27	0.27	0.35	0.30	0.00
Crit Moves:	****									****		
Green/Cycle:	0.43	0.00	0.43	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.57	0.00
Volume/Cap:	0.63	0.00	0.63	0.00	0.00	0.00	0.00	0.48	0.48	0.63	0.52	0.00
Delay/Veh:	23.8	0.0	23.8	0.0	0.0	0.0	0.0	13.1	13.1	20.0	13.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.8	0.0	23.8	0.0	0.0	0.0	0.0	13.1	13.1	20.0	13.6	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	11	0	11	0	0	0	0	9	9	4	11	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.724
Loss Time (sec):	0	Average Delay (sec/veh):	25.8
Optimal Cycle:	67	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	153	0	433	402	628	0	0	704	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	153	0	433	402	628	0	0	704	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	153	0	433	402	628	0	0	704	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	153	0	433	402	628	0	0	704	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	153	0	433	402	628	0	0	704	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.71	0.29
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3021	511
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.27	0.22	0.17	0.00	0.00	0.23	0.23
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.37	0.00	0.37	0.31	0.63	0.00	0.00	0.32	0.32
Volume/Cap:	0.00	0.00	0.00	0.12	0.00	0.72	0.72	0.28	0.00	0.00	0.72	0.72
Delay/Veh:	0.0	0.0	0.0	20.8	0.0	31.4	35.5	8.4	0.0	0.0	32.3	32.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.8	0.0	31.4	35.5	8.4	0.0	0.0	32.3	32.3
LOS by Move:	A	A	A	C	A	C	D	A	A	A	C	C
HCM2kAvgQ:	0	0	0	2	0	13	12	4	0	0	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.360
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	350	0	142	0	0	0	0	661	329	101	520	332
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	350	0	142	0	0	0	0	661	329	101	520	332
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	350	0	142	0	0	0	0	661	329	101	520	332
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	350	0	142	0	0	0	0	661	329	101	520	332
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	350	0	142	0	0	0	0	661	329	101	520	332
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1900	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.00	0.09	0.00	0.00	0.00	0.00	0.18	0.20	0.06	0.14	0.21
Crit Moves:	****								****	****		
Green/Cycle:	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.57	0.57	0.16	0.72	0.72
Volume/Cap:	0.36	0.00	0.32	0.00	0.00	0.00	0.00	0.32	0.36	0.36	0.20	0.28
Delay/Veh:	29.2	0.0	29.0	0.0	0.0	0.0	0.0	11.6	12.0	38.6	4.5	5.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.2	0.0	29.0	0.0	0.0	0.0	0.0	11.6	12.0	38.6	4.5	5.0
LOS by Move:	C	A	C	A	A	A	A	B	B	D	A	A
HCM2kAvgQ:	5	0	4	0	0	0	0	6	6	3	3	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.869
Loss Time (sec):	0	Average Delay (sec/veh):	21.3
Optimal Cycle:	110	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	191	549	39	145	564	74	116	874	181	34	1025	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	191	549	39	145	564	74	116	874	181	34	1025	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	191	549	39	145	564	74	116	874	181	34	1025	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	191	549	39	145	564	74	116	874	181	34	1025	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	191	549	39	145	564	74	116	874	181	34	1025	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	1.00	0.85	0.25	1.00	0.85	0.14	0.93	0.93	0.15	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.66	0.34	1.00	1.85	0.15
Final Sat.:	455	1900	1615	477	1900	1615	258	2914	603	290	3292	276
Capacity Analysis Module:												
Vol/Sat:	0.42	0.29	0.02	0.30	0.30	0.05	0.45	0.30	0.30	0.12	0.31	0.31
Crit Moves:	****						****					
Green/Cycle:	0.48	0.48	0.48	0.48	0.48	0.48	0.52	0.52	0.52	0.52	0.52	0.52
Volume/Cap:	0.87	0.60	0.05	0.63	0.61	0.09	0.87	0.58	0.58	0.23	0.60	0.60
Delay/Veh:	51.8	19.9	13.7	24.7	20.3	14.1	62.6	17.1	17.1	14.0	17.5	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.8	19.9	13.7	24.7	20.3	14.1	62.6	17.1	17.1	14.0	17.5	17.5
LOS by Move:	D	B	B	C	C	B	E	B	B	B	B	B
HCM2kAvgQ:	8	13	1	4	13	1	6	12	12	1	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.040
Loss Time (sec):	0	Average Delay (sec/veh):	40.6
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	572	1075	73	77	1335	64	105	365	441	87	338	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	572	1075	73	77	1335	64	105	365	441	87	338	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	572	1075	73	77	1335	64	105	365	441	87	338	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	572	1075	73	77	1335	64	105	365	441	87	338	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	572	1075	73	77	1335	64	105	365	441	87	338	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.95	0.85	0.95	0.94	0.94	0.38	0.87	0.87	0.13	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.71	0.29
Final Sat.:	1269	3610	1615	1805	3421	164	724	1657	1657	248	3013	517
Capacity Analysis Module:												
Vol/Sat:	0.45	0.30	0.05	0.04	0.39	0.39	0.14	0.22	0.27	0.35	0.11	0.11
Crit Moves:	****				****					****		
Green/Cycle:	0.67	0.58	0.58	0.45	0.37	0.37	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.93	0.51	0.08	0.23	1.06	1.06	0.44	0.66	0.80	1.06	0.34	0.34
Delay/Veh:	28.3	12.5	9.1	16.0	73.1	73.1	27.4	30.1	35.2	149.3	25.3	25.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.3	12.5	9.1	16.0	73.1	73.1	27.4	30.1	35.2	149.3	25.3	25.3
LOS by Move:	C	B	A	B	E	E	C	C	D	F	C	C
HCM2kAvgQ:	20	10	1	2	33	33	3	11	15	6	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.723
Loss Time (sec):	0	Average Delay (sec/veh):	153.2
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	73	1115	509	140	701	90	244	1374	39	498	712	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	1115	509	140	701	90	244	1374	39	498	712	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	1115	509	140	701	90	244	1374	39	498	712	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	1115	509	140	701	90	244	1374	39	498	712	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	73	1115	509	140	701	90	244	1374	39	498	712	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	1.00	0.85	0.06	1.00	0.85	0.95	0.91	0.91	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.92	0.08	1.00	3.00	1.00
Final Sat.:	520	1900	1615	119	1900	1615	1805	5023	143	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.59	0.32	1.17	0.37	0.06	0.14	0.27	0.27	0.28	0.14	0.06
Crit Moves:				****				****		****		
Green/Cycle:	0.68	0.68	0.68	0.68	0.68	0.68	0.16	0.16	0.16	0.16	0.16	0.16
Volume/Cap:	0.21	0.86	0.46	1.72	0.54	0.08	0.85	1.72	1.72	1.72	0.85	0.35
Delay/Veh:	6.2	18.4	7.7	387.4	8.5	5.4	62.3	372	372.5	381.5	49.4	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.2	18.4	7.7	387.4	8.5	5.4	62.3	372	372.5	381.5	49.4	38.1
LOS by Move:	A	B	A	F	A	A	E	F	F	F	D	D
HCM2kAvgQ:	1	29	7	13	11	1	10	44	44	42	11	3

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.159
Loss Time (sec):	0	Average Delay (sec/veh):	78.7
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	1238	0	557	661	1178	0	0	713	996
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1238	0	557	661	1178	0	0	713	996
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1238	0	557	661	1178	0	0	713	996
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1238	0	557	661	1178	0	0	713	996
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1238	0	557	661	1178	0	0	713	996
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.35	0.00	0.34	0.19	0.23	0.00	0.00	0.14	0.62
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.16	0.69	0.00	0.00	0.53	0.53
Volume/Cap:	0.00	0.00	0.00	1.16	0.00	1.13	1.16	0.33	0.00	0.00	0.26	1.16
Delay/Veh:	0.0	0.0	0.0	117.1	0.0	116.4	131.6	6.1	0.0	0.0	12.7	107.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	117.1	0.0	116.4	131.6	6.1	0.0	0.0	12.7	107.9
LOS by Move:	A	A	A	F	A	F	F	A	A	A	B	F
HCM2kAvgQ:	0	0	0	34	0	29	20	5	0	0	4	50

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.948
Loss Time (sec):	0	Average Delay (sec/veh):	33.0
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	251	681	3	121	615	68	140	953	153	309	950	241
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	251	681	3	121	615	68	140	953	153	309	950	241
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	251	681	3	121	615	68	140	953	153	309	950	241
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	251	681	3	121	615	68	140	953	153	309	950	241
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	251	681	3	121	615	68	140	953	153	309	950	241
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.28	0.95	0.85	0.29	0.94	0.94	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.80	0.20	1.00	1.72	0.28	1.00	1.60	0.40
Final Sat.:	541	3610	1615	543	3202	354	1805	3046	489	1805	2792	708
Capacity Analysis Module:												
Vol/Sat:	0.46	0.19	0.00	0.22	0.19	0.19	0.08	0.31	0.31	0.17	0.34	0.34
Crit Moves:	****							****		****		
Green/Cycle:	0.49	0.49	0.49	0.49	0.49	0.49	0.09	0.33	0.33	0.42	0.42	0.42
Volume/Cap:	0.95	0.39	0.00	0.46	0.39	0.39	0.82	0.95	0.95	0.77	0.82	0.82
Delay/Veh:	65.5	16.2	13.1	18.0	16.3	16.3	70.0	48.1	48.1	29.3	29.6	29.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.5	16.2	13.1	18.0	16.3	16.3	70.0	48.1	48.1	29.3	29.6	29.6
LOS by Move:	E	B	B	B	B	B	E	D	D	C	C	C
HCM2kAvgQ:	11	7	0	3	7	7	6	23	23	10	19	19

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.995
Loss Time (sec):	0	Average Delay (sec/veh):	29.0
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	340	347	73	321	197	72	111	907	169	40	1217	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	347	73	321	197	72	111	907	169	40	1217	208
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	347	73	321	197	72	111	907	169	40	1217	208
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	347	73	321	197	72	111	907	169	40	1217	208
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	347	73	321	197	72	111	907	169	40	1217	208
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.96	0.96	0.10	0.93	0.93	0.19	0.93	0.93
Lanes:	1.00	0.83	0.17	1.00	0.73	0.27	1.00	1.69	0.31	1.00	1.71	0.29
Final Sat.:	1805	1529	322	1805	1336	488	188	2971	554	352	3016	515
Capacity Analysis Module:												
Vol/Sat:	0.19	0.23	0.23	0.18	0.15	0.15	0.59	0.31	0.31	0.11	0.40	0.40
Crit Moves:		****		****			****					
Green/Cycle:	0.41	0.23	0.23	0.36	0.18	0.18	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.69	0.99	0.99	0.80	0.83	0.83	0.99	0.51	0.51	0.19	0.68	0.68
Delay/Veh:	27.5	80.9	80.9	36.5	55.3	55.3	103.7	12.1	12.1	9.8	14.8	14.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.5	80.9	80.9	36.5	55.3	55.3	103.7	12.1	12.1	9.8	14.8	14.8
LOS by Move:	C	F	F	D	E	E	F	B	B	A	B	B
HCM2kAvgQ:	10	19	19	11	10	10	7	10	10	1	16	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.618
Loss Time (sec):	0	Average Delay (sec/veh):	18.6
Optimal Cycle:	49	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	6	742	159	316	733	6	4	4	8	190	3	301	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	6	742	159	316	733	6	4	4	8	190	3	301	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	6	742	159	316	733	6	4	4	8	190	3	301	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	6	742	159	316	733	6	4	4	8	190	3	301	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	6	742	159	316	733	6	4	4	8	190	3	301	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.89	0.89	0.89	0.72	0.72	0.85	
Lanes:	1.00	1.65	0.35	1.00	1.98	0.02	0.25	0.25	0.50	0.98	0.02	1.00	
Final Sat.:	1805	2894	620	1805	3576	29	423	423	847	1353	21	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.26	0.26	0.18	0.20	0.20	0.01	0.01	0.01	0.14	0.14	0.19	
Crit Moves:		****		****								****	
Green/Cycle:	0.01	0.41	0.41	0.70	0.69	0.69	0.30	0.30	0.30	0.30	0.30	0.30	
Volume/Cap:	0.30	0.62	0.62	0.50	0.30	0.30	0.03	0.03	0.03	0.47	0.47	0.62	
Delay/Veh:	57.2	23.8	23.8	11.6	6.2	6.2	24.6	24.6	24.6	29.2	29.2	32.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	57.2	23.8	23.8	11.6	6.2	6.2	24.6	24.6	24.6	29.2	29.2	32.4	
LOS by Move:	E	C	C	B	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	12	12	5	5	5	0	0	0	5	5	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	0	Average Delay (sec/veh):	28.8
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Monterey Rd							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Split Phase			Split Phase			Permitted			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	
Volume Module:													
Base Vol:	322	261	88	148	295	56	59	202	254	40	291	62	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	322	261	88	148	295	56	59	202	254	40	291	62	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	322	261	88	148	295	56	59	202	254	40	291	62	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	322	261	88	148	295	56	59	202	254	40	291	62	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	322	261	88	148	295	56	59	202	254	40	291	62	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	0.96	0.82	0.92	0.96	0.82	0.36	0.88	0.88	0.92	0.94	0.94	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.56	1.00	0.82	0.18	
Final Sat.:	1742	1833	1558	1742	1833	1558	691	744	936	1742	1472	314	
Capacity Analysis Module:													
Vol/Sat:	0.18	0.14	0.06	0.08	0.16	0.04	0.09	0.27	0.27	0.02	0.20	0.20	
Crit Moves:	****				****			****		****			
Green/Cycle:	0.29	0.29	0.29	0.25	0.25	0.25	0.42	0.42	0.42	0.04	0.46	0.46	
Volume/Cap:	0.64	0.49	0.20	0.34	0.64	0.14	0.20	0.64	0.64	0.64	0.43	0.43	
Delay/Veh:	33.8	30.2	27.0	31.1	36.4	29.2	18.5	24.8	24.8	67.7	18.6	18.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	33.8	30.2	27.0	31.1	36.4	29.2	18.5	24.8	24.8	67.7	18.6	18.6	
LOS by Move:	C	C	C	C	D	C	B	C	C	E	B	B	
HCM2kAvgQ:	9	7	2	4	9	1	1	12	12	2	7	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.736
Loss Time (sec):	0	Average Delay (sec/veh):	16.7
Optimal Cycle:	55	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	52	838	224	141	778	31	32	69	18	233	71	143	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	52	838	224	141	778	31	32	69	18	233	71	143	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	52	838	224	141	778	31	32	69	18	233	71	143	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	52	838	224	141	778	31	32	69	18	233	71	143	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	52	838	224	141	778	31	32	69	18	233	71	143	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.26	0.92	0.92	0.18	0.94	0.94	0.84	0.84	0.84	0.74	0.74	0.74	
Lanes:	1.00	1.58	0.42	1.00	1.92	0.08	0.27	0.58	0.15	0.52	0.16	0.32	
Final Sat.:	496	2759	737	337	3452	138	431	930	242	734	224	450	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.30	0.30	0.42	0.23	0.23	0.07	0.07	0.07	0.32	0.32	0.32	
Crit Moves:				****							****		
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.43	0.43	0.43	0.43	0.43	0.43	
Volume/Cap:	0.18	0.53	0.53	0.74	0.40	0.40	0.17	0.17	0.17	0.74	0.74	0.74	
Delay/Veh:	10.7	13.7	13.7	29.9	12.1	12.1	17.6	17.6	17.6	28.4	28.4	28.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.7	13.7	13.7	29.9	12.1	12.1	17.6	17.6	17.6	28.4	28.4	28.4	
LOS by Move:	B	B	B	C	B	B	B	B	B	C	C	C	
HCM2kAvgQ:	1	11	11	5	7	7	2	2	2	13	13	13	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	323	433	32	88	355	146	183	274	272	18	150	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	323	433	32	88	355	146	183	274	272	18	150	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	323	433	32	88	355	146	183	274	272	18	150	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	323	433	32	88	355	146	183	274	272	18	150	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	323	433	32	88	355	146	183	274	272	18	150	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.48	1.00	0.85	0.43	1.00	0.85	0.53	0.88	0.88	0.30	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	906	1900	1615	810	1900	1615	1004	1676	1664	564	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.36	0.23	0.02	0.11	0.19	0.09	0.18	0.16	0.16	0.03	0.08	0.04
Crit Moves:	****						****					
Green/Cycle:	0.66	0.66	0.66	0.66	0.66	0.66	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.54	0.34	0.03	0.16	0.28	0.14	0.54	0.48	0.48	0.09	0.23	0.11
Delay/Veh:	9.9	7.6	5.9	6.6	7.2	6.4	28.5	26.5	26.5	22.8	23.9	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.9	7.6	5.9	6.6	7.2	6.4	28.5	26.5	26.5	22.8	23.9	22.9
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	6	6	0	1	4	2	5	7	7	0	3	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.611
Loss Time (sec):	0	Average Delay (sec/veh):	24.3
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Figueroa St						Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	140	729	84	103	618	60	66	222	91	95	323	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	140	729	84	103	618	60	66	222	91	95	323	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	140	729	84	103	618	60	66	222	91	95	323	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	729	84	103	618	60	66	222	91	95	323	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	140	729	84	103	618	60	66	222	91	95	323	108
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.84	0.84	0.84	0.85	0.85	0.85
Lanes:	1.00	1.79	0.21	1.00	1.82	0.18	0.17	0.59	0.24	0.18	0.61	0.21
Final Sat.:	1805	3187	367	1805	3247	315	277	933	382	292	992	332
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.23	0.06	0.19	0.19	0.24	0.24	0.24	0.33	0.33	0.33
Crit Moves:		****		****							****	
Green/Cycle:	0.14	0.37	0.37	0.33	0.33	0.33	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.57	0.61	0.61	0.42	0.57	0.57	0.45	0.45	0.45	0.61	0.61	0.61
Delay/Veh:	43.8	26.2	26.2	26.8	28.2	28.2	14.7	14.7	14.7	17.5	17.5	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.8	26.2	26.2	26.8	28.2	28.2	14.7	14.7	14.7	17.5	17.5	17.5
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B
HCM2kAvgQ:	5	11	11	3	9	9	7	7	7	12	12	12

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.689
Loss Time (sec):	0	Average Delay (sec/veh):	14.9
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1!	0	0
Volume Module:													
Base Vol:	10	787	80	199	598	1	10	5	0	84	40	317	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	787	80	199	598	1	10	5	0	84	40	317	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	787	80	199	598	1	10	5	0	84	40	317	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	10	787	80	199	598	1	10	5	0	84	40	317	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	10	787	80	199	598	1	10	5	0	84	40	317	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.36	0.94	0.94	0.25	0.95	0.95	0.83	0.83	1.00	0.85	0.85	0.85	
Lanes:	1.00	1.82	0.18	1.00	2.00	0.00	0.67	0.33	0.00	0.19	0.09	0.72	
Final Sat.:	688	3232	329	479	3603	6	1050	525	0	308	146	1161	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.24	0.24	0.42	0.17	0.17	0.01	0.01	0.00	0.27	0.27	0.27	
Crit Moves:				****							****		
Green/Cycle:	0.60	0.60	0.60	0.60	0.60	0.60	0.40	0.40	0.00	0.40	0.40	0.40	
Volume/Cap:	0.02	0.40	0.40	0.69	0.28	0.28	0.02	0.02	0.00	0.69	0.69	0.69	
Delay/Veh:	8.0	10.5	10.5	20.3	9.5	9.5	18.4	18.4	0.0	28.2	28.2	28.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.0	10.5	10.5	20.3	9.5	9.5	18.4	18.4	0.0	28.2	28.2	28.2	
LOS by Move:	A	B	B	C	A	A	B	B	A	C	C	C	
HCM2kAvgQ:	0	7	7	6	5	5	0	0	0	12	12	12	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.453
Loss Time (sec):	0	Average Delay (sec/veh):	11.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	101	241	42	32	182	60	52	61	59	23	71	38	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	101	241	42	32	182	60	52	61	59	23	71	38	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	101	241	42	32	182	60	52	61	59	23	71	38	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	101	241	42	32	182	60	52	61	59	23	71	38	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	101	241	42	32	182	60	52	61	59	23	71	38	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.85	0.15	1.00	0.75	0.25	0.30	0.35	0.34	0.17	0.54	0.29	
Final Sat.:	564	532	93	547	460	152	179	210	203	101	311	166	
Capacity Analysis Module:													
Vol/Sat:	0.18	0.45	0.45	0.06	0.40	0.40	0.29	0.29	0.29	0.23	0.23	0.23	
Crit Moves:			****		****			****			****		
Delay/Veh:	10.2	12.6	12.6	9.4	11.8	11.8	10.7	10.7	10.7	10.2	10.2	10.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.2	12.6	12.6	9.4	11.8	11.8	10.7	10.7	10.7	10.2	10.2	10.2	
LOS by Move:	B	B	B	A	B	B	B	B	B	B	B	B	
ApproachDel:	11.9			11.5			10.7			10.2			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	11.9			11.5			10.7			10.2			
LOS by Appr:	B			B			B			B			
AllWayAvgQ:	0.2	0.7	0.7	0.1	0.6	0.6	0.3	0.3	0.3	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.455
Loss Time (sec):	0	Average Delay (sec/veh):	23.6
Optimal Cycle:	34	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	220	601	97	186	542	43	44	108	211	104	178	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	601	97	186	542	43	44	108	211	104	178	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	220	601	97	186	542	43	44	108	211	104	178	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	601	97	186	542	43	44	108	211	104	178	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	220	601	97	186	542	43	44	108	211	104	178	249
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.50	1.00	0.85	0.60	1.00	0.85
Lanes:	1.00	1.72	0.28	1.00	1.85	0.15	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3044	491	1805	3308	262	953	1900	1615	1138	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.20	0.20	0.10	0.16	0.16	0.05	0.06	0.13	0.09	0.09	0.15
Crit Moves:		****		****								****
Green/Cycle:	0.28	0.43	0.43	0.38	0.38	0.38	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.43	0.45	0.45	0.38	0.43	0.43	0.14	0.17	0.39	0.27	0.28	0.45
Delay/Veh:	30.0	20.2	20.2	23.1	23.3	23.3	23.1	23.3	25.6	24.4	24.3	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.0	20.2	20.2	23.1	23.3	23.3	23.1	23.3	25.6	24.4	24.3	26.4
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	6	8	8	4	7	7	1	2	5	2	4	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.491
Loss Time (sec):	0	Average Delay (sec/veh):	3.6
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	238	932	40	30	643	361	32	9	21	40	39	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	238	932	40	30	643	361	32	9	21	40	39	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	238	932	40	30	643	361	32	9	21	40	39	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	238	932	40	30	643	361	32	9	21	40	39	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	238	932	40	30	643	361	32	9	21	40	39	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.28	0.94	0.94	0.29	0.90	0.90	0.61	0.90	0.90	0.57	0.86	0.86
Lanes:	1.00	1.92	0.08	1.00	1.28	0.72	1.00	0.30	0.70	1.00	2.00	1.00
Final Sat.:	525	3440	148	544	2187	1228	1165	510	1190	1085	3261	1630
Capacity Analysis Module:												
Vol/Sat:	0.45	0.27	0.27	0.06	0.29	0.29	0.03	0.02	0.02	0.04	0.01	0.01
Crit Moves:	****									****		
Green/Cycle:	0.92	0.92	0.92	0.92	0.92	0.92	0.08	0.08	0.08	0.08	0.08	0.08
Volume/Cap:	0.49	0.29	0.29	0.06	0.32	0.32	0.37	0.23	0.23	0.49	0.16	0.20
Delay/Veh:	1.3	0.4	0.4	0.3	0.5	0.5	46.6	44.5	44.5	49.0	43.5	43.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	0.4	0.4	0.3	0.5	0.5	46.6	44.5	44.5	49.0	43.5	43.7
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	2	2	1	1	1	2	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.767
Loss Time (sec):	0	Average Delay (sec/veh):	32.5
Optimal Cycle:	114	Level Of Service:	C

Street Name:	Figueroa St						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	379	660	244	254	629	90	96	709	173	297	974	187
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	379	660	244	254	629	90	96	709	173	297	974	187
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	379	660	244	254	629	90	96	709	173	297	974	187
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	379	660	244	254	629	90	96	709	173	297	974	187
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	379	660	244	254	629	90	96	709	173	297	974	187
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.61	0.39	1.00	1.68	0.32
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2817	687	1805	2955	567
Capacity Analysis Module:												
Vol/Sat:	0.21	0.18	0.15	0.14	0.17	0.06	0.05	0.25	0.25	0.16	0.33	0.33
Crit Moves:	****				****		****				****	
Green/Cycle:	0.48	0.27	0.27	0.43	0.22	0.22	0.31	0.31	0.31	0.21	0.45	0.45
Volume/Cap:	0.69	0.67	0.56	0.56	0.80	0.26	0.47	0.80	0.80	0.80	0.74	0.74
Delay/Veh:	23.9	34.4	32.9	21.8	42.9	32.8	26.5	35.7	35.7	49.5	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.9	34.4	32.9	21.8	42.9	32.8	26.5	35.7	35.7	49.5	24.6	24.6
LOS by Move:	C	C	C	C	D	C	C	D	D	D	C	C
HCM2kAvgQ:	10	11	7	7	12	2	3	15	15	11	17	17

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.492
Loss Time (sec):	0	Average Delay (sec/veh):	16.0
Optimal Cycle:	37	Level Of Service:	B

****

Street Name:	I-5 NB off-ramp							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Split Phase			Split Phase			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1! 0	0	1	0	0	0 1	1	0	2	0	0
	0	0	1	1	0								
Volume Module:													
Base Vol:	298	17	18	26	0	151	64	821	0	0	1042	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	298	17	18	26	0	151	64	821	0	0	1042	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	298	17	18	26	0	151	64	821	0	0	1042	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	298	17	18	26	0	151	64	821	0	0	1042	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	298	17	18	26	0	151	64	821	0	0	1042	25	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.19	0.95	1.00	1.00	0.95	0.95	
Lanes:	1.81	0.09	0.10	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.95	0.05	
Final Sat.:	3265	167	176	1805	0	1615	357	3610	0	0	3513	84	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.10	0.10	0.01	0.00	0.09	0.18	0.23	0.00	0.00	0.30	0.30	
Crit Moves:		****				****					****		
Green/Cycle:	0.21	0.21	0.21	0.19	0.00	0.19	0.60	0.60	0.00	0.00	0.60	0.60	
Volume/Cap:	0.44	0.49	0.49	0.08	0.00	0.49	0.30	0.38	0.00	0.00	0.49	0.49	
Delay/Veh:	35.0	35.6	35.6	33.4	0.0	37.4	10.4	10.3	0.0	0.0	11.4	11.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	35.0	35.6	35.6	33.4	0.0	37.4	10.4	10.3	0.0	0.0	11.4	11.4	
LOS by Move:	C	D	D	C	A	D	B	B	A	A	B	B	
HCM2kAvgQ:	5	5	5	1	0	5	1	7	0	0	10	10	

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	0	Average Delay (sec/veh):	16.4
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	241	528	105	112	285	110	129	1430	194	54	891	106
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	241	528	105	112	285	110	129	1430	194	54	891	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	241	528	105	112	285	110	129	1430	194	54	891	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	241	528	105	112	285	110	129	1430	194	54	891	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	241	528	105	112	285	110	129	1430	194	54	891	106
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.44	0.93	0.93	0.30	0.91	0.91	0.22	0.89	0.89	0.08	0.90	0.90
Lanes:	1.00	1.67	0.33	1.00	1.44	0.56	1.00	2.64	0.36	1.00	2.68	0.32
Final Sat.:	832	2936	584	564	2496	963	410	4486	609	157	4562	543
Capacity Analysis Module:												
Vol/Sat:	0.29	0.18	0.18	0.20	0.11	0.11	0.31	0.32	0.32	0.34	0.20	0.20
Crit Moves:	****									****		
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.54	0.54	0.54	0.54	0.54	0.54
Volume/Cap:	0.63	0.39	0.39	0.43	0.25	0.25	0.58	0.59	0.59	0.63	0.36	0.36
Delay/Veh:	24.2	18.1	18.1	19.6	16.7	16.7	19.1	15.7	15.7	30.5	13.1	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.2	18.1	18.1	19.6	16.7	16.7	19.1	15.7	15.7	30.5	13.1	13.1
LOS by Move:	C	B	B	B	B	B	B	B	B	C	B	B
HCM2kAvgQ:	7	7	7	3	4	4	4	12	12	2	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.368
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	14	443	112	0	0	0	199	667	0	0	218	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	443	112	0	0	0	199	667	0	0	218	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	443	112	0	0	0	199	667	0	0	218	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	443	112	0	0	0	199	667	0	0	218	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	443	112	0	0	0	199	667	0	0	218	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.51	0.95	1.00	1.00	0.91	0.91
Lanes:	0.05	1.56	0.39	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.37	0.63
Final Sat.:	86	2718	687	0	0	0	968	3610	0	0	2358	1082
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.00	0.00	0.00	0.21	0.18	0.00	0.00	0.09	0.09
Crit Moves:		****					****					
Green/Cycle:	0.44	0.44	0.44	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56	0.56
Volume/Cap:	0.37	0.37	0.37	0.00	0.00	0.00	0.37	0.33	0.00	0.00	0.17	0.17
Delay/Veh:	18.7	18.7	18.7	0.0	0.0	0.0	12.7	12.1	0.0	0.0	10.8	10.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.7	18.7	18.7	0.0	0.0	0.0	12.7	12.1	0.0	0.0	10.8	10.8
LOS by Move:	B	B	B	A	A	A	B	B	A	A	B	B
HCM2kAvgQ:	6	6	6	0	0	0	4	6	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.322
Loss Time (sec):	0	Average Delay (sec/veh):	13.5
Optimal Cycle:	21	Level Of Service:	B

****

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0	0	1	0	1	1	0	0
Volume Module:												
Base Vol:	0	0	0	204	187	156	0	653	49	24	215	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	204	187	156	0	653	49	24	215	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	204	187	156	0	653	49	24	215	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	204	187	156	0	653	49	24	215	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	204	187	156	0	653	49	24	215	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.94	0.94	0.32	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.86	0.14	1.00	2.00	0.00
Final Sat.:	0	0	0	1631	1631	1631	0	3323	249	600	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.11	0.10	0.00	0.20	0.20	0.04	0.06	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.39	0.39	0.39	0.00	0.61	0.61	0.61	0.61	0.00
Volume/Cap:	0.00	0.00	0.00	0.32	0.29	0.25	0.00	0.32	0.32	0.07	0.10	0.00
Delay/Veh:	0.0	0.0	0.0	21.5	21.2	20.7	0.0	9.5	9.5	8.0	8.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.5	21.2	20.7	0.0	9.5	9.5	8.0	8.1	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	5	4	3	0	5	5	0	1	0

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 1041.5 Worst Case Level Of Service: F[2399.5]

Street Name:	Ave 19						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Volume Module:												
Base Vol:	0	0	0	348	191	0	921	35	0	0	0	717
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	348	191	0	921	35	0	0	0	717
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	348	191	0	921	35	0	0	0	717
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	348	191	0	921	35	0	0	0	717
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	xxxxx	7.1	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	887	887	xxxxx	809	887	0
Potent Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	267	285	xxxxx	301	285	1091
Move Cap.:	xxxx	xxxx	xxxxx	1636	xxxx	xxxxx	77	225	xxxxx	223	225	1091
Volume/Cap:	xxxx	xxxx	xxxx	0.21	xxxx	xxxx	12.04	0.16	xxxx	0.00	0.00	0.66
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	51.4	xxxx	xxxxx	xxxx	xxxx	1.4
Control Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	2366	xxxx	xxxxx	xxxxx	xxxx	9.9
LOS by Move:	*	*	*	A	*	*	F	*	*	*	*	A
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	80	xxxx	xxxxx	xxxx	1091	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	29.1	xxxx	xxxxx	xxxxx	1.4	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2431	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	*	*	*	F	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			2399.5			9.9		
ApproachLOS:	*			*			F			A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.851
Loss Time (sec):	0	Average Delay (sec/veh):	23.7
Optimal Cycle:	125	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	65	366	375	157	256	17	22	290	66	513	608	287
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	366	375	157	256	17	22	290	66	513	608	287
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	366	375	157	256	17	22	290	66	513	608	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	366	375	157	256	17	22	290	66	513	608	287
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	366	375	157	256	17	22	290	66	513	608	287
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.88	0.88	0.95	1.00	0.85	0.25	0.92	0.92	0.50	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.63	0.37	1.00	1.36	0.64
Final Sat.:	1805	1668	1668	1805	1900	1615	479	2859	651	952	2334	1102
Capacity Analysis Module:												
Vol/Sat:	0.04	0.22	0.22	0.09	0.13	0.01	0.05	0.10	0.10	0.54	0.26	0.26
Crit Moves:			****	****						****		
Green/Cycle:	0.08	0.26	0.26	0.29	0.29	0.29	0.63	0.63	0.63	0.63	0.63	0.63
Volume/Cap:	0.47	0.83	0.85	0.60	0.47	0.04	0.07	0.16	0.16	0.85	0.41	0.41
Delay/Veh:	46.6	41.3	42.9	31.6	29.8	25.6	7.1	7.5	7.5	25.7	9.2	9.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.6	41.3	42.9	31.6	29.8	25.6	7.1	7.5	7.5	25.7	9.2	9.2
LOS by Move:	D	D	D	C	C	C	A	A	A	C	A	A
HCM2kAvgQ:	3	14	14	5	7	0	0	2	2	15	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.804
Loss Time (sec):	0	Average Delay (sec/veh):	91.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	1 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	10	1276	151	137	616	56	346	426	19	96	101	178
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	1276	151	137	616	56	346	426	19	96	101	178
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	1276	151	137	616	56	346	426	19	96	101	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1276	151	137	616	56	346	426	19	96	101	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	1276	151	137	616	56	346	426	19	96	101	178
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	0.98	0.98	0.06	1.00	0.85	0.36	0.94	0.94	0.61	0.61	0.61
Lanes:	1.00	0.89	0.11	1.00	1.00	1.00	1.00	1.91	0.09	0.51	0.54	0.95
Final Sat.:	648	1672	198	105	1900	1615	686	3434	153	594	624	1101
Capacity Analysis Module:												
Vol/Sat:	0.02	0.76	0.76	1.30	0.32	0.03	0.50	0.12	0.12	0.16	0.16	0.16
Crit Moves:				****			****					
Green/Cycle:	0.72	0.72	0.72	0.72	0.72	0.72	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.02	1.06	1.06	1.80	0.45	0.05	1.80	0.44	0.44	0.58	0.58	0.58
Delay/Veh:	4.0	55.9	55.9	422.7	6.0	4.1	417.6	29.9	29.9	32.3	32.3	32.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.0	55.9	55.9	422.7	6.0	4.1	417.6	29.9	29.9	32.3	32.3	32.3
LOS by Move:	A	E	E	F	A	A	F	C	C	C	C	C
HCM2kAvgQ:	0	59	59	13	8	1	31	6	6	6	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.021
Loss Time (sec):	0	Average Delay (sec/veh):	43.0
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	318	643	56	126	450	206	45	1128	289	109	673	125
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	318	643	56	126	450	206	45	1128	289	109	673	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	318	643	56	126	450	206	45	1128	289	109	673	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	318	643	56	126	450	206	45	1128	289	109	673	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	318	643	56	126	450	206	45	1128	289	109	673	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.31	0.94	0.94	0.29	0.91	0.91	0.80	0.80	0.80	0.50	0.50	0.50
Lanes:	1.00	1.84	0.16	1.00	1.37	0.63	0.06	1.54	0.40	0.24	1.48	0.28
Final Sat.:	591	3281	286	553	2360	1080	93	2335	598	230	1417	263
Capacity Analysis Module:												
Vol/Sat:	0.54	0.20	0.20	0.23	0.19	0.19	0.48	0.48	0.48	0.47	0.47	0.47
Crit Moves:	****							****				
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	1.02	0.37	0.37	0.43	0.36	0.36	1.02	1.02	1.02	1.00	1.00	1.00
Delay/Veh:	80.1	14.1	14.1	15.5	14.0	14.0	55.5	55.5	55.5	57.1	57.1	57.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	80.1	14.1	14.1	15.5	14.0	14.0	55.5	55.5	55.5	57.1	57.1	57.1
LOS by Move:	F	B	B	B	B	B	E	E	E	E	E	E
HCM2kAvgQ:	16	7	7	3	6	6	32	32	32	21	21	21

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 91.6 Worst Case Level Of Service: F[911.8]

Street Name:	Ave 21									Main St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	9	165	4	117	0	1325	6	15	1210	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	9	165	4	117	0	1325	6	15	1210	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	9	165	4	117	0	1325	6	15	1210	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	9	165	4	117	0	1325	6	15	1210	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	666	1903	2571	605	xxxx	xxxx	xxxxx	1331	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	407	43	26	446	xxxx	xxxx	xxxxx	525	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	407	41	26	446	xxxx	xxxx	xxxxx	525	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	0.02	4.02	0.16	0.26	xxxx	xxxx	xxxx	0.03	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.1	18.8	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	14.0	1561	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.1	xxxx	xxxxx								
LOS by Move:	*	*	B	F	*	*	*	*	*	B	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	289	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	2.0	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	26.2	xxxxx	xxxx	xxxxx	12.1	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	D	*	*	*	B	*	*								
ApproachDel:	14.0			911.8			xxxxxx			xxxxxx										
ApproachLOS:	B			F			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.429
Loss Time (sec):	0	Average Delay (sec/veh):	9.2
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	510	942	749	0	0	391	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	510	942	749	0	0	391	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	510	942	749	0	0	391	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	510	942	749	0	0	391	73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	510	942	749	0	0	391	73
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.92	0.92	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.67	1.33	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2935	2333	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.32	0.32	0.00	0.00	0.11	0.05
Crit Moves:					****			****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.00	0.00	0.25	0.25
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.24	0.43	0.43	0.00	0.00	0.43	0.18
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	3.9	4.8	4.8	0.0	0.0	31.7	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	3.9	4.8	4.8	0.0	0.0	31.7	29.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	C	C
HCM2kAvgQ:	0	0	0	0	0	3	7	7	0	0	6	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.703
Loss Time (sec):	0	Average Delay (sec/veh):	13.0
Optimal Cycle:	49	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	38	1417	90	119	1311	69	118	297	40	37	200	188
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	1417	90	119	1311	69	118	297	40	37	200	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	1417	90	119	1311	69	118	297	40	37	200	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	1417	90	119	1311	69	118	297	40	37	200	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	1417	90	119	1311	69	118	297	40	37	200	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.15	0.94	0.94	0.12	0.94	0.94	0.63	0.63	0.63	0.76	0.76	0.76
Lanes:	1.00	1.88	0.12	1.00	1.90	0.10	0.52	1.31	0.18	0.17	0.94	0.88
Final Sat.:	279	3364	214	232	3404	179	622	1565	211	253	1367	1285
Capacity Analysis Module:												
Vol/Sat:	0.14	0.42	0.42	0.51	0.39	0.39	0.19	0.19	0.19	0.15	0.15	0.15
Crit Moves:				****				****				
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	0.19	0.58	0.58	0.70	0.53	0.53	0.70	0.70	0.70	0.54	0.54	0.54
Delay/Veh:	4.7	6.6	6.6	20.0	6.1	6.1	36.4	36.4	36.4	32.0	32.0	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.7	6.6	6.6	20.0	6.1	6.1	36.4	36.4	36.4	32.0	32.0	32.0
LOS by Move:	A	A	A	C	A	A	D	D	D	C	C	C
HCM2kAvgQ:	1	12	12	4	10	10	8	8	8	6	6	6

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	0	Average Delay (sec/veh):	26.5
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	229	859	346	11	375	42	34	248	160	465	355	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	229	859	346	11	375	42	34	248	160	465	355	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	229	859	346	11	375	42	34	248	0	465	355	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	859	346	11	375	42	34	248	0	465	355	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	229	859	346	11	375	42	34	248	0	465	355	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.14	0.86	1.00	2.70	0.30	1.00	2.00	1.00	1.00	1.95	0.05
Final Sat.:	1805	3539	1425	1805	4595	515	1805	3610	1900	1805	3497	99
Capacity Analysis Module:												
Vol/Sat:	0.13	0.24	0.24	0.01	0.08	0.08	0.02	0.07	0.00	0.26	0.10	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.26	0.42	0.42	0.01	0.17	0.17	0.09	0.12	0.00	0.45	0.48	0.48
Volume/Cap:	0.48	0.58	0.58	0.58	0.48	0.48	0.21	0.58	0.00	0.58	0.21	0.21
Delay/Veh:	31.9	22.4	22.4	85.7	38.0	38.0	43.0	43.5	0.0	21.5	15.2	15.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.9	22.4	22.4	85.7	38.0	38.0	43.0	43.5	0.0	21.5	15.2	15.2
LOS by Move:	C	C	C	F	D	D	D	D	A	C	B	B
HCM2kAvgQ:	6	11	11	1	5	5	1	5	0	11	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: A[8.7]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	38	0	2	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	38	0	2	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	38	0	2	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	38	0	2	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1009	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				8.7	xxxxxx				xxxxxx										
ApproachLOS:	*				A	*				*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.415
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	217	1194	49	2	508	197	0	0	0	150	86	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	1194	49	2	508	197	0	0	0	150	86	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	1194	49	2	508	197	0	0	0	150	86	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	1194	49	2	508	197	0	0	0	150	86	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	1194	49	2	508	197	0	0	0	150	86	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.93	0.93	0.85
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.27	0.73	1.00
Final Sat.:	3502	3447	141	1805	3610	1615	0	0	0	2237	1283	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.35	0.35	0.00	0.14	0.12	0.00	0.00	0.00	0.07	0.07	0.04
Crit Moves:		****		****						****		
Green/Cycle:	0.26	0.84	0.84	0.00	0.58	0.58	0.00	0.00	0.00	0.16	0.16	0.16
Volume/Cap:	0.24	0.41	0.41	0.41	0.24	0.21	0.00	0.00	0.00	0.41	0.41	0.26
Delay/Veh:	29.6	2.2	2.2	98.8	10.2	10.1	0.0	0.0	0.0	38.1	38.1	37.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.6	2.2	2.2	98.8	10.2	10.1	0.0	0.0	0.0	38.1	38.1	37.2
LOS by Move:	C	A	A	F	B	B	A	A	A	D	D	D
HCM2kAvgQ:	3	5	5	0	4	3	0	0	0	4	4	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.462
Loss Time (sec):	0	Average Delay (sec/veh):	24.7
Optimal Cycle:	35	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	787	12	0	655	0	209	95	140	9	0	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	787	12	0	655	0	209	95	140	9	0	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	787	12	0	655	0	209	95	140	9	0	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	787	12	0	655	0	209	95	140	9	0	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	787	12	0	655	0	209	95	140	9	0	464
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.88	0.88	0.88	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	0.94	0.43	0.63	0.04	0.00	1.96
Final Sat.:	0	5098	78	0	3610	0	1582	719	1060	60	0	3178
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.15	0.00	0.18	0.00	0.13	0.13	0.13	0.15	0.00	0.15
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.39	0.39	0.00	0.39	0.00	0.29	0.29	0.29	0.32	0.00	0.32
Volume/Cap:	0.00	0.39	0.39	0.00	0.46	0.00	0.46	0.46	0.46	0.46	0.00	0.45
Delay/Veh:	0.0	22.0	22.0	0.0	22.8	0.0	29.7	29.7	29.7	27.3	0.0	27.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	22.0	22.0	0.0	22.8	0.0	29.7	29.7	29.7	27.3	0.0	27.2
LOS by Move:	A	C	C	A	C	A	C	C	C	C	A	C
HCM2kAvgQ:	0	6	6	0	8	0	6	6	6	6	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.297
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	141	653	0	0	305	1156	0	0	0	74	0	13	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	141	653	0	0	305	1156	0	0	0	74	0	13	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	141	653	0	0	305	0	0	0	0	74	0	13	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	141	653	0	0	305	0	0	0	0	74	0	13	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	141	653	0	0	305	0	0	0	0	74	0	13	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.85	0.00	0.15	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1264	0	222	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.18	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.06	0.00	0.06	
Crit Moves:	****				****					****			
Green/Cycle:	0.26	0.80	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.20	0.00	0.20	
Volume/Cap:	0.30	0.23	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.30	0.00	0.30	
Delay/Veh:	29.8	2.4	0.0	0.0	12.7	0.0	0.0	0.0	0.0	34.9	0.0	34.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	29.8	2.4	0.0	0.0	12.7	0.0	0.0	0.0	0.0	34.9	0.0	34.9	
LOS by Move:	C	A	A	A	B	A	A	A	A	C	A	C	
HCM2kAvgQ:	4	3	0	0	5	0	0	0	0	2	0	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.376
Loss Time (sec):	0	Average Delay (sec/veh):	22.6
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	319	145	28	348	0	474	4	71	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	319	145	28	348	0	474	4	71	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	319	145	28	348	0	474	4	71	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	319	145	28	348	0	474	4	71	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	319	145	28	348	0	474	4	71	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.38	0.63	1.00	1.00	0.00	1.76	0.01	0.23	0.00	0.00	0.00	
Final Sat.:	0	2365	1075	1805	1900	0	2854	21	369	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.13	0.13	0.02	0.18	0.00	0.17	0.19	0.19	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.26	0.26	0.36	0.62	0.00	0.38	0.38	0.38	0.00	0.00	0.00	
Volume/Cap:	0.00	0.51	0.51	0.04	0.29	0.00	0.44	0.51	0.51	0.00	0.00	0.00	
Delay/Veh:	0.0	31.8	31.8	20.9	8.8	0.0	23.5	24.4	24.4	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	31.8	31.8	20.9	8.8	0.0	23.5	24.4	24.4	0.0	0.0	0.0	
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A	
HCM2kAvgQ:	0	7	7	1	5	0	6	8	8	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.5 Worst Case Level Of Service: A[8.5]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Volume Module:																				
Base Vol:	33	9	0	0	26	1	0	0	18	0	0	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	33	9	0	0	26	1	0	0	18	0	0	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	33	9	0	0	26	1	0	0	18	0	0	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	33	9	0	0	26	1	0	0	18	0	0	0								
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx								
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	27	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	27	xxxx	xxxx	xxxxx								
Potent Cap.:	1600	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1055	xxxx	xxxx	xxxxx								
Move Cap.:	1600	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1055	xxxx	xxxx	xxxxx								
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx								
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.5	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	A	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx				8.5			xxxxxx									
ApproachLOS:	*			*				A			*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[11.3]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	11	12	17	43	0	9	11	109	98	59	26	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	12	17	43	0	9	11	109	98	59	26	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	12	17	43	0	9	11	109	98	59	26	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	12	17	43	0	9	11	109	98	59	26	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	329	324	158	339	373	26	26	xxxx	xxxxx	207	xxxx	xxxxx
Potent Cap.:	629	597	893	619	561	1056	1601	xxxx	xxxxx	1376	xxxx	xxxxx
Move Cap.:	599	567	893	574	532	1056	1601	xxxx	xxxxx	1376	xxxx	xxxxx
Volume/Cap:	0.02	0.02	0.02	0.07	0.00	0.01	0.01	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	683	xxxxx	xxxx	624	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.6	xxxxx	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.6			11.3			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 19.9 Worst Case Level Of Service: E[43.4]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	409		0		50	0		0		0	0		108		0	0		148		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	409		0		50	0		0		0	0		108		0	0		148		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	409		0		0	0		0		0	0		108		0	0		148		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	409		0		0	0		0		0	0		108		0	0		148		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		818	xxxxx	xxxx		818	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		313	xxxxx	xxxx		313	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		235	xxxxx	xxxx		235	xxxxx						
Volume/Cap:	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.46	xxxx	xxxx		0.63	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		2.2	xxxxx	xxxx		3.8	xxxxx						
Control Del:	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		32.8	xxxxx	xxxxx		43.4	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		D	*	*		E	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shared LOS:	*	*	*	*	*	*	*	*	*		*	*	*							
ApproachDel:	xxxxxx			xxxxxx				32.8				43.4								
ApproachLOS:	*			*				D				E								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.783
Loss Time (sec):	0	Average Delay (sec/veh):	19.0
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy									Ave 66								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			70	0	0			0	0	0			0	635	54		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			70	0	0			0	0	0			0	635	54		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	0			70	0	0			0	0	0			0	635	54		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Reduced Vol:	0	0	0			70	0	0			0	0	0			0	635	54		
PCE Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
FinalVolume:	0	0	0			70	0	0			0	0	0			0	635	54		
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Lanes:	0.00	0.00	0.00			1.00	0.00	1.00			0.00	0.00	0.00			0.00	0.92	0.08		
Final Sat.:	0	0	0			530	0	642			0	0	0			0	811	69		
Capacity Analysis Module:																				
Vol/Sat:	xxxx	xxxx	xxxx			0.13	xxxx	0.00			xxxx	xxxx	xxxx			xxxx	0.78	0.78		
Crit Moves:						****											****			
Delay/Veh:	0.0	0.0	0.0			10.0	0.0	0.0			0.0	0.0	0.0			0.0	19.9	19.9		
Delay Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
AdjDel/Veh:	0.0	0.0	0.0			10.0	0.0	0.0			0.0	0.0	0.0			0.0	19.9	19.9		
LOS by Move:	*	*	*			B	*	*			*	*	*			*	C	C		
ApproachDel:	xxxxxx					10.0					xxxxxx					19.9				
Delay Adj:	xxxxx					1.00					xxxxx					1.00				
ApprAdjDel:	xxxxxx					10.0					xxxxxx					19.9				
LOS by Appr:	*					B					*					C				
AllWayAvgQ:	0.0	0.0	0.0			0.1	0.0	0.0			0.0	0.0	0.0			3.1	3.1	3.1		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[13.5]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0		7	0		58			65	543		0		0	417		135	
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0		7	0		58			65	543		0		0	417		135	
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0		7	0		58			65	543		0		0	417		135	
Reduct Vol:	0	0	0		0	0		0			0	0		0		0	0		0	
FinalVolume:	0	0	0		7	0		58			65	543		0		0	417		135	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	6.5		6.2			4.1	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	4.0		3.3			2.2	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		1158	1158		485			552	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx		219	198		587			1028	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx		208	185		587			1028	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx		0.03	0.00		0.10			0.06	xxxx	xxxx	xxxx		xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx				0.2	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx				8.7	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
LOS by Move:	*	*	*		*	*		*			A	*	*	*		*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	491	xxxxx				xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	0.5	xxxxx				xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	13.5	xxxxx				xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Shared LOS:	*	*	*		*	B	*				*	*	*	*		*	*			
ApproachDel:	xxxxxx					13.5					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	6.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	13	1	2	1	1	4	5	242	8	4	73	1	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	13	1	2	1	1	4	5	242	8	4	73	1	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	13	1	2	1	1	4	5	242	8	4	73	1	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	13	1	2	1	1	4	5	242	8	4	73	1	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.81	0.06	0.13	0.17	0.17	0.67	0.02	0.95	0.03	0.05	0.94	0.01	
Final Sat.:	195	15	30	0	0	1	17	807	27	37	668	9	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.07	0.07	6.00	6.00	6.00	0.30	0.30	0.30	0.11	0.11	0.11	
Crit Moves:			****			****		****		****			
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.07	0.07	0.07	6.00	6.00	6.00	0.30	0.30	0.30	0.11	0.11	0.11	
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.1	3.1	3.1	1.5	1.5	1.5	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.1	3.1	3.1	1.5	1.5	1.5	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: D[26.4]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	102	0	206	0	0	0	77	343	0	0	522	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	0	206	0	0	0	77	343	0	0	522	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	102	0	206	0	0	0	77	343	0	0	522	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	102	0	206	0	0	0	77	343	0	0	522	52
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1045	1071	172	xxxx	xxxx	xxxxx	574	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	256	223	877	xxxx	xxxx	xxxxx	1009	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	240	205	877	xxxx	xxxx	xxxxx	1009	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.43	0.00	0.23	xxxx	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	467	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.7	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	26.4	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	*	*	A	*	*	*	*	*
ApproachDel:		26.4		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		D			*			*			*	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[8.5]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		369		8			0	0		0		0	0		60	
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0	0		369		8			0	0		0		0	0		60	
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0	0		369		8			0	0		0		0	0		60	
Reduct Vol:	0	0	0	0		0		0			0	0		0		0	0		0	
FinalVolume:	0	0	0	0		369		8			0	0		0		0	0		60	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx	xxxx		6.2	
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx	xxxx		3.3	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			373	xxxx		xxxxx		xxxx	xxxx		0	
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			588	xxxx		xxxxx		xxxx	xxxx		1091	
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			555	xxxx		xxxxx		xxxx	xxxx		1091	
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.00	xxxx		xxxx		xxxx	xxxx		0.05	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx	xxxx		0.2	
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx	xxxx		8.5	
LOS by Move:	*	*	*	*		*		*			*	*		*		*	*		A	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*		*			*	*		*		*	*		*	
ApproachDel:	xxxxxx			xxxxxx							xxxxxx						8.5			
ApproachLOS:	*					*						*					A			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.521
Loss Time (sec):	0	Average Delay (sec/veh):	11.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	96	28	46	10	336	225	3	297	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	96	28	46	10	336	225	3	297	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	96	28	46	10	336	225	3	297	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	96	28	46	10	336	225	3	297	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	96	28	46	10	336	225	3	297	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.56	0.16	0.27	0.03	0.97	1.00	0.02	1.91	0.07
Final Sat.:	0	533	0	339	99	163	19	645	764	12	1207	45
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.28	0.28	0.28	0.52	0.52	0.29	0.25	0.25	0.24
Crit Moves:		****		****				****		****		
Delay/Veh:	0.0	0.0	0.0	10.7	10.7	10.7	13.5	13.5	9.2	10.0	10.0	9.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.7	10.7	10.7	13.5	13.5	9.2	10.0	10.0	9.9
LOS by Move:	*	*	*	B	B	B	B	B	A	B	A	A
ApproachDel:	xxxxxx			10.7			11.8			10.0		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			10.7			11.8			10.0		
LOS by Appr:	*			B			B			A		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.3	0.3	1.0	1.0	0.4	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																		
Base Vol:	210	2	6	0	0	0	200	232	0	0	102	88						
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Initial Bse:	210	2	6	0	0	0	200	232	0	0	102	88						
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
PHF Volume:	210	2	6	0	0	0	200	232	0	0	102	88						
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0						
Reduced Vol:	210	2	6	0	0	0	200	232	0	0	102	88						
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
FinalVolume:	210	2	6	0	0	0	200	232	0	0	102	88						
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Lanes:	0.96	0.01	0.03	0.00	0.00	0.00	0.46	0.54	0.00	0.00	0.54	0.46						
Final Sat.:	595	6	17	0	0	0	338	392	0	0	388	335						
Capacity Analysis Module:																		
Vol/Sat:	0.35	0.35	0.35	xxxx	xxxx	xxxx	0.59	0.59	xxxx	xxxx	0.26	0.26						
Crit Moves:	****						****				****							
Delay/Veh:	11.1	11.1	11.1	0.0	0.0	0.0	14.3	14.3	0.0	0.0	9.3	9.3						
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
AdjDel/Veh:	11.1	11.1	11.1	0.0	0.0	0.0	14.3	14.3	0.0	0.0	9.3	9.3						
LOS by Move:	B	B	B	*	*	*	B	B	*	*	A	A						
ApproachDel:	11.1			xxxxxx			14.3			9.3								
Delay Adj:	1.00			xxxxx			1.00			1.00								
ApprAdjDel:	11.1			xxxxxx			14.3			9.3								
LOS by Appr:	B			*			B			A								
AllWayAvgQ:	0.5	0.5	0.5	0.0	0.0	0.0	1.3	1.3	1.3	0.3	0.3	0.3						

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.694
Loss Time (sec):	0	Average Delay (sec/veh):	16.9
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43					
Approach:	North Bound				South Bound				East Bound				West Bound		
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign		
Rights:	Include				Include				Include				Include		
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0
Lanes:	0 0	1! 0	0		0 0	1! 0	0		0 0	1! 0	0		0 0	1! 0	0
Volume Module:															
Base Vol:	9	23	45		74	60	109		171	253	12		47	277	106
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Initial Bse:	9	23	45		74	60	109		171	253	12		47	277	106
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
PHF Volume:	9	23	45		74	60	109		171	253	12		47	277	106
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0
Reduced Vol:	9	23	45		74	60	109		171	253	12		47	277	106
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
FinalVolume:	9	23	45		74	60	109		171	253	12		47	277	106
Saturation Flow Module:															
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Lanes:	0.12	0.30	0.58		0.30	0.25	0.45		0.39	0.58	0.03		0.11	0.64	0.25
Final Sat.:	54	138	270		166	135	245		246	364	17		70	415	159
Capacity Analysis Module:															
Vol/Sat:	0.17	0.17	0.17		0.45	0.45	0.45		0.69	0.69	0.69		0.67	0.67	0.67
Crit Moves:		****				****			****				****		
Delay/Veh:	10.3	10.3	10.3		13.1	13.1	13.1		19.3	19.3	19.3		17.8	17.8	17.8
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
AdjDel/Veh:	10.3	10.3	10.3		13.1	13.1	13.1		19.3	19.3	19.3		17.8	17.8	17.8
LOS by Move:	B	B	B		B	B	B		C	C	C		C	C	C
ApproachDel:		10.3				13.1				19.3				17.8	
Delay Adj:		1.00				1.00				1.00				1.00	
ApprAdjDel:		10.3				13.1				19.3				17.8	
LOS by Appr:		B				B				C				C	
AllWayAvgQ:	0.1	0.1	0.1		0.6	0.6	0.6		1.9	1.9	1.9		1.7	1.7	1.7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.491
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	162	4	45	5	4	27	11	209	140	27	241	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	4	45	5	4	27	11	209	140	27	241	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	162	4	45	5	4	27	11	209	140	27	241	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	4	45	5	4	27	11	209	140	27	241	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	162	4	45	5	4	27	11	209	140	27	241	2
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	0.14	0.11	0.75	0.03	0.58	0.39	0.10	0.89	0.01
Final Sat.:	522	338	252	80	64	432	22	426	285	68	608	5
Capacity Analysis Module:												
Vol/Sat:	0.31	0.01	0.18	0.06	0.06	0.06	0.49	0.49	0.49	0.40	0.40	0.40
Crit Moves:	****			****			****			****		
Delay/Veh:	11.9	8.9	8.9	8.8	8.8	8.8	12.0	12.0	12.0	11.2	11.2	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.9	8.9	8.9	8.8	8.8	8.8	12.0	12.0	12.0	11.2	11.2	11.2
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	11.2			8.8			12.0			11.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.2			8.8			12.0			11.2		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.4	0.1	0.1	0.1	0.1	0.1	0.9	0.9	0.9	0.6	0.6	0.6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 65.1 Worst Case Level Of Service: F[524.6]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	232	0	107	0	1524	0	0	869	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	232	0	107	0	1524	0	0	869	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	232	0	107	0	1524	0	0	869	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	232	0	107	0	1524	0	0	869	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1959	2393	762	1631	2393	435	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	39	34	352	94	34	575	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	32	34	352	94	34	575	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.46	0.00	0.19	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.7	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	94	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	21.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	760.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			524.6			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[10.8]

Street Name:	ASP NB on-ramp									Ave 26									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	87	1034	0	0	0	0	918	78		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	87	1034	0	0	0	0	918	78		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	87	1034	0	0	0	0	918	78		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	87	1034	0	0	0	0	918	78		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					996	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					703	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					703	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.12	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	64	Critical Vol./Cap.(X):	0.788
Loss Time (sec):	0	Average Delay (sec/veh):	16.7
Optimal Cycle:	180	Level Of Service:	B

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2
Volume Module:												
Base Vol:	0	279	161	823	740	209	87	38	18	0	0	548
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	279	161	823	740	209	87	38	18	0	0	548
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	279	161	823	740	209	87	38	18	0	0	548
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	279	161	823	740	209	87	38	18	0	0	548
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	279	161	823	740	209	87	38	18	0	0	548
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.00	1.27	0.73	2.00	0.78	0.22	0.61	0.27	0.13	0.00	0.00	2.00
Final Sat.:	0	2163	1248	3502	1433	405	1103	482	228	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.24	0.52	0.52	0.08	0.08	0.08	0.00	0.00	0.19
Crit Moves:					****		****					****
Green/Cycle:	0.00	0.14	0.14	0.56	0.70	0.70	0.09	0.09	0.09	0.00	0.00	0.77
Volume/Cap:	0.00	0.92	0.92	0.42	0.73	0.73	0.92	0.92	0.92	0.00	0.00	0.25
Delay/Veh:	0.0	49.6	49.6	8.1	8.0	8.0	77.4	77.4	77.4	0.0	0.0	2.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	49.6	49.6	8.1	8.0	8.0	77.4	77.4	77.4	0.0	0.0	2.1
LOS by Move:	A	D	D	A	A	A	E	E	E	A	A	A
HCM2kAvgQ:	0	8	8	5	13	13	6	6	6	0	0	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.3]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	73	909	0	0	0	1015	73			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	73	909	0	0	0	1015	73			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	73	909	0	0	0	1015	73			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	73	909	0	0	0	1015	73			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1088	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					649	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					649	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.11	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.7]

Street Name:	ASP SB Exit 25									Casanova St							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	52	10		5	180		0		0	0		0		0	24		0		9
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	52	10		5	180		0		0	0		0		0	24		0		9
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	52	10		5	180		0		0	0		0		0	24		0		9
Reduct Vol:	0	0	0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0	52	10		5	180		0		0	0		0		0	24		0		9
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx		xxxxx		xxxxx	xxxx		xxxxx		6.4	6.5		6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx		xxxxx		xxxxx	xxxx		xxxxx		3.5	4.0		3.3		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		62	xxxx		xxxxx		xxxx	xxxx		xxxxx		247	247		57		
Potent Cap.:	xxxx	xxxx	xxxxx		1554	xxxx		xxxxx		xxxx	xxxx		xxxxx		746	659		1015		
Move Cap.:	xxxx	xxxx	xxxxx		1554	xxxx		xxxxx		xxxx	xxxx		xxxxx		744	657		1015		
Volume/Cap:	xxxx	xxxx	xxxx		0.00	xxxx		xxxx		xxxx	xxxx		xxxx		0.03	0.00		0.01		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		
Control Del:	xxxxx	xxxx	xxxxx		7.3	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		
LOS by Move:	*	*	*		A	*		*		*	*		*		*	*		*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx		802	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		0.0	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	0.1		xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx		7.3	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	9.7		xxxxx		
Shared LOS:	*	*	*		A	*		*		*	*		*		*	A		*		
ApproachDel:	xxxxxx				xxxxxx					xxxxxx						9.7				
ApproachLOS:	*				*					*						A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[13.4]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	19	8	13	22	160	234	76	113	99								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	19	8	13	22	160	234	76	113	99								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	19	8	13	22	160	234	76	113	99								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	19	8	13	22	160	234	76	113	99								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	636	753	163	212	xxxx	xxxxx	394	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	446	341	888	1370	xxxx	xxxxx	1176	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	417	313	888	1370	xxxx	xxxxx	1176	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.03	0.01	0.02	xxxx	xxxx	0.06	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.2	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	8.3	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	467	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.4	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx			13.4			xxxxxx			xxxxxx										
ApproachLOS:	*			B			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.507
Loss Time (sec):	0	Average Delay (sec/veh):	11.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1			
Volume Module:													
Base Vol:	0	200	0	0	337	0	0	0	0	102	1	104	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	200	0	0	337	0	0	0	0	102	1	104	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	200	0	0	337	0	0	0	0	102	1	104	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	200	0	0	337	0	0	0	0	102	1	104	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	200	0	0	337	0	0	0	0	102	1	104	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	592	647	0	0	664	0	0	0	0	541	584	659	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.31	xxxx	xxxx	0.51	xxxx	xxxx	xxxx	xxxx	0.19	0.00	0.16	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	10.4	0.0	0.0	13.5	0.0	0.0	0.0	0.0	10.4	8.5	8.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.4	0.0	0.0	13.5	0.0	0.0	0.0	0.0	10.4	8.5	8.7	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		10.4			13.5			xxxxxx			9.5		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		10.4			13.5			xxxxxx			9.5		
LOS by Appr:		B			B			*			A		
AllWayAvgQ:	0.0	0.4	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.2	0.0	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.499
Loss Time (sec):	0	Average Delay (sec/veh):	12.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	120	262	298	314	0	0	0	1	89	1	82	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	120	262	298	314	0	0	0	1	89	1	82	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	120	262	298	314	0	0	0	1	89	1	82	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	120	262	298	314	0	0	0	1	89	1	82	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	120	262	298	314	0	0	0	1	89	1	82	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.05	0.95	
Final Sat.:	0	608	694	597	651	0	0	469	516	475	26	535	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.20	0.38	0.50	0.48	xxxx	xxxx	0.00	0.00	0.19	0.04	0.15	
Crit Moves:			****	****					****	****			
Delay/Veh:	0.0	9.8	10.7	14.3	13.0	0.0	0.0	0.0	9.0	11.4	9.6	9.6	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	9.8	10.7	14.3	13.0	0.0	0.0	0.0	9.0	11.4	9.6	9.6	
LOS by Move:	*	A	B	B	B	*	*	*	A	B	A	A	
ApproachDel:	10.4			13.6			9.0			10.5			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.4			13.6			9.0			10.5			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.2	0.6	0.9	0.9	0.0	0.0	0.0	0.0	0.2	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.560
Loss Time (sec):	0	Average Delay (sec/veh):	6.5
Optimal Cycle:	42	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	937	61	168	969	0	0	0	0	154	0	115
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	937	61	168	969	0	0	0	0	154	0	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	937	61	168	969	0	0	0	0	154	0	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	937	61	168	969	0	0	0	0	154	0	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	937	61	168	969	0	0	0	0	154	0	115
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.63	0.63	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.88	0.12	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3359	219	354	2040	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.48	0.48	0.00	0.00	0.00	0.00	0.09	0.00	0.07
Crit Moves:					****					****		
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.33	0.33	0.56	0.56	0.00	0.00	0.00	0.00	0.56	0.00	0.47
Delay/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	41.9	0.0	40.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	41.9	0.0	40.1
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	4	4	6	6	0	0	0	0	5	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.568
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	19	859	165	59	441	173	36	213	3	43	173	303
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	859	165	59	441	173	36	213	3	43	173	303
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	859	165	59	441	173	36	213	3	43	173	303
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	859	165	59	441	173	36	213	3	43	173	303
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	19	859	165	59	441	173	36	213	3	43	173	303
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	0.93	0.93	0.17	0.91	0.91	0.30	1.00	1.00	0.53	0.90	0.90
Lanes:	1.00	1.68	0.32	1.00	1.44	0.56	1.00	0.99	0.01	1.00	0.36	0.64
Final Sat.:	623	2956	568	315	2484	974	578	1870	26	1003	624	1093
Capacity Analysis Module:												
Vol/Sat:	0.03	0.29	0.29	0.19	0.18	0.18	0.06	0.11	0.11	0.04	0.28	0.28
Crit Moves:		****									****	
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.06	0.57	0.57	0.37	0.35	0.35	0.13	0.23	0.23	0.09	0.57	0.57
Delay/Veh:	12.4	17.2	17.2	16.1	14.6	14.6	14.2	14.9	14.9	13.8	19.0	19.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.4	17.2	17.2	16.1	14.6	14.6	14.2	14.9	14.9	13.8	19.0	19.0
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	0	12	12	2	6	6	1	4	4	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.280
Loss Time (sec):	0	Average Delay (sec/veh):	8.7
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	108	0	134	157	374	0	0	375	146
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	108	0	134	157	374	0	0	375	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	108	0	134	157	374	0	0	375	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	108	0	134	157	374	0	0	375	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	108	0	134	157	374	0	0	375	146
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.47	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	885	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.18	0.10	0.00	0.00	0.20	0.09
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.70	0.70	0.00	0.00	0.70	1.00
Volume/Cap:	0.00	0.00	0.00	0.10	0.00	0.28	0.25	0.15	0.00	0.00	0.28	0.09
Delay/Veh:	0.0	0.0	0.0	25.6	0.0	27.3	5.5	4.9	0.0	0.0	5.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.6	0.0	27.3	5.5	4.9	0.0	0.0	5.6	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	2	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.524
Loss Time (sec):	0	Average Delay (sec/veh):	14.9
Optimal Cycle:	30	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	96	224	3	11	127	210	235	247	117	2	447	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	96	224	3	11	127	210	235	247	117	2	447	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	96	224	3	11	127	210	235	247	117	2	447	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	224	3	11	127	210	235	247	117	2	447	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	96	224	3	11	127	210	235	247	117	2	447	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.97	0.97	0.85	0.38	1.00	0.85	0.54	0.99	0.99
Lanes:	0.30	0.69	0.01	0.08	0.92	1.00	1.00	1.00	1.00	1.00	0.92	0.08
Final Sat.:	493	1150	15	147	1701	1615	714	1900	1615	1030	1718	158
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.07	0.07	0.13	0.33	0.13	0.07	0.00	0.26	0.26
Crit Moves:		****					****					
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.63	0.63	0.63	0.63	0.63	0.63
Volume/Cap:	0.52	0.52	0.52	0.20	0.20	0.35	0.52	0.21	0.12	0.00	0.41	0.41
Delay/Veh:	25.3	25.3	25.3	21.5	21.5	23.0	11.4	8.0	7.5	6.9	9.6	9.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	25.3	25.3	21.5	21.5	23.0	11.4	8.0	7.5	6.9	9.6	9.6
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	8	8	8	3	3	5	5	3	1	0	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.685
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	523	267	67	1298	16	12	37	20	305	21	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	523	267	67	1298	16	12	37	20	305	21	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	523	267	67	1298	16	12	37	20	305	21	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	523	267	67	1298	16	12	37	20	305	21	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	523	267	67	1298	16	12	37	20	305	21	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.85	0.85	0.85	0.91	0.91	0.91	0.67	0.67	0.85
Lanes:	0.01	1.99	1.00	0.10	1.88	0.02	0.17	0.54	0.29	0.94	0.06	1.00
Final Sat.:	20	3414	1615	157	3034	37	299	922	499	1184	82	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.17	0.43	0.43	0.43	0.04	0.04	0.04	0.26	0.26	0.01
Crit Moves:					****						****	
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.25	0.25	0.26	0.69	0.69	0.69	0.11	0.11	0.11	0.69	0.69	0.04
Delay/Veh:	8.4	8.4	8.6	13.3	13.3	13.3	20.4	20.4	20.4	30.4	30.4	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.4	8.4	8.6	13.3	13.3	13.3	20.4	20.4	20.4	30.4	30.4	19.8
LOS by Move:	A	A	A	B	B	B	C	C	C	C	C	B
HCM2kAvgQ:	4	4	4	15	15	15	1	1	1	10	10	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.416
Loss Time (sec):	0	Average Delay (sec/veh):	7.4
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0	1! 0	0
Volume Module:													
Base Vol:	130	1128	6	3	646	39	131	6	67	9	15	36	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	130	1128	6	3	646	39	131	6	67	9	15	36	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	130	1128	6	3	646	39	131	6	67	9	15	36	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	130	1128	6	3	646	39	131	6	67	9	15	36	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	130	1128	6	3	646	39	131	6	67	9	15	36	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.35	0.95	0.95	0.21	0.94	0.94	0.71	0.71	0.85	0.89	0.89	0.89	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.96	0.04	1.00	0.15	0.25	0.60	
Final Sat.:	671	3587	19	401	3374	204	1284	59	1615	253	421	1011	
Capacity Analysis Module:													
Vol/Sat:	0.19	0.31	0.31	0.01	0.19	0.19	0.10	0.10	0.04	0.04	0.04	0.04	
Crit Moves:		****						****					
Green/Cycle:	0.76	0.76	0.76	0.76	0.76	0.76	0.24	0.24	0.24	0.24	0.24	0.24	
Volume/Cap:	0.26	0.42	0.42	0.01	0.25	0.25	0.42	0.42	0.17	0.15	0.15	0.15	
Delay/Veh:	4.0	4.5	4.5	3.0	3.8	3.8	32.6	32.6	29.9	29.7	29.7	29.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	4.0	4.5	4.5	3.0	3.8	3.8	32.6	32.6	29.9	29.7	29.7	29.7	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	7	7	0	3	3	4	4	2	1	1	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	130	0	278	344	417	0	0	266	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	130	0	278	344	417	0	0	266	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	130	0	278	344	417	0	0	266	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	130	0	278	344	417	0	0	266	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	130	0	278	344	417	0	0	266	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.54	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	1.32	0.00	1.68	1.00	2.00	0.00	0.00	1.71	0.29
Final Sat.:	0	0	0	2214	0	2823	1030	3610	0	0	3021	511
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.10	0.33	0.12	0.00	0.00	0.09	0.09
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.23	0.77	0.77	0.00	0.00	0.77	0.77
Volume/Cap:	0.00	0.00	0.00	0.26	0.00	0.43	0.43	0.15	0.00	0.00	0.11	0.11
Delay/Veh:	0.0	0.0	0.0	31.8	0.0	33.4	4.3	3.0	0.0	0.0	2.9	2.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.8	0.0	33.4	4.3	3.0	0.0	0.0	2.9	2.9
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	5	4	2	0	0	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	0	Average Delay (sec/veh):	13.7
Optimal Cycle:	25	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	43	578	16	94	463	42	127	257	88	12	140	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	578	16	94	463	42	127	257	88	12	140	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	43	578	16	94	463	42	127	257	88	12	140	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	578	16	94	463	42	127	257	88	12	140	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	43	578	16	94	463	42	127	257	88	12	140	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.42	1.00	0.85	0.36	1.00	0.85	0.53	0.91	0.91	0.40	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.40	0.60
Final Sat.:	802	1900	1615	676	1900	1615	1000	2586	886	753	2413	1034
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.01	0.14	0.24	0.03	0.13	0.10	0.10	0.02	0.06	0.06
Crit Moves:		****					****					
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.08	0.43	0.01	0.20	0.35	0.04	0.43	0.34	0.34	0.05	0.20	0.20
Delay/Veh:	4.6	6.5	4.4	5.2	5.9	4.5	29.5	27.8	27.8	25.4	26.5	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.6	6.5	4.4	5.2	5.9	4.5	29.5	27.8	27.8	25.4	26.5	26.5
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	8	0	1	6	0	4	4	4	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.487
Loss Time (sec):	0	Average Delay (sec/veh):	21.6
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	23	716	17	89	627	18	58	187	45	45	138	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	716	17	89	627	18	58	187	45	45	138	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	716	17	89	627	18	58	187	45	45	138	211
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	716	17	89	627	18	58	187	45	45	138	211
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	716	17	89	627	18	58	187	45	45	138	211
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.97	0.95	0.91	0.91
Lanes:	1.00	1.95	0.05	1.00	1.94	0.06	1.00	0.81	0.19	1.00	0.40	0.60
Final Sat.:	1805	3514	83	1805	3495	100	1805	1487	358	1805	683	1045
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.20	0.05	0.18	0.18	0.03	0.13	0.13	0.02	0.20	0.20
Crit Moves:		****		****			****				****	
Green/Cycle:	0.03	0.42	0.42	0.10	0.48	0.48	0.40	0.40	0.40	0.08	0.41	0.41
Volume/Cap:	0.37	0.49	0.49	0.49	0.37	0.37	0.18	0.31	0.31	0.31	0.49	0.49
Delay/Veh:	50.9	21.5	21.5	44.5	16.3	16.3	19.9	20.8	20.8	44.7	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.9	21.5	21.5	44.5	16.3	16.3	19.9	20.8	20.8	44.7	22.0	22.0
LOS by Move:	D	C	C	D	B	B	B	C	C	D	C	C
HCM2kAvgQ:	1	9	9	3	7	7	1	5	5	2	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.461
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1
	1	0	0	0	0	0	0	0	1	1	0	1
	0	2	0	0								
Volume Module:												
Base Vol:	154	0	138	0	0	0	0	832	112	104	710	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	0	138	0	0	0	0	832	112	104	710	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	0	138	0	0	0	0	832	112	104	710	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	0	138	0	0	0	0	832	112	104	710	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	0	138	0	0	0	0	832	112	104	710	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	1.00	0.79	1.00	1.00	1.00	1.00	0.93	0.93	0.22	0.95	1.00
Lanes:	0.53	0.00	0.47	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00
Final Sat.:	792	0	710	0	0	0	0	3125	421	417	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.27	0.27	0.25	0.20	0.00
Crit Moves:	****							****				
Green/Cycle:	0.42	0.00	0.42	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.58	0.00
Volume/Cap:	0.46	0.00	0.46	0.00	0.00	0.00	0.00	0.46	0.46	0.43	0.34	0.00
Delay/Veh:	21.3	0.0	21.3	0.0	0.0	0.0	0.0	12.3	12.3	13.1	11.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.3	0.0	21.3	0.0	0.0	0.0	0.0	12.3	12.3	13.1	11.2	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	7	0	7	0	0	0	0	9	9	2	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.499
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	78	0	259	258	617	0	0	561	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	78	0	259	258	617	0	0	561	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	78	0	259	258	617	0	0	561	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	78	0	259	258	617	0	0	561	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	78	0	259	258	617	0	0	561	126
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.63	0.37
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	2867	644
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.16	0.14	0.17	0.00	0.00	0.20	0.20
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.32	0.00	0.32	0.29	0.68	0.00	0.00	0.39	0.39
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.50	0.50	0.25	0.00	0.00	0.50	0.50
Delay/Veh:	0.0	0.0	0.0	23.6	0.0	28.2	30.5	6.3	0.0	0.0	23.3	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.6	0.0	28.2	30.5	6.3	0.0	0.0	23.3	23.3
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	7	7	4	0	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	0	Average Delay (sec/veh):	27.7
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	138	0	277	0	0	225	0	632	206	200	398	274
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	0	277	0	0	225	0	632	206	200	398	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	138	0	277	0	0	225	0	632	206	200	398	274
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	0	277	0	0	225	0	632	206	200	398	274
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	138	0	277	0	0	225	0	632	206	200	398	274
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.17	0.00	0.00	0.14	0.00	0.18	0.13	0.11	0.11	0.17
Crit Moves:			****			****		****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.23	0.00	0.29	0.29	0.19	0.48	0.48
Volume/Cap:	0.14	0.00	0.59	0.00	0.00	0.59	0.00	0.59	0.43	0.59	0.23	0.35
Delay/Veh:	26.4	0.0	32.6	0.0	0.0	36.9	0.0	31.1	29.2	40.1	15.2	16.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.4	0.0	32.6	0.0	0.0	36.9	0.0	31.1	29.2	40.1	15.2	16.5
LOS by Move:	C	A	C	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	8	0	0	7	0	9	5	6	4	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.546
Loss Time (sec):	0	Average Delay (sec/veh):	17.0
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	172	502	31	29	471	36	99	689	237	30	677	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	172	502	31	29	471	36	99	689	237	30	677	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	172	502	31	29	471	36	99	689	237	30	677	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	172	502	31	29	471	36	99	689	237	30	677	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	172	502	31	29	471	36	99	689	237	30	677	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	1.00	0.85	0.30	1.00	0.85	0.27	0.91	0.91	0.19	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.88	0.12
Final Sat.:	616	1900	1615	570	1900	1615	507	2583	888	359	3359	218
Capacity Analysis Module:												
Vol/Sat:	0.28	0.26	0.02	0.05	0.25	0.02	0.20	0.27	0.27	0.08	0.20	0.20
Crit Moves:	****							****				
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.55	0.52	0.04	0.10	0.48	0.04	0.40	0.55	0.55	0.17	0.41	0.41
Delay/Veh:	18.6	16.7	12.2	12.7	16.2	12.2	17.3	18.2	18.2	14.7	16.5	16.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.6	16.7	12.2	12.7	16.2	12.2	17.3	18.2	18.2	14.7	16.5	16.5
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	4	10	0	1	9	1	2	11	11	1	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.648
Loss Time (sec):	0	Average Delay (sec/veh):	21.8
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	299	543	53	45	796	48	61	248	403	83	333	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	299	543	53	45	796	48	61	248	403	83	333	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	299	543	53	45	796	48	61	248	403	83	333	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	299	543	53	45	796	48	61	248	403	83	333	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	299	543	53	45	796	48	61	248	403	83	333	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.42	0.86	0.86	0.25	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.00	1.00	1.00	1.79	0.21
Final Sat.:	1805	3610	1615	1805	3376	204	805	1637	1637	466	3171	381
Capacity Analysis Module:												
Vol/Sat:	0.17	0.15	0.03	0.02	0.24	0.24	0.08	0.15	0.25	0.18	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.62	0.53	0.53	0.45	0.36	0.36	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.53	0.28	0.06	0.10	0.65	0.65	0.20	0.40	0.65	0.47	0.28	0.28
Delay/Veh:	15.4	13.0	11.4	15.5	27.6	27.6	21.1	22.8	27.0	25.3	21.6	21.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.4	13.0	11.4	15.5	27.6	27.6	21.1	22.8	27.0	25.3	21.6	21.6
LOS by Move:	B	B	B	B	C	C	C	C	C	C	C	C
HCM2kAvgQ:	6	5	1	1	12	12	1	6	11	3	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.921
Loss Time (sec):	0	Average Delay (sec/veh):	33.1
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	124	678	226	37	1005	169	108	268	37	600	1328	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	124	678	226	37	1005	169	108	268	37	600	1328	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	124	678	226	37	1005	169	108	268	37	600	1328	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	678	226	37	1005	169	108	268	37	600	1328	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	678	226	37	1005	169	108	268	37	600	1328	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.14	1.00	0.85	0.30	1.00	0.85	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.64	0.36	1.00	3.00	1.00
Final Sat.:	270	1900	1615	569	1900	1615	1805	4475	618	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.46	0.36	0.14	0.07	0.53	0.10	0.06	0.06	0.06	0.33	0.26	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.08	0.07	0.07	0.36	0.35	0.35
Volume/Cap:	0.80	0.62	0.24	0.11	0.92	0.18	0.74	0.92	0.92	0.92	0.74	0.08
Delay/Veh:	41.7	15.2	10.7	9.9	31.7	10.2	63.3	76.6	76.6	49.1	30.5	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.7	15.2	10.7	9.9	31.7	10.2	63.3	76.6	76.6	49.1	30.5	22.1
LOS by Move:	D	B	B	A	C	B	E	E	E	D	C	C
HCM2kAvgQ:	5	14	3	1	32	2	5	6	6	22	14	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	0	Average Delay (sec/veh):	17.8
Optimal Cycle:	97	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	938	0	45	22	396	0	0	1386	862
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	938	0	45	22	396	0	0	1386	862
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	938	0	45	22	396	0	0	1386	862
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	938	0	45	22	396	0	0	1386	862
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	938	0	45	22	396	0	0	1386	862
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.27	0.00	0.03	0.01	0.08	0.00	0.00	0.27	0.53
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.33	0.00	0.33	0.01	0.67	0.00	0.00	0.66	0.66
Volume/Cap:	0.00	0.00	0.00	0.81	0.00	0.08	0.81	0.11	0.00	0.00	0.40	0.81
Delay/Veh:	0.0	0.0	0.0	34.8	0.0	23.0	141.3	6.0	0.0	0.0	7.9	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.8	0.0	23.0	141.3	6.0	0.0	0.0	7.9	17.0
LOS by Move:	A	A	A	C	A	C	F	A	A	A	A	B
HCM2kAvgQ:	0	0	0	16	0	1	1	2	0	0	7	21

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	0	Average Delay (sec/veh):	26.8
Optimal Cycle:	111	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	135	659	3	159	741	57	131	898	191	307	786	156
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	135	659	3	159	741	57	131	898	191	307	786	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	135	659	3	159	741	57	131	898	191	307	786	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	659	3	159	741	57	131	898	191	307	786	156
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	135	659	3	159	741	57	131	898	191	307	786	156
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.20	0.95	0.85	0.27	0.94	0.94	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.86	0.14	1.00	1.65	0.35	1.00	1.67	0.33
Final Sat.:	383	3610	1615	506	3316	255	1805	2899	617	1805	2937	583
Capacity Analysis Module:												
Vol/Sat:	0.35	0.18	0.00	0.31	0.22	0.22	0.07	0.31	0.31	0.17	0.27	0.27
Crit Moves:	****							****		****		
Green/Cycle:	0.42	0.42	0.42	0.42	0.42	0.42	0.12	0.37	0.37	0.45	0.45	0.45
Volume/Cap:	0.83	0.43	0.00	0.74	0.53	0.53	0.59	0.83	0.83	0.69	0.59	0.59
Delay/Veh:	54.7	20.5	16.7	37.4	21.8	21.8	45.6	33.2	33.2	22.5	21.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.7	20.5	16.7	37.4	21.8	21.8	45.6	33.2	33.2	22.5	21.0	21.0
LOS by Move:	D	C	B	D	C	C	D	C	C	C	C	C
HCM2kAvgQ:	6	8	0	6	10	10	5	18	18	9	12	12

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.565
Loss Time (sec):	0	Average Delay (sec/veh):	18.6
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0
Volume Module:												
Base Vol:	157	125	22	198	244	82	106	684	159	41	838	151
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	157	125	22	198	244	82	106	684	159	41	838	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	157	125	22	198	244	82	106	684	159	41	838	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	125	22	198	244	82	106	684	159	41	838	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	125	22	198	244	82	106	684	159	41	838	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.96	0.96	0.19	0.92	0.92	0.24	0.93	0.93
Lanes:	1.00	0.85	0.15	1.00	0.75	0.25	1.00	1.62	0.38	1.00	1.69	0.31
Final Sat.:	1805	1579	278	1805	1368	460	353	2846	662	447	2989	539
Capacity Analysis Module:												
Vol/Sat:	0.09	0.08	0.08	0.11	0.18	0.18	0.30	0.24	0.24	0.09	0.28	0.28
Crit Moves:	****				****		****					
Green/Cycle:	0.35	0.20	0.20	0.47	0.32	0.32	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.35	0.40	0.40	0.31	0.57	0.57	0.57	0.45	0.45	0.17	0.53	0.53
Delay/Veh:	23.6	35.8	35.8	16.4	29.8	29.8	19.7	14.7	14.7	12.5	15.6	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.6	35.8	35.8	16.4	29.8	29.8	19.7	14.7	14.7	12.5	15.6	15.6
LOS by Move:	C	D	D	B	C	C	B	B	B	B	B	B
HCM2kAvgQ:	4	4	4	4	9	9	3	8	8	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.570
Loss Time (sec):	0	Average Delay (sec/veh):	18.0
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	503	119	380	733	3	1	1	1	143	2	294	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	503	119	380	733	3	1	1	1	143	2	294	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	503	119	380	733	3	1	1	1	143	2	294	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	503	119	380	733	3	1	1	1	143	2	294	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	503	119	380	733	3	1	1	1	143	2	294	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.62	0.38	1.00	1.99	0.01	0.33	0.33	0.33	0.99	0.01	1.00	
Final Sat.:	1900	2836	671	1805	3593	15	584	584	584	1383	19	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.18	0.18	0.21	0.20	0.20	0.00	0.00	0.00	0.10	0.10	0.18	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.31	0.31	0.68	0.68	0.68	0.32	0.32	0.32	0.32	0.32	0.32	
Volume/Cap:	0.00	0.57	0.57	0.48	0.30	0.30	0.01	0.01	0.01	0.32	0.32	0.57	
Delay/Veh:	0.0	29.6	29.6	9.2	6.5	6.5	23.2	23.2	23.2	26.3	26.3	29.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	29.6	29.6	9.2	6.5	6.5	23.2	23.2	23.2	26.3	26.3	29.8	
LOS by Move:	A	C	C	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	9	9	6	5	5	0	0	0	4	4	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	0	Average Delay (sec/veh):	28.5
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Protected					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	328	141	29		70	234	36		9	198	304		63	279	28			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	328	141	29		70	234	36		9	198	304		63	279	28			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	328	141	29		70	234	36		9	198	304		63	279	28			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	328	141	29		70	234	36		9	198	304		63	279	28			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	328	141	29		70	234	36		9	198	304		63	279	28			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.92	0.96	0.82		0.92	0.96	0.82		0.43	0.88	0.88		0.92	0.95	0.95			
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.39	0.61		1.00	0.91	0.09			
Final Sat.:	1742	1833	1558		1742	1833	1558		817	657	1009		1742	1643	165			
Capacity Analysis Module:																		
Vol/Sat:	0.19	0.08	0.02		0.04	0.13	0.02		0.01	0.30	0.30		0.04	0.17	0.17			
Crit Moves:	****					****				****			****					
Green/Cycle:	0.29	0.29	0.29		0.20	0.20	0.20		0.46	0.46	0.46		0.06	0.52	0.52			
Volume/Cap:	0.65	0.27	0.06		0.21	0.65	0.12		0.02	0.65	0.65		0.65	0.33	0.33			
Delay/Veh:	34.3	27.7	25.9		34.0	41.4	33.3		14.7	22.8	22.8		61.2	14.3	14.3			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	34.3	27.7	25.9		34.0	41.4	33.3		14.7	22.8	22.8		61.2	14.3	14.3			
LOS by Move:	C	C	C		C	D	C		B	C	C		E	B	B			
HCM2kAvgQ:	10	3	1		2	8	1		0	13	13		3	5	5			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.494
Loss Time (sec):	0	Average Delay (sec/veh):	17.1
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	15	486	134	94	827	14	19	69	10	222	97	58	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	15	486	134	94	827	14	19	69	10	222	97	58	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	15	486	134	94	827	14	19	69	10	222	97	58	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	15	486	134	94	827	14	19	69	10	222	97	58	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	15	486	134	94	827	14	19	69	10	222	97	58	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.21	0.92	0.92	0.31	0.95	0.95	0.91	0.91	0.91	0.76	0.76	0.76	
Lanes:	1.00	1.57	0.43	1.00	1.97	0.03	0.19	0.70	0.10	0.59	0.26	0.15	
Final Sat.:	401	2738	755	588	3541	60	334	1212	176	853	373	223	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.18	0.18	0.16	0.23	0.23	0.06	0.06	0.06	0.26	0.26	0.26	
Crit Moves:					****						****		
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.53	0.53	0.53	0.53	0.53	0.53	
Volume/Cap:	0.08	0.38	0.38	0.34	0.49	0.49	0.11	0.11	0.11	0.49	0.49	0.49	
Delay/Veh:	14.6	17.0	17.0	17.3	18.3	18.3	11.9	11.9	11.9	15.6	15.6	15.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	14.6	17.0	17.0	17.3	18.3	18.3	11.9	11.9	11.9	15.6	15.6	15.6	
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B	
HCM2kAvgQ:	0	6	6	2	9	9	1	1	1	8	8	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.538
Loss Time (sec):	0	Average Delay (sec/veh):	15.6
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	215	304	23	62	470	66	43	159	367	36	242	149
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	215	304	23	62	470	66	43	159	367	36	242	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	215	304	23	62	470	66	43	159	367	36	242	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	304	23	62	470	66	43	159	367	36	242	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	215	304	23	62	470	66	43	159	367	36	242	149
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.36	1.00	0.85	0.49	1.00	0.85	0.46	0.85	0.85	0.36	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	691	1900	1615	922	1900	1615	874	1616	1616	676	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.31	0.16	0.01	0.07	0.25	0.04	0.05	0.10	0.23	0.05	0.13	0.09
Crit Moves:	****								****			
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.42	0.42	0.42	0.42
Volume/Cap:	0.54	0.28	0.02	0.12	0.43	0.07	0.12	0.23	0.54	0.13	0.30	0.22
Delay/Veh:	14.4	10.7	9.0	9.6	12.1	9.3	17.7	18.6	22.2	17.8	19.4	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.4	10.7	9.0	9.6	12.1	9.3	17.7	18.6	22.2	17.8	19.4	18.6
LOS by Move:	B	B	A	A	B	A	B	B	C	B	B	B
HCM2kAvgQ:	5	5	0	1	8	1	1	3	9	1	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	0	Average Delay (sec/veh):	22.4
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Figueroa St						Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	88	405	70	85	980	72	50	291	174	78	180	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	405	70	85	980	72	50	291	174	78	180	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	88	405	70	85	980	72	50	291	174	78	180	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	405	70	85	980	72	50	291	174	78	180	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	405	70	85	980	72	50	291	174	78	180	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.90	0.90	0.90	0.76	0.76	0.76
Lanes:	1.00	1.71	0.29	1.00	1.86	0.14	0.10	0.56	0.34	0.25	0.58	0.16
Final Sat.:	1805	3010	520	1805	3328	245	166	968	579	365	843	234
Capacity Analysis Module:												
Vol/Sat:	0.05	0.13	0.13	0.05	0.29	0.29	0.30	0.30	0.30	0.21	0.21	0.21
Crit Moves:					****			****				
Green/Cycle:	0.08	0.39	0.39	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	0.64	0.34	0.34	0.21	0.64	0.64	0.64	0.64	0.64	0.46	0.46	0.46
Delay/Veh:	55.0	21.3	21.3	16.9	21.8	21.8	22.1	22.1	22.1	18.6	18.6	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.0	21.3	21.3	16.9	21.8	21.8	22.1	22.1	22.1	18.6	18.6	18.6
LOS by Move:	D	C	C	B	C	C	C	C	C	B	B	B
HCM2kAvgQ:	4	5	5	2	14	14	13	13	13	7	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.635
Loss Time (sec):	0	Average Delay (sec/veh):	12.4
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1!	0	0
Volume Module:													
Base Vol:	11	469	151	284	1290	1	8	10	0	142	21	177	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	11	469	151	284	1290	1	8	10	0	142	21	177	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	11	469	151	284	1290	1	8	10	0	142	21	177	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	11	469	151	284	1290	1	8	10	0	142	21	177	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	11	469	151	284	1290	1	8	10	0	142	21	177	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.14	0.92	0.92	0.36	0.95	0.95	0.89	0.89	1.00	0.81	0.81	0.81	
Lanes:	1.00	1.51	0.49	1.00	2.00	0.00	0.44	0.56	0.00	0.42	0.06	0.52	
Final Sat.:	274	2631	847	688	3607	3	751	938	0	639	94	796	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.18	0.18	0.41	0.36	0.36	0.01	0.01	0.00	0.22	0.22	0.22	
Crit Moves:				****							****		
Green/Cycle:	0.65	0.65	0.65	0.65	0.65	0.65	0.35	0.35	0.00	0.35	0.35	0.35	
Volume/Cap:	0.06	0.27	0.27	0.64	0.55	0.55	0.03	0.03	0.00	0.64	0.64	0.64	
Delay/Veh:	6.5	7.5	7.5	13.4	9.8	9.8	21.4	21.4	0.0	29.7	29.7	29.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	6.5	7.5	7.5	13.4	9.8	9.8	21.4	21.4	0.0	29.7	29.7	29.7	
LOS by Move:	A	A	A	B	A	A	C	C	A	C	C	C	
HCM2kAvgQ:	0	4	4	6	11	11	0	0	0	10	10	10	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.417
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	40	57	96	232	191	40	8	167	21	35	94	45	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	40	57	96	232	191	40	8	167	21	35	94	45	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	40	57	96	232	191	40	8	167	21	35	94	45	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	40	57	96	232	191	40	8	167	21	35	94	45	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	40	57	96	232	191	40	8	167	21	35	94	45	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.37	0.63	1.00	0.83	0.17	0.04	0.85	0.11	0.20	0.54	0.26	
Final Sat.:	511	221	371	556	509	107	24	500	63	118	316	151	
Capacity Analysis Module:													
Vol/Sat:	0.08	0.26	0.26	0.42	0.38	0.38	0.33	0.33	0.33	0.30	0.30	0.30	
Crit Moves:		****		****			****				****		
Delay/Veh:	9.9	10.3	10.3	13.2	11.6	11.6	11.4	11.4	11.4	10.9	10.9	10.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	9.9	10.3	10.3	13.2	11.6	11.6	11.4	11.4	11.4	10.9	10.9	10.9	
LOS by Move:	A	B	B	B	B	B	B	B	B	B	B	B	
ApproachDel:		10.2			12.4			11.4			10.9		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		10.2			12.4			11.4			10.9		
LOS by Appr:		B			B			B			B		
AllWayAvgQ:	0.1	0.3	0.3	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
Loss Time (sec):	0	Average Delay (sec/veh):	24.2
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	135	404	103	393	830	26	58	276	383	78	84	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	135	404	103	393	830	26	58	276	383	78	84	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	135	404	103	393	830	26	58	276	383	78	84	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	404	103	393	830	26	58	276	383	78	84	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	135	404	103	393	830	26	58	276	383	78	84	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.65	1.00	0.85	0.42	1.00	0.85
Lanes:	1.00	1.59	0.41	1.00	1.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2789	711	1805	3484	109	1233	1900	1615	802	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.14	0.14	0.22	0.24	0.24	0.05	0.15	0.24	0.10	0.04	0.07
Crit Moves:		****		****					****			
Green/Cycle:	0.14	0.24	0.24	0.46	0.46	0.46	0.40	0.40	0.40	0.40	0.40	0.40
Volume/Cap:	0.52	0.60	0.60	0.54	0.52	0.52	0.12	0.37	0.60	0.25	0.11	0.17
Delay/Veh:	41.4	34.8	34.8	19.4	19.4	19.4	19.3	21.7	25.5	20.7	19.2	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.4	34.8	34.8	19.4	19.4	19.4	19.3	21.7	25.5	20.7	19.2	19.7
LOS by Move:	D	C	C	B	B	B	B	C	C	C	B	B
HCM2kAvgQ:	4	8	8	9	10	10	1	6	10	2	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.464
Loss Time (sec):	0	Average Delay (sec/veh):	6.0
Optimal Cycle:	27	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	85	600	35	44	1161	262	52	29	23	62	76	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	600	35	44	1161	262	52	29	23	62	76	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	600	35	44	1161	262	52	29	23	62	76	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	600	35	44	1161	262	52	29	23	62	76	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	600	35	44	1161	262	52	29	23	62	76	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.17	0.94	0.94	0.39	0.92	0.92	0.56	0.93	0.93	0.56	0.85	0.85
Lanes:	1.00	1.89	0.11	1.00	1.63	0.37	1.00	0.56	0.44	1.00	2.00	1.00
Final Sat.:	320	3383	197	744	2864	646	1059	989	785	1060	3247	1624
Capacity Analysis Module:												
Vol/Sat:	0.27	0.18	0.18	0.06	0.41	0.41	0.05	0.03	0.03	0.06	0.02	0.03
Crit Moves:					****					****		
Green/Cycle:	0.87	0.87	0.87	0.87	0.87	0.87	0.13	0.13	0.13	0.13	0.13	0.13
Volume/Cap:	0.30	0.20	0.20	0.07	0.46	0.46	0.39	0.23	0.23	0.46	0.19	0.25
Delay/Veh:	1.7	1.0	1.0	0.9	1.4	1.4	42.0	39.9	39.9	43.1	39.2	39.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.7	1.0	1.0	0.9	1.4	1.4	42.0	39.9	39.9	43.1	39.2	39.7
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	1	2	2	0	5	5	2	2	2	2	1	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.838
Loss Time (sec):	0	Average Delay (sec/veh):	38.9
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Figueroa St						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	312	333	214	305	1207	51	13	937	224	201	619	129
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	312	333	214	305	1207	51	13	937	224	201	619	129
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	312	333	214	305	1207	51	13	937	224	201	619	129
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	333	214	305	1207	51	13	937	224	201	619	129
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	312	333	214	305	1207	51	13	937	224	201	619	129
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.61	0.39	1.00	1.66	0.34
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2829	676	1805	2910	606
Capacity Analysis Module:												
Vol/Sat:	0.17	0.09	0.13	0.17	0.33	0.03	0.01	0.33	0.33	0.11	0.21	0.21
Crit Moves:	****				****			****				
Green/Cycle:	0.42	0.23	0.23	0.53	0.35	0.35	0.35	0.35	0.35	0.12	0.45	0.45
Volume/Cap:	0.77	0.39	0.56	0.44	0.95	0.09	0.13	0.95	0.95	0.95	0.47	0.47
Delay/Veh:	29.4	32.6	35.7	14.0	46.4	21.7	25.0	47.0	47.0	91.4	19.4	19.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.4	32.6	35.7	14.0	46.4	21.7	25.0	47.0	47.0	91.4	19.4	19.4
LOS by Move:	C	C	D	B	D	C	C	D	D	F	B	B
HCM2kAvgQ:	10	5	6	6	24	1	0	23	23	10	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.384
Loss Time (sec):	0	Average Delay (sec/veh):	17.7
Optimal Cycle:	30	Level Of Service:	B

Street Name:	I-5 NB off-ramp									Ave 26								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Permitted					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1!	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	326	30	30		23	0	92		78	609	0		0	710	22			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	326	30	30		23	0	92		78	609	0		0	710	22			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	326	30	30		23	0	92		78	609	0		0	710	22			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	326	30	30		23	0	92		78	609	0		0	710	22			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	326	30	30		23	0	92		78	609	0		0	710	22			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.95	0.95	0.95		0.95	1.00	0.85		0.28	0.95	1.00		1.00	0.95	0.95			
Lanes:	1.73	0.13	0.13		1.00	0.00	1.00		1.00	2.00	0.00		0.00	1.94	0.06			
Final Sat.:	3119	242	242		1805	0	1615		528	3610	0		0	3486	108			
Capacity Analysis Module:																		
Vol/Sat:	0.10	0.12	0.12		0.01	0.00	0.06		0.15	0.17	0.00		0.00	0.20	0.20			
Crit Moves:		****					****							****				
Green/Cycle:	0.32	0.32	0.32		0.15	0.00	0.15		0.53	0.53	0.00		0.00	0.53	0.53			
Volume/Cap:	0.32	0.38	0.38		0.09	0.00	0.38		0.28	0.32	0.00		0.00	0.38	0.38			
Delay/Veh:	25.8	26.5	26.5		36.9	0.0	39.5		13.5	13.4	0.0		0.0	14.0	14.0			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	25.8	26.5	26.5		36.9	0.0	39.5		13.5	13.4	0.0		0.0	14.0	14.0			
LOS by Move:	C	C	C		D	A	D		B	B	A		A	B	B			
HCM2kAvgQ:	4	5	5		1	0	3		2	6	0		0	7	7			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.701
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	89	259	49	82	397	104	86	939	137	81	1712	116
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	259	49	82	397	104	86	939	137	81	1712	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	259	49	82	397	104	86	939	137	81	1712	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	259	49	82	397	104	86	939	137	81	1712	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	259	49	82	397	104	86	939	137	81	1712	116
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.23	0.93	0.93	0.40	0.92	0.92	0.09	0.89	0.89	0.23	0.90	0.90
Lanes:	1.00	1.68	0.32	1.00	1.58	0.42	1.00	2.62	0.38	1.00	2.81	0.19
Final Sat.:	434	2963	561	752	2772	726	173	4440	648	437	4812	326
Capacity Analysis Module:												
Vol/Sat:	0.21	0.09	0.09	0.11	0.14	0.14	0.50	0.21	0.21	0.19	0.36	0.36
Crit Moves:	****						****					
Green/Cycle:	0.29	0.29	0.29	0.29	0.29	0.29	0.71	0.71	0.71	0.71	0.71	0.71
Volume/Cap:	0.70	0.30	0.30	0.37	0.49	0.49	0.70	0.30	0.30	0.26	0.50	0.50
Delay/Veh:	47.6	27.6	27.6	29.1	29.6	29.6	25.1	5.5	5.5	5.7	6.8	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.6	27.6	27.6	29.1	29.6	29.6	25.1	5.5	5.5	5.7	6.8	6.8
LOS by Move:	D	C	C	C	C	C	C	A	A	A	A	A
HCM2kAvgQ:	4	4	4	2	7	7	3	4	4	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.389
Loss Time (sec):	0	Average Delay (sec/veh):	11.4
Optimal Cycle:	24	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	26	349	30	0	0	0	72	186	0	0	784	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	349	30	0	0	0	72	186	0	0	784	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	349	30	0	0	0	72	186	0	0	784	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	349	30	0	0	0	72	186	0	0	784	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	349	30	0	0	0	72	186	0	0	784	179
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	1.00	1.00	1.00	0.25	0.95	1.00	1.00	0.92	0.92
Lanes:	0.13	1.72	0.15	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.63	0.37
Final Sat.:	227	3047	262	0	0	0	474	3610	0	0	2857	652
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.00	0.00	0.00	0.15	0.05	0.00	0.00	0.27	0.27
Crit Moves:		****									****	
Green/Cycle:	0.29	0.29	0.29	0.00	0.00	0.00	0.71	0.71	0.00	0.00	0.71	0.71
Volume/Cap:	0.39	0.39	0.39	0.00	0.00	0.00	0.22	0.07	0.00	0.00	0.39	0.39
Delay/Veh:	28.3	28.3	28.3	0.0	0.0	0.0	5.4	4.6	0.0	0.0	6.1	6.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.3	28.3	28.3	0.0	0.0	0.0	5.4	4.6	0.0	0.0	6.1	6.1
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	5	5	0	0	0	1	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.268
Loss Time (sec):	0	Average Delay (sec/veh):	10.5
Optimal Cycle:	20	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 1	0 1	1	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	35	108	225	0	202	118	125	693	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	35	108	225	0	202	118	125	693	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	35	108	225	0	202	118	125	693	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	35	108	225	0	202	118	125	693	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	35	108	225	0	202	118	125	693	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.90	0.90	0.53	0.95	1.00
Lanes:	0.00	0.00	0.00	0.29	0.88	1.83	0.00	1.26	0.74	1.00	2.00	0.00
Final Sat.:	0	0	0	461	1423	2964	0	2153	1258	1009	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.08	0.08	0.00	0.09	0.09	0.12	0.19	0.00
Crit Moves:					****						****	
Green/Cycle:	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.72	0.72	0.72	0.72	0.00
Volume/Cap:	0.00	0.00	0.00	0.27	0.27	0.27	0.00	0.13	0.13	0.17	0.27	0.00
Delay/Veh:	0.0	0.0	0.0	27.9	27.9	27.9	0.0	4.5	4.5	4.7	5.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.9	27.9	27.9	0.0	4.5	4.5	4.7	5.0	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	3	3	0	2	2	1	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 178.2 Worst Case Level Of Service: F[2921.1]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			569	1356			0	138		0		0	0		0		238
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	0	0			569	1356			0	138		0		0	0		0		238
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	0	0			569	1356			0	138		0		0	0		0		238
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			569	1356			0	138		0		0	0		0		238
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2494		2494	xxxxx		1816		2494		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			20		29	xxxxx		61		29		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			11		19	xxxxx		45		19		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.35	xxxx	xxxx			12.09		0.00	xxxx		0.00		0.00		0.22
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.6	xxxx	xxxxx			9.8		xxxx	xxxxx		xxxx		xxxx		0.4
Control Del:	xxxxx	xxxx	xxxxx			8.4	xxxx	xxxxx			2921		xxxx	xxxxx		xxxxx		xxxx		8.7
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			11		xxxx	xxxxx		xxxx		1091		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			5.8		xxxx	xxxxx		xxxxx		0.4		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			2921		xxxx	xxxxx		xxxxx		8.7		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					2921.1					8.7				
ApproachLOS:	*					*					F					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.663
Loss Time (sec):	0	Average Delay (sec/veh):	23.2
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	46	220	346	418	372	14	106	357	94	142	179	157
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	220	346	418	372	14	106	357	94	142	179	157
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	220	346	418	372	14	106	357	94	142	179	157
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	220	346	418	372	14	106	357	94	142	179	157
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	220	346	418	372	14	106	357	94	142	179	157
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	1.00	0.85	0.43	0.92	0.92	0.34	0.88	0.88
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.58	0.42	1.00	1.07	0.93
Final Sat.:	1805	1639	1639	1805	1900	1615	811	2768	729	644	1788	1569
Capacity Analysis Module:												
Vol/Sat:	0.03	0.13	0.21	0.23	0.20	0.01	0.13	0.13	0.13	0.22	0.10	0.10
Crit Moves:			****	****						****		
Green/Cycle:	0.08	0.32	0.32	0.59	0.59	0.59	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.33	0.42	0.66	0.57	0.33	0.01	0.39	0.39	0.39	0.66	0.30	0.30
Delay/Veh:	45.1	27.1	31.4	14.1	10.6	8.5	26.6	25.8	25.8	36.2	24.9	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.1	27.1	31.4	14.1	10.6	8.5	26.6	25.8	25.8	36.2	24.9	24.9
LOS by Move:	D	C	C	B	B	A	C	C	C	D	C	C
HCM2kAvgQ:	2	6	11	9	6	0	3	6	6	5	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.707
Loss Time (sec):	0	Average Delay (sec/veh):	20.5
Optimal Cycle:	49	Level Of Service:	C

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	1 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	6	469	46	163	603	540	149	125	9	69	763	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	469	46	163	603	540	149	125	9	69	763	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	469	46	163	603	540	149	125	9	69	763	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	469	46	163	603	540	149	125	9	69	763	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	469	46	163	603	540	149	125	9	69	763	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.99	0.99	0.26	1.00	0.85	0.21	0.94	0.94	0.86	0.86	0.86
Lanes:	1.00	0.91	0.09	1.00	1.00	1.00	1.00	1.87	0.13	0.15	1.68	0.17
Final Sat.:	362	1707	167	494	1900	1615	400	3334	240	248	2740	284
Capacity Analysis Module:												
Vol/Sat:	0.02	0.27	0.27	0.33	0.32	0.33	0.37	0.04	0.04	0.28	0.28	0.28
Crit Moves:						****	****					
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.04	0.58	0.58	0.70	0.67	0.71	0.71	0.07	0.07	0.53	0.53	0.53
Delay/Veh:	14.2	20.1	20.1	29.6	22.3	23.9	28.3	11.6	11.6	15.8	15.8	15.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.2	20.1	20.1	29.6	22.3	23.9	28.3	11.6	11.6	15.8	15.8	15.8
LOS by Move:	B	C	C	C	C	C	C	B	B	B	B	B
HCM2kAvgQ:	0	12	12	5	15	14	5	1	1	10	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.791
Loss Time (sec):	0	Average Delay (sec/veh):	19.8
Optimal Cycle:	69	Level Of Service:	B

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	146	285	29	196	451	392	28	471	198	64	1164	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	285	29	196	451	392	28	471	198	64	1164	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	285	29	196	451	392	28	471	198	64	1164	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	285	29	196	451	392	28	471	198	64	1164	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	146	285	29	196	451	392	28	471	198	64	1164	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.21	0.94	0.94	0.49	0.88	0.88	0.75	0.75	0.75	0.83	0.83	0.83
Lanes:	1.00	1.82	0.18	1.00	1.07	0.93	0.08	1.35	0.57	0.10	1.76	0.14
Final Sat.:	395	3231	329	936	1797	1562	115	1934	813	152	2763	226
Capacity Analysis Module:												
Vol/Sat:	0.37	0.09	0.09	0.21	0.25	0.25	0.24	0.24	0.24	0.42	0.42	0.42
Crit Moves:	****										****	
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.79	0.19	0.19	0.45	0.54	0.54	0.46	0.46	0.46	0.79	0.79	0.79
Delay/Veh:	42.7	15.6	15.6	18.7	19.3	19.3	14.7	14.7	14.7	21.5	21.5	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	15.6	15.6	18.7	19.3	19.3	14.7	14.7	14.7	21.5	21.5	21.5
LOS by Move:	D	B	B	B	B	B	B	B	B	C	C	C
HCM2kAvgQ:	6	3	3	4	10	10	7	7	7	19	19	19

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 42.4 Worst Case Level Of Service: F[483.3]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	99	1	123	0	610	0	2	1703	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	2	99	1	123	0	610	0	2	1703	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	2	99	1	123	0	610	0	2	1703	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	2	99	1	123	0	610	0	2	1703	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	305	2012	2317	852	xxxx	xxxx	xxxxx	610	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	697	35	38	307	xxxx	xxxx	xxxxx	979	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	697	35	38	307	xxxx	xxxx	xxxxx	979	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	0.00	2.81	0.03	0.40	xxxx	xxxx	xxxx	0.00	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	11.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	10.2	1056	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx								
LOS by Move:	*	*	B	F	*	*	*	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	291	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	2.0	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	26.3	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	D	*	*	*	A	*	*								
ApproachDel:	10.2			483.3			xxxxxx			xxxxxx										
ApproachLOS:	B			F			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.892
Loss Time (sec):	0	Average Delay (sec/veh):	794.9
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1835	289	450	0	0	890	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1835	289	450	0	0	890	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1835	289	450	0	0	890	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1835	289	450	0	0	890	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1835	289	450	0	0	890	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.17	1.83	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2077	3234	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.14	0.14	0.00	0.00	0.25	0.00
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.28	0.28
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	4.14	0.89	0.89	0.00	0.00	0.89	0.02
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1460	53.3	53.3	0.0	0.0	45.0	26.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1460	53.3	53.3	0.0	0.0	45.0	26.3
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	129	11	11	0	0	17	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	13	222	6	90	1501	64	56	191	87	108	288	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	222	6	90	1501	64	56	191	87	108	288	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	222	6	90	1501	64	56	191	87	108	288	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	222	6	90	1501	64	56	191	87	108	288	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	222	6	90	1501	64	56	191	87	108	288	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.11	0.95	0.95	0.59	0.94	0.94	0.72	0.72	0.72	0.69	0.69	0.69
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.34	1.14	0.52	0.50	1.32	0.18
Final Sat.:	209	3501	95	1113	3441	147	458	1564	712	649	1732	235
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.06	0.08	0.44	0.44	0.12	0.12	0.12	0.17	0.17	0.17
Crit Moves:					****						****	
Green/Cycle:	0.72	0.72	0.72	0.72	0.72	0.72	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.09	0.09	0.09	0.11	0.60	0.60	0.44	0.44	0.44	0.60	0.60	0.60
Delay/Veh:	4.3	4.1	4.1	4.2	7.2	7.2	30.3	30.3	30.3	32.9	32.9	32.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.3	4.1	4.1	4.2	7.2	7.2	30.3	30.3	30.3	32.9	32.9	32.9
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	13	13	5	5	5	7	7	7

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.906
Loss Time (sec):	0	Average Delay (sec/veh):	34.9
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	86	545	673	53	748	62	39	463	399	585	312	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	545	673	53	748	62	39	463	399	585	312	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	86	545	673	53	748	62	39	463	0	585	312	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	545	673	53	748	62	39	463	0	585	312	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	86	545	673	53	748	62	39	463	0	585	312	27
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.83	0.83	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.94	0.94
Lanes:	1.00	2.00	1.00	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.84	0.16
Final Sat.:	1805	3171	1585	1805	4732	392	1805	3610	1900	1805	3283	284
Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.42	0.03	0.16	0.16	0.02	0.13	0.00	0.32	0.10	0.10
Crit Moves:			****	****				****		****		
Green/Cycle:	0.12	0.47	0.47	0.03	0.38	0.38	0.09	0.14	0.00	0.36	0.41	0.41
Volume/Cap:	0.41	0.37	0.91	0.91	0.41	0.41	0.23	0.91	0.00	0.91	0.23	0.23
Delay/Veh:	42.3	17.1	33.6	132.5	22.6	22.6	42.8	62.0	0.0	47.0	19.5	19.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.3	17.1	33.6	132.5	22.6	22.6	42.8	62.0	0.0	47.0	19.5	19.5
LOS by Move:	D	B	C	F	C	C	D	E	A	D	B	B
HCM2kAvgQ:	3	6	25	4	7	7	1	11	0	21	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 8.0 Worst Case Level Of Service: A[9.4]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0			164	0		8		0		13	0		0		17	0	
Growth Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00		1.00	1.00		1.00		1.00	1.00	
Initial Bse:	0	0	0			164	0		8		0		13	0		0		17	0	
User Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00		1.00	1.00		1.00		1.00	1.00	
PHF Adj:	1.00	1.00	1.00			1.00	1.00		1.00		1.00		1.00	1.00		1.00		1.00	1.00	
PHF Volume:	0	0	0			164	0		8		0		13	0		0		17	0	
Reduct Vol:	0	0	0			0	0		0		0		0	0		0		0	0	
FinalVolume:	0	0	0			164	0		8		0		13	0		0		17	0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5		6.2		xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0		3.3		xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			30	30		17		xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx			989	867		1068		xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx			989	867		1068		xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx			0.17	0.00		0.01		xxxx	xxxx	xxxx	xxxx		xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx		xxxxx		xxxx	xxxx	xxxxx	xxxx		xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx		xxxxx		xxxxx	xxxx	xxxxx	xxxxx		xxxx	xxxxx			
LOS by Move:	*	*	*			*	*		*		*	*	*	*		*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx		993		xxxxx	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx		0.6		xxxxx	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx		9.4		xxxxx	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*		A		*	*	*	*			*	*	*		
ApproachDel:	xxxxxx							9.4					xxxxxx					xxxxxx		
ApproachLOS:		*						A					*					*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.384
Loss Time (sec):	0	Average Delay (sec/veh):	11.6
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	226	1014	97	11	647	216	0	0	0	182	42	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	226	1014	97	11	647	216	0	0	0	182	42	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	226	1014	97	11	647	216	0	0	0	182	42	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	1014	97	11	647	216	0	0	0	182	42	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	226	1014	97	11	647	216	0	0	0	182	42	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.90	0.90	0.85
Lanes:	2.00	1.83	0.17	1.00	2.00	1.00	0.00	0.00	0.00	1.63	0.38	1.00
Final Sat.:	3502	3252	311	1805	3610	1615	0	0	0	2766	638	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.31	0.31	0.01	0.18	0.13	0.00	0.00	0.00	0.07	0.07	0.02
Crit Moves:		****		****						****		
Green/Cycle:	0.22	0.81	0.81	0.02	0.61	0.61	0.00	0.00	0.00	0.17	0.17	0.17
Volume/Cap:	0.29	0.38	0.38	0.38	0.29	0.22	0.00	0.00	0.00	0.38	0.38	0.14
Delay/Veh:	32.8	2.6	2.6	57.1	9.4	8.9	0.0	0.0	0.0	37.2	37.2	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.8	2.6	2.6	57.1	9.4	8.9	0.0	0.0	0.0	37.2	37.2	35.4
LOS by Move:	C	A	A	E	A	A	A	A	A	D	D	D
HCM2kAvgQ:	3	5	5	1	5	3	0	0	0	3	3	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.550
Loss Time (sec):	0	Average Delay (sec/veh):	23.5
Optimal Cycle:	41	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	787	18	0	836	0	271	338	175	8	0	276
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	787	18	0	836	0	271	338	175	8	0	276
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	787	18	0	836	0	271	338	175	8	0	276
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	787	18	0	836	0	271	338	175	8	0	276
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	787	18	0	836	0	271	338	175	8	0	276
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.90	0.90	0.90	0.85	1.00	0.85
Lanes:	0.00	2.93	0.07	0.00	2.00	0.00	0.69	0.86	0.45	0.05	0.00	1.95
Final Sat.:	0	5054	116	0	3610	0	1186	1479	766	89	0	3153
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.00	0.23	0.00	0.23	0.23	0.23	0.09	0.00	0.09
Crit Moves:					****		****			****		
Green/Cycle:	0.00	0.42	0.42	0.00	0.42	0.00	0.42	0.42	0.42	0.16	0.00	0.16
Volume/Cap:	0.00	0.37	0.37	0.00	0.55	0.00	0.55	0.55	0.55	0.55	0.00	0.53
Delay/Veh:	0.0	20.0	20.0	0.0	22.3	0.0	22.6	22.6	22.6	39.7	0.0	39.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	20.0	20.0	0.0	22.3	0.0	22.6	22.6	22.6	39.7	0.0	39.4
LOS by Move:	A	B	B	A	C	A	C	C	C	D	A	D
HCM2kAvgQ:	0	6	6	0	10	0	10	10	10	5	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.460
Loss Time (sec):	0	Average Delay (sec/veh):	16.8
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	176	964	0	0	284	602	0	0	0	247	0	23	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	964	0	0	284	602	0	0	0	247	0	23	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	964	0	0	284	0	0	0	0	247	0	23	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	964	0	0	284	0	0	0	0	247	0	23	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	964	0	0	284	0	0	0	0	247	0	23	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	1.00	0.74	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.91	0.00	0.09	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1280	0	119	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.27	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.19	0.00	0.19	
Crit Moves:		****								****			
Green/Cycle:	0.44	0.68	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.32	0.00	0.32	
Volume/Cap:	0.22	0.39	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.61	0.00	0.61	
Delay/Veh:	17.6	6.9	0.0	0.0	35.8	0.0	0.0	0.0	0.0	31.4	0.0	31.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	17.6	6.9	0.0	0.0	35.8	0.0	0.0	0.0	0.0	31.4	0.0	31.4	
LOS by Move:	B	A	A	A	D	A	A	A	A	C	A	C	
HCM2kAvgQ:	3	7	0	0	8	0	0	0	0	8	0	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.629
Loss Time (sec):	0	Average Delay (sec/veh):	24.6
Optimal Cycle:	73	Level Of Service:	C

Street Name:	Orange Grove Bl							ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0	
Volume Module:													
Base Vol:	0	306	101	24	505	0	832	4	169	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	306	101	24	505	0	832	4	169	0	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	306	101	24	505	0	832	4	169	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	306	101	24	505	0	832	4	169	0	0	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	306	101	24	505	0	832	4	169	0	0	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	
Lanes:	0.00	1.50	0.50	1.00	1.00	0.00	1.71	0.01	0.29	0.00	0.00	0.00	
Final Sat.:	0	2613	863	1805	1900	0	2768	11	465	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.12	0.12	0.01	0.27	0.00	0.30	0.36	0.36	0.00	0.00	0.00	
Crit Moves:					****			****					
Green/Cycle:	0.00	0.16	0.16	0.36	0.51	0.00	0.49	0.49	0.49	0.00	0.00	0.00	
Volume/Cap:	0.00	0.75	0.75	0.04	0.52	0.00	0.62	0.75	0.75	0.00	0.00	0.00	
Delay/Veh:	0.0	45.8	45.8	21.0	16.6	0.0	19.6	23.0	23.0	0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	45.8	45.8	21.0	16.6	0.0	19.6	23.0	23.0	0.0	0.0	0.0	
LOS by Move:	A	D	D	C	B	A	B	C	C	A	A	A	
HCM2kAvgQ:	0	8	8	0	10	0	11	16	16	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: A[8.6]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	19		0		0	0		34		9	5		0		27	0		0		0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19		0		0	0		34		9	5		0		27	0		0		0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19		0		0	0		34		9	5		0		27	0		0		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	19		0		0	0		34		9	5		0		27	0		0		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4		6.5		6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5		4.0		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	43	xxxx	xxxxx	xxxx	xxxx	xxxxx					77		77		39	xxxx	xxxx	xxxxx		
Potent Cap.:	1579	xxxx	xxxxx	xxxx	xxxx	xxxxx					932		818		1039	xxxx	xxxx	xxxxx		
Move Cap.:	1579	xxxx	xxxxx	xxxx	xxxx	xxxxx					923		808		1039	xxxx	xxxx	xxxxx		
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx					0.01		0.00		0.03	xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*	*	*	*					*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	1019	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.1	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.6	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*					*	A	*			*	*	*		
ApproachDel:	xxxxxx			xxxxxx							8.6					xxxxxx				
ApproachLOS:	*			*							A					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[11.7]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	9	3	1	36	3	8	4	91	13	12	252	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	3	1	36	3	8	4	91	13	12	252	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	3	1	36	3	8	4	91	13	12	252	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	1	36	3	8	4	91	13	12	252	21
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	398	403	98	394	399	263	273	xxxx	xxxxx	104	xxxx	xxxxx
Potent Cap.:	566	540	964	569	542	781	1302	xxxx	xxxxx	1500	xxxx	xxxxx
Move Cap.:	553	534	964	561	536	781	1302	xxxx	xxxxx	1500	xxxx	xxxxx
Volume/Cap:	0.02	0.01	0.00	0.06	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	567	xxxxx	xxxx	588	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.5	xxxxx	xxxxx	11.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			11.7			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 249.2 Worst Case Level Of Service: F[798.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	647	0	275			0	0	0			0	151	0			0	254	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	647	0	275			0	0	0			0	151	0			0	254	0		
User Adj:	1.00	1.00	0.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	0.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	647	0	0			0	0	0			0	151	0			0	254	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	647	0	0			0	0	0			0	151	0			0	254	0		
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				6.5	xxxxx	xxxxx			6.5	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				4.0	xxxxx	xxxxx			4.0	xxxxx			
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		1294	xxxxx		xxxx		1294	xxxxx			
Potent Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		164	xxxxx		xxxx		164	xxxxx			
Move Cap.:	1636	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		99	xxxxx		xxxx		99	xxxxx			
Volume/Cap:	0.40	xxxx	xxxx		xxxx	xxxx	xxxx		xxxx		1.52	xxxx		xxxx		2.56	xxxx			
Level Of Service Module:																				
2Way95thQ:	1.9	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		11.4	xxxxx		xxxx		23.4	xxxxx			
Control Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx				355	xxxxx	xxxxx			799	xxxxx			
LOS by Move:	A	*	*	*	*	*	*				F	*	*			F	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	xxxxx		xxxx		xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx			
Shared LOS:	*	*	*		*	*	*		*		*	*		*		*	*			
ApproachDel:	xxxxxx				xxxxxx						355.5					798.8				
ApproachLOS:	*				*						F					F				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.630
Loss Time (sec):	0	Average Delay (sec/veh):	13.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	La Riba Wy						Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	150	0	16	0	0	0	0	330	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	150	0	16	0	0	0	0	330	208
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	150	0	16	0	0	0	0	330	208
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	150	0	16	0	0	0	0	330	208
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	150	0	16	0	0	0	0	330	208
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61	0.39
Final Sat.:	0	0	0	556	0	683	0	0	0	0	524	330
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.27	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	0.63	0.63
Crit Moves:				****							****	
Delay/Veh:	0.0	0.0	0.0	10.9	0.0	7.7	0.0	0.0	0.0	0.0	13.7	13.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.9	0.0	7.7	0.0	0.0	0.0	0.0	13.7	13.7
LOS by Move:	*	*	*	B	*	A	*	*	*	*	B	B
ApproachDel:	xxxxxx			10.6			xxxxxx			13.7		
Delay Adj:	xxxxx			1.00			xxxxx			1.00		
ApprAdjDel:	xxxxxx			10.6			xxxxxx			13.7		
LOS by Appr:	*			B			*			B		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[13.3]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	8	0	68	84	342	0	0	452	83								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	8	0	68	84	342	0	0	452	83								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	8	0	68	84	342	0	0	452	83								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	8	0	68	84	342	0	0	452	83								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1004	1004	494	535	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	271	244	580	1043	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	254	224	580	1043	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.03	0.00	0.12	0.08	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	511	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				13.3		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	8.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St							
Approach:	North Bound				South Bound			East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R	L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign			Stop Sign				Yield Sign			
Rights:	Include				Include			Include				Include			
Lanes:	1 0	0	0	0	0 0	0	0 1	0 0	1!	0	0	0 0	1	0	0
Volume Module:															
Base Vol:	6	0	0	0	0	8	8	150	11	0	88	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	6	0	0	0	0	8	8	150	11	0	88	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	6	0	0	0	0	8	8	150	11	0	88	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	6	0	0	0	0	8	8	150	11	0	88	0			
Saturation Flow Module:															
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0			
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Lanes:	1.00	0.00	0.00	0.00	0.00	1.00	0.05	0.89	0.07	0.00	1.00	0.00			
Final Sat.:	346	0	0	0	0	1	47	882	65	0	903	0			
Capacity Analysis Module:															
Vol/Sat:	0.02	0.00	0.00	0.00	0.00	8.00	0.17	0.17	0.17	0.00	0.10	0.00			
Crit Moves:	****					****	****				****				
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Volume/Cap:	0.02	0.00	0.00	0.00	0.00	8.00	0.17	0.17	0.17	0.00	0.10	0.00			
Delay/Veh:	1.1	0.0	0.0	0.0	0.0	xxxxx	1.9	1.9	1.9	0.0	1.4	0.0			
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	1.1	0.0	0.0	0.0	0.0	xxxxx	1.9	1.9	1.9	0.0	1.4	0.0			
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: C[17.5]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 1	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	66	0	380	0	0	0	15	267	0	0	524	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	0	380	0	0	0	15	267	0	0	524	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	0	380	0	0	0	15	267	0	0	524	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	66	0	380	0	0	0	15	267	0	0	524	71
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	857	892	134	xxxx	xxxx	xxxxx	595	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	331	283	921	xxxx	xxxx	xxxxx	991	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	327	279	921	xxxx	xxxx	xxxxx	991	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.20	0.00	0.41	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	726	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.3	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	17.5	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	*	*	*
ApproachDel:		17.5		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C		*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 4.5 Worst Case Level Of Service: B[13.1]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		332		4			34	0		0		0		0		252
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		332		4			34	0		0		0		0		252
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		332		4			34	0		0		0		0		252
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		332		4			34	0		0		0		0		252
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			334	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			623	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			479	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.07	xxxx		xxxx		xxxx		xxxx		0.23
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			0.2	xxxx		xxxxx		xxxx		xxxx		0.9
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			13.1	xxxx		xxxxx		xxxxx		xxxx		9.3
LOS by Move:	*	*	*	*		*		*			B	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							13.1							9.3		
ApproachLOS:	*			*							B							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.526
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	153	11	142	12	266	228	22	558	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	153	11	142	12	266	228	22	558	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	153	11	142	12	266	228	22	558	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	153	11	142	12	266	228	22	558	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	153	11	142	12	266	228	22	558	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.50	0.04	0.46	0.04	0.96	1.00	0.07	1.87	0.06
Final Sat.:	0	451	0	291	21	270	24	540	634	43	1087	33
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.53	0.53	0.53	0.49	0.49	0.36	0.52	0.51	0.51
Crit Moves:		****			****			****		****		
Delay/Veh:	0.0	0.0	0.0	14.9	14.9	14.9	14.6	14.6	11.1	15.0	14.8	14.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	14.9	14.9	14.9	14.6	14.6	11.1	15.0	14.8	14.7
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			14.9			13.0			14.8		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			14.9			13.0			14.8		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	1.0	1.0	1.0	0.9	0.9	0.5	1.0	1.0	1.0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.668
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP NB Exit 28A									Ave 52								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0			
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	409	0	1		0	0	0		159	255	0		0	194	15			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	409	0	1		0	0	0		159	255	0		0	194	15			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	409	0	1		0	0	0		159	255	0		0	194	15			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	409	0	1		0	0	0		159	255	0		0	194	15			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	409	0	1		0	0	0		159	255	0		0	194	15			
Saturation Flow Module:																		
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	1.00	0.00	0.00		0.00	0.00	0.00		0.38	0.62	0.00		0.00	0.93	0.07			
Final Sat.:	612	0	1		0	0	0		244	392	0		0	555	43			
Capacity Analysis Module:																		
Vol/Sat:	0.67	xxxx	0.67	xxxx	xxxx	xxxx	0.65	0.65	xxxx	xxxx	0.35	0.35						
Crit Moves:	****						****				****							
Delay/Veh:	18.4	0.0	18.4	0.0	0.0	0.0	17.5	17.5	0.0	0.0	11.4	11.4						
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
AdjDel/Veh:	18.4	0.0	18.4	0.0	0.0	0.0	17.5	17.5	0.0	0.0	11.4	11.4						
LOS by Move:	C	*	C	*	*	*	C	C	*	*	B	B						
ApproachDel:	18.4			xxxxxx			17.5			11.4								
Delay Adj:	1.00			xxxxx			1.00			1.00								
ApprAdjDel:	18.4			xxxxxx			17.5			11.4								
LOS by Appr:	C			*			C			B								
AllWayAvgQ:	1.7	1.7	1.7	0.0	0.0	0.0	1.6	1.6	1.6	0.5	0.5	0.5						

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.587
Loss Time (sec):	0	Average Delay (sec/veh):	12.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP SB Exit 27/Carlota Bl						Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	15	31	14	4	11	66	163	112	37	37	386	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	31	14	4	11	66	163	112	37	37	386	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	31	14	4	11	66	163	112	37	37	386	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	31	14	4	11	66	163	112	37	37	386	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	31	14	4	11	66	163	112	37	37	386	25
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.25	0.52	0.23	0.05	0.14	0.81	0.52	0.36	0.12	0.08	0.86	0.06
Final Sat.:	141	292	132	30	83	497	379	261	86	63	657	43
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.13	0.13	0.13	0.43	0.43	0.43	0.59	0.59	0.59
Crit Moves:		****		****				****			****	
Delay/Veh:	9.2	9.2	9.2	8.9	8.9	8.9	11.2	11.2	11.2	13.7	13.7	13.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.2	9.2	9.2	8.9	8.9	8.9	11.2	11.2	11.2	13.7	13.7	13.7
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	9.2			8.9			11.2			13.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.2			8.9			11.2			13.7		
LOS by Appr:	A			A			B			B		
AllWayAvgQ:	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.7	0.7	1.3	1.3	1.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.374
Loss Time (sec):	0	Average Delay (sec/veh):	9.9
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	229	26	55	1	2	3	8	50	71	37	122	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	229	26	55	1	2	3	8	50	71	37	122	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	229	26	55	1	2	3	8	50	71	37	122	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	26	55	1	2	3	8	50	71	37	122	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	229	26	55	1	2	3	8	50	71	37	122	13
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.65	0.35	0.17	0.33	0.50	0.06	0.39	0.55	0.22	0.71	0.08
Final Sat.:	613	453	249	115	230	344	46	287	408	152	503	54
Capacity Analysis Module:												
Vol/Sat:	0.37	0.06	0.22	0.01	0.01	0.01	0.17	0.17	0.17	0.24	0.24	0.24
Crit Moves:	****			****				****		****		
Delay/Veh:	11.6	8.3	8.3	7.9	7.9	7.9	8.5	8.5	8.5	9.3	9.3	9.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.6	8.3	8.3	7.9	7.9	7.9	8.5	8.5	8.5	9.3	9.3	9.3
LOS by Move:	B	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	10.8			7.9			8.5			9.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.8			7.9			8.5			9.3		
LOS by Appr:	B			A			A			A		
AllWayAvgQ:	0.5	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 33.9 Worst Case Level Of Service: F[289.0]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	164	0	135	0	1133	0	0	1113	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	164	0	135	0	1133	0	0	1113	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	164	0	135	0	1133	0	0	1113	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	164	0	135	0	1133	0	0	1113	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1690	2246	567	1680	2246	557	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	62	42	472	87	42	479	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	45	42	472	87	42	479	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	1.88	0.00	0.28	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	87	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	14.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	514.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			289.0			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[13.1]

Street Name:	ASP NB on-ramp																							
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Yield Sign						Yield Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	0	0	0		0	1	2	0	0		0	0	1	1	0	
Volume Module:																								
Base Vol:	0	0	0	0	0	0	110	779	0	0	1160	107												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	0	0	0	0	0	0	110	779	0	0	1160	107												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Volume:	0	0	0	0	0	0	110	779	0	0	1160	107												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
FinalVolume:	0	0	0	0	0	0	110	779	0	0	1160	107												
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1267	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	555	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	555	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.20	xxxx	xxxx	xxxx	xxxx	xxxx												
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx														
ApproachLOS:	*			*			*			*														

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	64	Critical Vol./Cap.(X):	0.615
Loss Time (sec):	0	Average Delay (sec/veh):	16.4
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	2	0 0	1 0	0	0 1!	0 0	0	0 0	0 2
Volume Module:												
Base Vol:	3	651	76	450	402	175	109	28	22	0	0	520
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	651	76	450	402	175	109	28	22	0	0	520
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	651	76	450	402	175	109	28	22	0	0	520
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	651	76	450	402	175	109	28	22	0	0	520
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	651	76	450	402	175	109	28	22	0	0	520
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.92	0.95	0.95	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.01	1.78	0.21	2.00	0.70	0.30	0.69	0.18	0.14	0.00	0.00	2.00
Final Sat.:	14	3021	353	3502	1264	550	1236	317	249	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.22	0.13	0.32	0.32	0.09	0.09	0.09	0.00	0.00	0.18
Crit Moves:		****		****					****			****
Green/Cycle:	0.35	0.35	0.35	0.21	0.56	0.56	0.14	0.14	0.14	0.00	0.00	0.51
Volume/Cap:	0.62	0.62	0.62	0.62	0.57	0.57	0.62	0.62	0.62	0.00	0.00	0.36
Delay/Veh:	18.2	18.2	18.2	24.6	9.9	9.9	30.1	30.1	30.1	0.0	0.0	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.2	18.2	18.2	24.6	9.9	9.9	30.1	30.1	30.1	0.0	0.0	9.7
LOS by Move:	B	B	B	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	7	7	7	5	8	8	4	4	4	0	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[11.4]

Street Name:	ASP NB on-ramp									San Fernando Rd									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	29	567	0	0	0	1123	79			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	29	567	0	0	0	1123	79			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	29	567	0	0	0	1123	79			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	29	567	0	0	0	1123	79			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1202	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					588	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					588	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.05	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[8.4]

Street Name:	ASP SB Exit 25									Casanova St									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	6		0		14	113		0		0	0		0		0	0		10	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	6		0		14	113		0		0	0		0		0	0		10	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	6		0		14	113		0		0	0		0		0	0		10	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
FinalVolume:	0	6		0		14	113		0		0	0		0		0	0		10	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		6.2	
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		3.3	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		6	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		6	
Potent Cap.:	xxxx	xxxx		xxxxx		1628	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		1083	
Move Cap.:	xxxx	xxxx		xxxxx		1628	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		1083	
Volume/Cap:	xxxx	xxxx		xxxx		0.01	xxxx		xxxx		xxxx	xxxx		xxxx		xxxx	xxxx		0.01	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		0.0	
Control Del:	xxxxx	xxxx		xxxxx		7.2	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		8.4	
LOS by Move:	*	*		*		A	*		*		*	*		*		*	*		A	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx		xxxxx		7.2	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shared LOS:	*	*		*		A	*		*		*	*		*		*	*		*	
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					8.4				
ApproachLOS:	*					*					*					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.2]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0		24	2		4			4	141		64		14	190		22	
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0		24	2		4			4	141		64		14	190		22	
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0		24	2		4			4	141		64		14	190		22	
Reduct Vol:	0	0	0		0	0		0			0	0		0		0	0		0	
FinalVolume:	0	0	0		24	2		4			4	141		64		14	190		22	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	6.5		6.2			4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	4.0		3.3			2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		410	442		201			212	xxxx	xxxxx			205	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx		602	513		845			1370	xxxx	xxxxx			1378	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx		596	506		845			1370	xxxx	xxxxx			1378	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx		0.04	0.00		0.00			0.00	xxxx	xxxx			0.01	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx				0.0	xxxx	xxxxx			0.0	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx				7.6	xxxx	xxxxx			7.6	xxxx	xxxxx		
LOS by Move:	*	*	*		*	*	*				A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	613	xxxxx				xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	0.2	xxxxx				0.0	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	11.2	xxxxx				7.6	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*		*	B	*				A	*	*			*	*	*		
ApproachDel:	xxxxxx					11.2					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.788
Loss Time (sec):	0	Average Delay (sec/veh):	19.1
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	2	517	0	0	280	2	0	0	0	157	4	25	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	517	0	0	280	2	0	0	0	157	4	25	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	517	0	0	280	2	0	0	0	157	4	25	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	517	0	0	280	2	0	0	0	157	4	25	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	517	0	0	280	2	0	0	0	157	4	25	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	597	656	0	0	602	4	0	0	0	486	521	579	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.79	xxxx	xxxx	0.47	0.47	xxxx	xxxx	xxxx	0.32	0.01	0.04	
Crit Moves:		****			****					****			
Delay/Veh:	8.7	24.8	0.0	0.0	13.6	13.6	0.0	0.0	0.0	12.6	9.2	8.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.7	24.8	0.0	0.0	13.6	13.6	0.0	0.0	0.0	12.6	9.2	8.7	
LOS by Move:	A	C	*	*	B	B	*	*	*	B	A	A	
ApproachDel:		24.7			13.6			xxxxxx			12.0		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		24.7			13.6			xxxxxx			12.0		
LOS by Appr:		C			B			*			B		
AllWayAvgQ:	0.0	3.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.4	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.700
Loss Time (sec):	0	Average Delay (sec/veh):	14.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	486	51	120	339	0	0	4	2	18	0	47	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	486	51	120	339	0	0	4	2	18	0	47	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	486	51	120	339	0	0	4	2	18	0	47	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	486	51	120	339	0	0	4	2	18	0	47	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	486	51	120	339	0	0	4	2	18	0	47	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.33	0.67	0.55	0.45	1.00	
Final Sat.:	0	694	788	624	688	0	0	646	339	263	212	546	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.70	0.06	0.19	0.49	xxxx	xxxx	0.01	0.01	0.07	0.00	0.09	
Crit Moves:		****			****			****				****	
Delay/Veh:	0.0	18.7	7.5	9.7	12.7	0.0	0.0	9.4	9.0	9.9	9.9	9.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	18.7	7.5	9.7	12.7	0.0	0.0	9.4	9.0	9.9	9.9	9.2	
LOS by Move:	*	C	A	A	B	*	*	A	A	A	A	A	
ApproachDel:		17.7			11.9			9.3			9.4		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		17.7			11.9			9.3			9.4		
LOS by Appr:		C			B			A			A		
AllWayAvgQ:	0.0	2.1	0.1	0.2	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	0	Average Delay (sec/veh):	5.8
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	836	76	187	858	0	0	0	0	110	0	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	836	76	187	858	0	0	0	0	110	0	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	836	76	187	858	0	0	0	0	110	0	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	836	76	187	858	0	0	0	0	110	0	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	836	76	187	858	0	0	0	0	110	0	118
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.62	0.62	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.83	0.17	0.36	1.64	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3269	297	422	1938	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.26	0.44	0.44	0.00	0.00	0.00	0.00	0.06	0.00	0.07
Crit Moves:					****							****
Green/Cycle:	0.00	0.86	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.14	0.00	0.14
Volume/Cap:	0.00	0.30	0.30	0.52	0.52	0.00	0.00	0.00	0.00	0.43	0.00	0.52
Delay/Veh:	0.0	1.4	1.4	2.0	2.0	0.0	0.0	0.0	0.0	40.4	0.0	41.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.4	1.4	2.0	2.0	0.0	0.0	0.0	0.0	40.4	0.0	41.8
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	3	3	5	5	0	0	0	0	4	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.788
Loss Time (sec):	0	Average Delay (sec/veh):	15.6
Optimal Cycle:	68	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	13	692	106	330	736	27	25	206	10	113	215	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	692	106	330	736	27	25	206	10	113	215	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	692	106	330	736	27	25	206	10	113	215	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	692	106	330	736	27	25	206	10	113	215	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	692	106	330	736	27	25	206	10	113	215	172
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	0.93	0.93	0.31	0.95	0.95	0.15	0.99	0.99	0.40	0.93	0.93
Lanes:	1.00	1.73	0.27	1.00	1.93	0.07	1.00	0.95	0.05	1.00	0.56	0.44
Final Sat.:	602	3068	470	580	3465	127	287	1799	87	752	985	788
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.23	0.57	0.21	0.21	0.09	0.11	0.11	0.15	0.22	0.22
Crit Moves:				****							****	
Green/Cycle:	0.72	0.72	0.72	0.72	0.72	0.72	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.03	0.31	0.31	0.79	0.29	0.29	0.31	0.41	0.41	0.54	0.79	0.79
Delay/Veh:	4.0	5.0	5.0	18.5	4.9	4.9	30.9	30.0	30.0	33.6	41.7	41.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.0	5.0	5.0	18.5	4.9	4.9	30.9	30.0	30.0	33.6	41.7	41.7
LOS by Move:	A	A	A	B	A	A	C	C	C	C	D	D
HCM2kAvgQ:	0	5	5	9	4	4	1	6	6	4	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.297
Loss Time (sec):	0	Average Delay (sec/veh):	10.7
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0	2 0	0	0 1	1 0	2	0 0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	173	0	169	145	531	0	0	366	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	0	169	145	531	0	0	366	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	173	0	169	145	531	0	0	366	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	173	0	169	145	531	0	0	366	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	173	0	169	145	531	0	0	366	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.45	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	863	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.10	0.17	0.15	0.00	0.00	0.19	0.06
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.65	0.65	0.00	0.00	0.65	1.00
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.30	0.26	0.23	0.00	0.00	0.30	0.06
Delay/Veh:	0.0	0.0	0.0	22.1	0.0	23.7	7.7	7.3	0.0	0.0	7.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.1	0.0	23.7	7.7	7.3	0.0	0.0	7.8	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	4	2	3	0	0	5	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.785
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	67	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Lanes:	0	1	0	0	1	0	0	1	0	1	0	0
Volume Module:												
Base Vol:	147	232	12	34	248	386	385	601	209	7	368	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	232	12	34	248	386	385	601	209	7	368	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	147	232	12	34	248	386	385	601	209	7	368	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	232	12	34	248	386	385	601	209	7	368	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	232	12	34	248	386	385	601	209	7	368	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.65	0.65	0.65	0.94	0.94	0.85	0.43	1.00	0.85	0.29	0.99	0.99
Lanes:	0.38	0.59	0.03	0.12	0.88	1.00	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	467	737	38	214	1562	1615	819	1900	1615	547	1772	111
Capacity Analysis Module:												
Vol/Sat:	0.31	0.31	0.31	0.16	0.16	0.24	0.47	0.32	0.13	0.01	0.21	0.21
Crit Moves:		****					****					
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.60	0.60	0.60	0.60	0.60	0.60
Volume/Cap:	0.79	0.79	0.79	0.40	0.40	0.60	0.79	0.53	0.22	0.02	0.35	0.35
Delay/Veh:	34.2	34.2	34.2	21.7	21.7	25.1	23.3	12.2	9.4	8.2	10.3	10.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.2	34.2	34.2	21.7	21.7	25.1	23.3	12.2	9.4	8.2	10.3	10.3
LOS by Move:	C	C	C	C	C	C	C	B	A	A	B	B
HCM2kAvgQ:	12	12	12	6	6	10	11	11	3	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.468
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1! 0
Volume Module:												
Base Vol:	8	750	337	44	760	26	17	30	17	243	35	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	750	337	44	760	26	17	30	17	243	35	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	750	337	44	760	26	17	30	17	243	35	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	750	337	44	760	26	17	30	17	243	35	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	750	337	44	760	26	17	30	17	243	35	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.83	0.83	0.83	0.88	0.88	0.88	0.71	0.71	0.85
Lanes:	0.02	1.98	1.00	0.11	1.83	0.06	0.27	0.47	0.26	0.87	0.13	1.00
Final Sat.:	36	3386	1615	168	2894	99	444	783	444	1181	170	1615
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.21	0.26	0.26	0.26	0.04	0.04	0.04	0.21	0.21	0.01
Crit Moves:					****						****	
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.44	0.44	0.44	0.44	0.44	0.44
Volume/Cap:	0.40	0.40	0.37	0.47	0.47	0.47	0.09	0.09	0.09	0.47	0.47	0.03
Delay/Veh:	12.5	12.5	12.5	13.3	13.3	13.3	16.4	16.4	16.4	20.4	20.4	15.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	12.5	12.5	13.3	13.3	13.3	16.4	16.4	16.4	20.4	20.4	15.9
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	7	7	6	8	8	8	1	1	1	6	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.349
Loss Time (sec):	0	Average Delay (sec/veh):	6.3
Optimal Cycle:	22	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	80	896	16	25	831	130	97	16	73	2	10	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	896	16	25	831	130	97	16	73	2	10	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	896	16	25	831	130	97	16	73	2	10	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	896	16	25	831	130	97	16	73	2	10	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	896	16	25	831	130	97	16	73	2	10	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.95	0.95	0.28	0.93	0.93	0.76	0.76	0.85	0.91	0.91	0.91
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.86	0.14	1.00	0.07	0.33	0.60
Final Sat.:	505	3536	63	532	3059	479	1246	206	1615	115	576	1036
Capacity Analysis Module:												
Vol/Sat:	0.16	0.25	0.25	0.05	0.27	0.27	0.08	0.08	0.05	0.02	0.02	0.02
Crit Moves:					****			****				
Green/Cycle:	0.78	0.78	0.78	0.78	0.78	0.78	0.22	0.22	0.22	0.22	0.22	0.22
Volume/Cap:	0.20	0.33	0.33	0.06	0.35	0.35	0.35	0.35	0.20	0.08	0.08	0.08
Delay/Veh:	3.2	3.4	3.4	2.7	3.5	3.5	33.4	33.4	31.9	30.8	30.8	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.2	3.4	3.4	2.7	3.5	3.5	33.4	33.4	31.9	30.8	30.8	30.8
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	4	4	0	5	5	3	3	2	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.529
Loss Time (sec):	0	Average Delay (sec/veh):	12.9
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	104	0	478	294	531	0	0	492	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	104	0	478	294	531	0	0	492	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	104	0	478	294	531	0	0	492	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	104	0	478	294	531	0	0	492	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	104	0	478	294	531	0	0	492	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.87	1.00	0.87	0.42	0.95	1.00	1.00	0.94	0.94
Lanes:	0.00	0.00	0.00	1.18	0.00	1.82	1.00	2.00	0.00	0.00	1.87	0.13
Final Sat.:	0	0	0	1946	0	3007	793	3610	0	0	3344	231
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.16	0.37	0.15	0.00	0.00	0.15	0.15
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.70	0.70	0.00	0.00	0.70	0.70
Volume/Cap:	0.00	0.00	0.00	0.18	0.00	0.53	0.53	0.21	0.00	0.00	0.21	0.21
Delay/Veh:	0.0	0.0	0.0	25.9	0.0	29.6	8.1	5.3	0.0	0.0	5.3	5.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.9	0.0	29.6	8.1	5.3	0.0	0.0	5.3	5.3
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	7	5	3	0	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	15.2
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	106	524	15	94	552	60	128	359	123	23	295	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	524	15	94	552	60	128	359	123	23	295	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	524	15	94	552	60	128	359	123	23	295	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	524	15	94	552	60	128	359	123	23	295	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	524	15	94	552	60	128	359	123	23	295	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.35	1.00	0.85	0.36	1.00	0.85	0.43	0.91	0.91	0.33	0.93	0.93
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.49	0.51	1.00	1.71	0.29
Final Sat.:	656	1900	1615	688	1900	1615	816	2586	886	626	3020	512
Capacity Analysis Module:												
Vol/Sat:	0.16	0.28	0.01	0.14	0.29	0.04	0.16	0.14	0.14	0.04	0.10	0.10
Crit Moves:					****		****					
Green/Cycle:	0.65	0.65	0.65	0.65	0.65	0.65	0.35	0.35	0.35	0.35	0.35	0.35
Volume/Cap:	0.25	0.42	0.01	0.21	0.45	0.06	0.45	0.40	0.40	0.10	0.28	0.28
Delay/Veh:	7.6	8.7	6.2	7.4	8.9	6.4	26.1	24.7	24.7	22.1	23.5	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.6	8.7	6.2	7.4	8.9	6.4	26.1	24.7	24.7	22.1	23.5	23.5
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	2	8	0	1	8	1	4	6	6	1	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.550
Loss Time (sec):	0	Average Delay (sec/veh):	24.2
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	46	744	35	142	873	34	79	288	63	84	209	164
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	744	35	142	873	34	79	288	63	84	209	164
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	744	35	142	873	34	79	288	63	84	209	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	744	35	142	873	34	79	288	63	84	209	164
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	744	35	142	873	34	79	288	63	84	209	164
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.97	0.97	0.95	0.93	0.93
Lanes:	1.00	1.91	0.09	1.00	1.93	0.08	1.00	0.82	0.18	1.00	0.56	0.44
Final Sat.:	1805	3425	161	1805	3455	135	1805	1517	332	1805	994	780
Capacity Analysis Module:												
Vol/Sat:	0.03	0.22	0.22	0.08	0.25	0.25	0.04	0.19	0.19	0.05	0.21	0.21
Crit Moves:		****		****			****				****	
Green/Cycle:	0.05	0.40	0.40	0.14	0.49	0.49	0.37	0.37	0.37	0.09	0.38	0.38
Volume/Cap:	0.52	0.55	0.55	0.55	0.52	0.52	0.29	0.51	0.51	0.51	0.55	0.55
Delay/Veh:	51.6	23.8	23.8	42.4	17.8	17.8	22.7	25.1	25.1	46.1	25.1	25.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.6	23.8	23.8	42.4	17.8	17.8	22.7	25.1	25.1	46.1	25.1	25.1
LOS by Move:	D	C	C	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	2	10	10	5	10	10	2	9	9	3	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.616
Loss Time (sec):	0	Average Delay (sec/veh):	15.1
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	73	0	351	0	0	0	0	787	154	146	1022	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	0	351	0	0	0	0	787	154	146	1022	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	0	351	0	0	0	0	787	154	146	1022	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	0	351	0	0	0	0	787	154	146	1022	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	73	0	351	0	0	0	0	787	154	146	1022	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.93	0.93	0.22	0.95	1.00
Lanes:	0.17	0.00	0.83	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00
Final Sat.:	276	0	1328	0	0	0	0	2945	576	415	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.27	0.27	0.35	0.28	0.00
Crit Moves:	****									****		
Green/Cycle:	0.43	0.00	0.43	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.57	0.00
Volume/Cap:	0.62	0.00	0.62	0.00	0.00	0.00	0.00	0.47	0.47	0.62	0.50	0.00
Delay/Veh:	23.9	0.0	23.9	0.0	0.0	0.0	0.0	12.7	12.7	19.0	13.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.9	0.0	23.9	0.0	0.0	0.0	0.0	12.7	12.7	19.0	13.0	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	11	0	11	0	0	0	0	9	9	4	10	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
Loss Time (sec):	0	Average Delay (sec/veh):	26.2
Optimal Cycle:	63	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	168	0	435	425	510	0	0	564	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	168	0	435	425	510	0	0	564	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	168	0	435	425	510	0	0	564	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	168	0	435	425	510	0	0	564	135
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	168	0	435	425	510	0	0	564	135
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.61	0.39
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	2828	677
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.27	0.24	0.14	0.00	0.00	0.20	0.20
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.38	0.00	0.38	0.33	0.62	0.00	0.00	0.28	0.28
Volume/Cap:	0.00	0.00	0.00	0.13	0.00	0.70	0.70	0.23	0.00	0.00	0.70	0.70
Delay/Veh:	0.0	0.0	0.0	20.1	0.0	29.8	32.7	8.6	0.0	0.0	34.4	34.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.1	0.0	29.8	32.7	8.6	0.0	0.0	34.4	34.4
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	2	0	12	12	4	0	0	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.317
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	306	0	102	0	0	0	0	586	309	70	415	344
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	306	0	102	0	0	0	0	586	309	70	415	344
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	306	0	102	0	0	0	0	586	309	70	415	344
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	306	0	102	0	0	0	0	586	309	70	415	344
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	306	0	102	0	0	0	0	586	309	70	415	344
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1900	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.06	0.00	0.00	0.00	0.00	0.16	0.19	0.04	0.11	0.21
Crit Moves:	****								****	****		
Green/Cycle:	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.60	0.60	0.12	0.72	0.72
Volume/Cap:	0.32	0.00	0.23	0.00	0.00	0.00	0.00	0.27	0.32	0.32	0.16	0.29
Delay/Veh:	29.0	0.0	28.3	0.0	0.0	0.0	0.0	9.5	10.0	40.9	4.3	5.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.0	0.0	28.3	0.0	0.0	0.0	0.0	9.5	10.0	40.9	4.3	5.0
LOS by Move:	C	A	C	A	A	A	A	A	A	D	A	A
HCM2kAvgQ:	4	0	2	0	0	0	0	4	5	2	2	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.711
Loss Time (sec):	0	Average Delay (sec/veh):	17.8
Optimal Cycle:	50	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	217	476	33	106	498	72	104	763	191	26	878	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	476	33	106	498	72	104	763	191	26	878	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	476	33	106	498	72	104	763	191	26	878	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	476	33	106	498	72	104	763	191	26	878	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	476	33	106	498	72	104	763	191	26	878	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.35	1.00	0.85	0.36	1.00	0.85	0.14	0.92	0.92	0.14	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.60	0.40	1.00	1.88	0.12
Final Sat.:	663	1900	1615	692	1900	1615	271	2801	701	258	3363	214
Capacity Analysis Module:												
Vol/Sat:	0.33	0.25	0.02	0.15	0.26	0.04	0.38	0.27	0.27	0.10	0.26	0.26
Crit Moves:	****						****					
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.54	0.54	0.54	0.54	0.54	0.54
Volume/Cap:	0.71	0.54	0.04	0.33	0.57	0.10	0.71	0.51	0.51	0.19	0.48	0.48
Delay/Veh:	29.2	20.1	14.9	17.8	20.6	15.3	32.2	14.8	14.8	12.5	14.6	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.2	20.1	14.9	17.8	20.6	15.3	32.2	14.8	14.8	12.5	14.6	14.6
LOS by Move:	C	C	B	B	C	B	C	B	B	B	B	B
HCM2kAvgQ:	7	11	1	2	11	1	4	10	10	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.713
Loss Time (sec): 0 Average Delay (sec/veh): 24.9
Optimal Cycle: 65 Level Of Service: C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T	- R		L - T	- R		L - T	- R		L - T	- R	
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	397	636	52	71	985	57	81	342	332	71	334	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	397	636	52	71	985	57	81	342	332	71	334	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	397	636	52	71	985	57	81	342	332	71	334	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	397	636	52	71	985	57	81	342	332	71	334	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	397	636	52	71	985	57	81	342	332	71	334	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.39	0.88	0.88	0.20	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.01	0.99	1.00	1.74	0.26
Final Sat.:	1805	3610	1615	1805	3385	196	744	1696	1647	374	3088	453
Capacity Analysis Module:												
Vol/Sat:	0.22	0.18	0.03	0.04	0.29	0.29	0.11	0.20	0.20	0.19	0.11	0.11
Crit Moves:	****				****			****				
Green/Cycle:	0.72	0.59	0.59	0.54	0.41	0.41	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.62	0.30	0.05	0.13	0.71	0.71	0.38	0.71	0.71	0.67	0.38	0.38
Delay/Veh:	22.3	10.5	8.9	12.5	26.4	26.4	30.0	34.8	34.8	47.1	29.1	29.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.3	10.5	8.9	12.5	26.4	26.4	30.0	34.8	34.8	47.1	29.1	29.1
LOS by Move:	C	B	A	B	C	C	C	C	C	D	C	C
HCM2kAvgQ:	7	5	1	1	15	15	2	11	11	3	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.926
Loss Time (sec):	0	Average Delay (sec/veh):	32.8
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	59	1152	395	120	669	80	182	770	24	299	395	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	1152	395	120	669	80	182	770	24	299	395	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	59	1152	395	120	669	80	182	770	24	299	395	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	1152	395	120	669	80	182	770	24	299	395	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	1152	395	120	669	80	182	770	24	299	395	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	1.00	0.85	0.12	1.00	0.85	0.95	0.91	0.91	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.91	0.09	1.00	3.00	1.00
Final Sat.:	628	1900	1615	224	1900	1615	1805	5008	156	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.61	0.24	0.54	0.35	0.05	0.10	0.15	0.15	0.17	0.08	0.04
Crit Moves:		****						****		****		
Green/Cycle:	0.65	0.65	0.65	0.65	0.65	0.65	0.20	0.17	0.17	0.18	0.15	0.15
Volume/Cap:	0.14	0.93	0.37	0.82	0.54	0.08	0.51	0.93	0.93	0.93	0.51	0.27
Delay/Veh:	6.7	26.9	8.1	42.0	9.7	6.3	37.2	56.8	56.8	71.9	39.8	38.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.7	26.9	8.1	42.0	9.7	6.3	37.2	56.8	56.8	71.9	39.8	38.4
LOS by Move:	A	C	A	D	A	A	D	E	E	E	D	D
HCM2kAvgQ:	1	36	6	5	11	1	6	13	13	13	5	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.571
Loss Time (sec):	0	Average Delay (sec/veh):	268.9
Optimal Cycle:	63	Level Of Service:	F

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	1283	0	38	40	1063	0	0	691	983
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1283	0	38	40	1063	0	0	691	983
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1283	0	38	40	1063	0	0	691	983
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1283	0	38	40	1063	0	0	691	983
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1283	0	38	40	1063	0	0	691	983
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.37	0.00	0.02	0.01	0.20	0.00	0.00	0.13	0.61
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.52	0.00	0.52	0.29	0.48	0.00	0.00	0.19	0.19
Volume/Cap:	0.00	0.00	0.00	0.70	0.00	0.05	0.04	0.43	0.00	0.00	0.70	3.22
Delay/Veh:	0.0	0.0	0.0	19.5	0.0	11.8	25.4	17.1	0.0	0.0	40.3	1047
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.5	0.0	11.8	25.4	17.1	0.0	0.0	40.3	1047
LOS by Move:	A	A	A	B	A	B	C	B	A	A	D	F
HCM2kAvgQ:	0	0	0	16	0	1	0	8	0	0	9	113

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.875
Loss Time (sec):	0	Average Delay (sec/veh):	28.6
Optimal Cycle:	149	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	246	561	3	90	524	61	135	921	170	297	948	202
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	246	561	3	90	524	61	135	921	170	297	948	202
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	246	561	3	90	524	61	135	921	170	297	948	202
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	246	561	3	90	524	61	135	921	170	297	948	202
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	246	561	3	90	524	61	135	921	170	297	948	202
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	0.95	0.85	0.34	0.94	0.94	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.79	0.21	1.00	1.69	0.31	1.00	1.65	0.35
Final Sat.:	614	3610	1615	639	3183	371	1805	2976	549	1805	2897	617
Capacity Analysis Module:												
Vol/Sat:	0.40	0.16	0.00	0.14	0.16	0.16	0.07	0.31	0.31	0.16	0.33	0.33
Crit Moves:	****							****		****		
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.10	0.35	0.35	0.44	0.44	0.44
Volume/Cap:	0.87	0.34	0.00	0.31	0.36	0.36	0.74	0.87	0.87	0.71	0.74	0.74
Delay/Veh:	49.3	17.5	14.7	17.7	17.7	17.7	58.8	37.4	37.4	24.5	25.2	25.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.3	17.5	14.7	17.7	17.7	17.7	58.8	37.4	37.4	24.5	25.2	25.2
LOS by Move:	D	B	B	B	B	B	E	D	D	C	C	C
HCM2kAvgQ:	10	6	0	2	6	6	6	20	20	9	17	17

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.850
Loss Time (sec):	0	Average Delay (sec/veh):	24.6
Optimal Cycle:	124	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	324	325	75	316	171	66	99	880	144	36	1185	199
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	324	325	75	316	171	66	99	880	144	36	1185	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	324	325	75	316	171	66	99	880	144	36	1185	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	324	325	75	316	171	66	99	880	144	36	1185	199
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	324	325	75	316	171	66	99	880	144	36	1185	199
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.96	0.96	0.11	0.93	0.93	0.21	0.93	0.93
Lanes:	1.00	0.81	0.19	1.00	0.72	0.28	1.00	1.72	0.28	1.00	1.71	0.29
Final Sat.:	1805	1500	346	1805	1314	507	216	3037	497	392	3024	508
Capacity Analysis Module:												
Vol/Sat:	0.18	0.22	0.22	0.18	0.13	0.13	0.46	0.29	0.29	0.09	0.39	0.39
Crit Moves:		****		****			****					
Green/Cycle:	0.46	0.25	0.25	0.40	0.19	0.19	0.54	0.54	0.54	0.54	0.54	0.54
Volume/Cap:	0.56	0.85	0.85	0.68	0.67	0.67	0.85	0.54	0.54	0.17	0.73	0.73
Delay/Veh:	22.3	49.2	49.2	28.5	42.4	42.4	61.0	15.2	15.2	12.1	18.9	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.3	49.2	49.2	28.5	42.4	42.4	61.0	15.2	15.2	12.1	18.9	18.9
LOS by Move:	C	D	D	C	D	D	E	B	B	B	B	B
HCM2kAvgQ:	8	14	14	9	8	8	5	11	11	1	18	18

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.554
Loss Time (sec):	0	Average Delay (sec/veh):	16.9
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	7	715	166	261	726	5	3	4	8	210	3	255	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	7	715	166	261	726	5	3	4	8	210	3	255	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	7	715	166	261	726	5	3	4	8	210	3	255	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	7	715	166	261	726	5	3	4	8	210	3	255	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	7	715	166	261	726	5	3	4	8	210	3	255	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.89	0.89	0.89	0.72	0.72	0.85	
Lanes:	1.00	1.62	0.38	1.00	1.99	0.01	0.20	0.27	0.53	0.99	0.01	1.00	
Final Sat.:	1805	2847	661	1805	3582	25	340	453	907	1357	19	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.25	0.25	0.14	0.20	0.20	0.01	0.01	0.01	0.15	0.15	0.16	
Crit Moves:		****		****								****	
Green/Cycle:	0.01	0.45	0.45	0.71	0.70	0.70	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.29	0.55	0.55	0.41	0.29	0.29	0.03	0.03	0.03	0.54	0.54	0.55	
Delay/Veh:	55.4	20.4	20.4	8.3	5.7	5.7	25.8	25.8	25.8	31.8	31.8	31.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	55.4	20.4	20.4	8.3	5.7	5.7	25.8	25.8	25.8	31.8	31.8	31.8	
LOS by Move:	E	C	C	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	11	11	4	4	4	0	0	0	6	6	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 0 Average Delay (sec/veh): 27.7
Optimal Cycle: 42 Level Of Service: C

Street Name:	Monterey Rd						Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	287	223	76	121	284	48	43	148	221	37	235	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	287	223	76	121	284	48	43	148	221	37	235	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	287	223	76	121	284	48	43	148	221	37	235	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	287	223	76	121	284	48	43	148	221	37	235	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	287	223	76	121	284	48	43	148	221	37	235	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.96	0.82	0.92	0.96	0.82	0.41	0.88	0.88	0.92	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.40	0.60	1.00	0.83	0.17
Final Sat.:	1742	1833	1558	1742	1833	1558	776	669	999	1742	1484	303
Capacity Analysis Module:												
Vol/Sat:	0.16	0.12	0.05	0.07	0.15	0.03	0.06	0.22	0.22	0.02	0.16	0.16
Crit Moves:	****				****			****		****		
Green/Cycle:	0.29	0.29	0.29	0.28	0.28	0.28	0.39	0.39	0.39	0.04	0.43	0.43
Volume/Cap:	0.56	0.41	0.17	0.25	0.56	0.11	0.14	0.56	0.56	0.56	0.37	0.37
Delay/Veh:	31.3	29.0	26.4	28.5	32.5	27.2	19.7	24.7	24.7	57.9	19.5	19.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.3	29.0	26.4	28.5	32.5	27.2	19.7	24.7	24.7	57.9	19.5	19.5
LOS by Move:	C	C	C	C	C	C	B	C	C	E	B	B
HCM2kAvgQ:	8	6	2	3	8	1	1	9	9	2	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.636
Loss Time (sec):	0	Average Delay (sec/veh):	16.3
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	56	808	207	119	778	31	32	67	20	224	67	121	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	56	808	207	119	778	31	32	67	20	224	67	121	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	56	808	207	119	778	31	32	67	20	224	67	121	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	56	808	207	119	778	31	32	67	20	224	67	121	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	56	808	207	119	778	31	32	67	20	224	67	121	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.92	0.92	0.18	0.94	0.94	0.84	0.84	0.84	0.74	0.74	0.74	
Lanes:	1.00	1.59	0.41	1.00	1.92	0.08	0.27	0.56	0.17	0.54	0.16	0.29	
Final Sat.:	478	2786	714	345	3452	138	431	902	269	768	230	415	
Capacity Analysis Module:													
Vol/Sat:	0.12	0.29	0.29	0.34	0.23	0.23	0.07	0.07	0.07	0.29	0.29	0.29	
Crit Moves:				****							****		
Green/Cycle:	0.54	0.54	0.54	0.54	0.54	0.54	0.46	0.46	0.46	0.46	0.46	0.46	
Volume/Cap:	0.22	0.54	0.54	0.64	0.42	0.42	0.16	0.16	0.16	0.64	0.64	0.64	
Delay/Veh:	12.3	15.1	15.1	23.1	13.7	13.7	16.0	16.0	16.0	22.8	22.8	22.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	12.3	15.1	15.1	23.1	13.7	13.7	16.0	16.0	16.0	22.8	22.8	22.8	
LOS by Move:	B	B	B	C	B	B	B	B	B	C	C	C	
HCM2kAvgQ:	1	11	11	4	8	8	2	2	2	10	10	10	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.459
Loss Time (sec):	0	Average Delay (sec/veh):	14.7
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	285	363	28	96	288	157	170	269	200	14	155	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	285	363	28	96	288	157	170	269	200	14	155	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	285	363	28	96	288	157	170	269	200	14	155	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	285	363	28	96	288	157	170	269	200	14	155	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	285	363	28	96	288	157	170	269	200	14	155	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.51	1.00	0.85	0.46	1.00	0.85	0.53	0.89	0.89	0.36	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.85	1.00	1.00	1.00
Final Sat.:	977	1900	1615	881	1900	1615	1016	1938	1441	689	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.29	0.19	0.02	0.11	0.15	0.10	0.17	0.14	0.14	0.02	0.08	0.04
Crit Moves:	****						****					
Green/Cycle:	0.64	0.64	0.64	0.64	0.64	0.64	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.46	0.30	0.03	0.17	0.24	0.15	0.46	0.38	0.38	0.06	0.22	0.10
Delay/Veh:	9.9	8.4	6.8	7.6	7.9	7.4	25.2	23.6	23.6	20.7	22.2	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.9	8.4	6.8	7.6	7.9	7.4	25.2	23.6	23.6	20.7	22.2	21.0
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	5	5	0	1	4	2	4	6	6	0	3	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.612
Loss Time (sec):	0	Average Delay (sec/veh):	24.0
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	125	711	89	111	618	54	61	224	85	99	309	113	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	125	711	89	111	618	54	61	224	85	99	309	113	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	125	711	89	111	618	54	61	224	85	99	309	113	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	125	711	89	111	618	54	61	224	85	99	309	113	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	125	711	89	111	618	54	61	224	85	99	309	113	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.85	0.85	0.85	0.84	0.84	0.84	
Lanes:	1.00	1.78	0.22	1.00	1.84	0.16	0.16	0.61	0.23	0.19	0.59	0.22	
Final Sat.:	1805	3155	395	1805	3280	287	266	977	371	305	951	348	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.23	0.23	0.06	0.19	0.19	0.23	0.23	0.23	0.33	0.33	0.33	
Crit Moves:		****		****							****		
Green/Cycle:	0.13	0.37	0.37	0.34	0.34	0.34	0.53	0.53	0.53	0.53	0.53	0.53	
Volume/Cap:	0.55	0.61	0.61	0.43	0.55	0.55	0.43	0.43	0.43	0.61	0.61	0.61	
Delay/Veh:	43.9	26.6	26.6	26.2	27.1	27.1	14.6	14.6	14.6	17.6	17.6	17.6	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	43.9	26.6	26.6	26.2	27.1	27.1	14.6	14.6	14.6	17.6	17.6	17.6	
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B	
HCM2kAvgQ:	4	11	11	3	9	9	7	7	7	12	12	12	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.650
Loss Time (sec): 0 Average Delay (sec/veh): 15.0
Optimal Cycle: 41 Level Of Service: B

Street Name:	Figueroa St						Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	11	765	104	175	584	1	9	6	0	112	40	282
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	765	104	175	584	1	9	6	0	112	40	282
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	765	104	175	584	1	9	6	0	112	40	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	765	104	175	584	1	9	6	0	112	40	282
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	765	104	175	584	1	9	6	0	112	40	282
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.36	0.93	0.93	0.24	0.95	0.95	0.85	0.85	1.00	0.84	0.84	0.84
Lanes:	1.00	1.76	0.24	1.00	2.00	0.00	0.60	0.40	0.00	0.26	0.09	0.65
Final Sat.:	691	3121	424	464	3603	6	967	645	0	410	146	1033
Capacity Analysis Module:												
Vol/Sat:	0.02	0.25	0.25	0.38	0.16	0.16	0.01	0.01	0.00	0.27	0.27	0.27
Crit Moves:				****							****	
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.00	0.42	0.42	0.42
Volume/Cap:	0.03	0.42	0.42	0.65	0.28	0.28	0.02	0.02	0.00	0.65	0.65	0.65
Delay/Veh:	9.0	11.8	11.8	19.7	10.6	10.6	17.0	17.0	0.0	25.4	25.4	25.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.0	11.8	11.8	19.7	10.6	10.6	17.0	17.0	0.0	25.4	25.4	25.4
LOS by Move:	A	B	B	B	B	B	B	B	A	C	C	C
HCM2kAvgQ:	0	8	8	5	5	5	0	0	0	11	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.354
Loss Time (sec):	0	Average Delay (sec/veh):	10.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av						Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Volume Module:												
Base Vol:	90	200	33	33	140	73	46	51	36	13	65	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	200	33	33	140	73	46	51	36	13	65	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	200	33	33	140	73	46	51	36	13	65	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	200	33	33	140	73	46	51	36	13	65	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	200	33	33	140	73	46	51	36	13	65	32
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.86	0.14	1.00	0.66	0.34	0.35	0.38	0.27	0.12	0.59	0.29
Final Sat.:	591	564	93	579	433	226	216	239	169	74	368	181
Capacity Analysis Module:												
Vol/Sat:	0.15	0.35	0.35	0.06	0.32	0.32	0.21	0.21	0.21	0.18	0.18	0.18
Crit Moves:		****			****		****				****	
Delay/Veh:	9.6	10.8	10.8	9.0	10.3	10.3	9.6	9.6	9.6	9.4	9.4	9.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	10.8	10.8	9.0	10.3	10.3	9.6	9.6	9.6	9.4	9.4	9.4
LOS by Move:	A	B	B	A	B	B	A	A	A	A	A	A
ApproachDel:		10.4			10.1			9.6			9.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.4			10.1			9.6			9.4	
LOS by Appr:		B			B			A			A	
AllWayAvgQ:	0.2	0.5	0.5	0.1	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.466
Loss Time (sec):	0	Average Delay (sec/veh):	23.2
Optimal Cycle:	35	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	193	615	87	197	567	44	49	107	206	92	158	256
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	615	87	197	567	44	49	107	206	92	158	256
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	193	615	87	197	567	44	49	107	206	92	158	256
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	615	87	197	567	44	49	107	206	92	158	256
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	193	615	87	197	567	44	49	107	206	92	158	256
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.53	1.00	0.85	0.60	1.00	0.85
Lanes:	1.00	1.75	0.25	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3104	439	1805	3314	257	1006	1900	1615	1142	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.20	0.11	0.17	0.17	0.05	0.06	0.13	0.08	0.08	0.16
Crit Moves:		****		****								****
Green/Cycle:	0.25	0.43	0.43	0.41	0.41	0.41	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.42	0.47	0.47	0.39	0.42	0.42	0.14	0.17	0.37	0.24	0.24	0.47
Delay/Veh:	31.8	20.8	20.8	21.5	21.5	21.5	23.1	23.2	25.4	24.0	23.9	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.8	20.8	20.8	21.5	21.5	21.5	23.1	23.2	25.4	24.0	23.9	26.5
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	8	8	5	7	7	1	2	5	2	3	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.324
Loss Time (sec):	0	Average Delay (sec/veh):	3.2
Optimal Cycle:	21	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	133	923	29	44	613	403	28	6	9	30	34	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	923	29	44	613	403	28	6	9	30	34	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	923	29	44	613	403	28	6	9	30	34	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	923	29	44	613	403	28	6	9	30	34	37
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	923	29	44	613	403	28	6	9	30	34	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.95	0.95	0.29	0.89	0.89	0.60	0.91	0.91	0.67	0.84	0.84
Lanes:	1.00	1.94	0.06	1.00	1.21	0.79	1.00	0.40	0.60	1.00	2.00	1.00
Final Sat.:	518	3484	109	556	2048	1347	1133	692	1037	1275	3188	1594
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.08	0.30	0.30	0.02	0.01	0.01	0.02	0.01	0.02
Crit Moves:					****		****					
Green/Cycle:	0.92	0.92	0.92	0.92	0.92	0.92	0.08	0.08	0.08	0.08	0.08	0.08
Volume/Cap:	0.28	0.29	0.29	0.09	0.32	0.32	0.32	0.11	0.11	0.31	0.14	0.30
Delay/Veh:	0.7	0.4	0.4	0.4	0.5	0.5	45.9	43.4	43.4	45.5	43.2	44.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.7	0.4	0.4	0.4	0.5	0.5	45.9	43.4	43.4	45.5	43.2	44.4
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	1	2	2	0	2	2	1	1	1	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.722
Loss Time (sec): 0 Average Delay (sec/veh): 31.3
Optimal Cycle: 105 Level Of Service: C

Street Name:	Figueroa St						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	392	570	224	204	584	81	85	675	190	283	902	145
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	392	570	224	204	584	81	85	675	190	283	902	145
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	392	570	224	204	584	81	85	675	190	283	902	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	392	570	224	204	584	81	85	675	190	283	902	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	392	570	224	204	584	81	85	675	190	283	902	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.56	0.44	1.00	1.72	0.28
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2724	767	1805	3045	490
Capacity Analysis Module:												
Vol/Sat:	0.22	0.16	0.14	0.11	0.16	0.05	0.05	0.25	0.25	0.16	0.30	0.30
Crit Moves:	****				****		****				****	
Green/Cycle:	0.48	0.28	0.28	0.41	0.21	0.21	0.32	0.32	0.32	0.20	0.45	0.45
Volume/Cap:	0.68	0.56	0.49	0.43	0.78	0.24	0.42	0.78	0.78	0.78	0.66	0.66
Delay/Veh:	22.9	31.3	30.8	20.7	43.0	33.5	25.9	34.8	34.8	48.6	22.9	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.9	31.3	30.8	20.7	43.0	33.5	25.9	34.8	34.8	48.6	22.9	22.9
LOS by Move:	C	C	C	C	D	C	C	C	C	D	C	C
HCM2kAvgQ:	10	8	6	5	11	2	3	15	15	10	14	14

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 I-5 NB off-ramp (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	34	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	319	16	16	20	0	141	57	676	0	0	895	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	16	16	20	0	141	57	676	0	0	895	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	319	16	16	20	0	141	57	676	0	0	895	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	319	16	16	20	0	141	57	676	0	0	895	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	16	16	20	0	141	57	676	0	0	895	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.23	0.95	1.00	1.00	0.95	0.95
Lanes:	1.83	0.08	0.08	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	3308	151	151	1805	0	1615	428	3610	0	0	3524	75
Capacity Analysis Module:												
Vol/Sat:	0.10	0.11	0.11	0.01	0.00	0.09	0.13	0.19	0.00	0.00	0.25	0.25
Crit Moves:		****				****					****	
Green/Cycle:	0.24	0.24	0.24	0.20	0.00	0.20	0.57	0.57	0.00	0.00	0.57	0.57
Volume/Cap:	0.41	0.45	0.45	0.06	0.00	0.45	0.23	0.33	0.00	0.00	0.45	0.45
Delay/Veh:	32.5	33.0	33.0	32.8	0.0	36.5	11.3	11.6	0.0	0.0	12.7	12.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.5	33.0	33.0	32.8	0.0	36.5	11.3	11.6	0.0	0.0	12.7	12.7
LOS by Move:	C	C	C	C	A	D	B	B	A	A	B	B
HCM2kAvgQ:	5	5	5	1	0	4	1	6	0	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.525
Loss Time (sec):	0	Average Delay (sec/veh):	15.0
Optimal Cycle:	30	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	203	463	98	119	227	106	118	1382	141	43	860	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	463	98	119	227	106	118	1382	141	43	860	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	203	463	98	119	227	106	118	1382	141	43	860	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	463	98	119	227	106	118	1382	141	43	860	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	203	463	98	119	227	106	118	1382	141	43	860	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.47	0.93	0.93	0.33	0.90	0.90	0.23	0.90	0.90	0.10	0.89	0.89
Lanes:	1.00	1.65	0.35	1.00	1.36	0.64	1.00	2.72	0.28	1.00	2.67	0.33
Final Sat.:	893	2901	614	619	2343	1094	439	4641	474	197	4536	564
Capacity Analysis Module:												
Vol/Sat:	0.23	0.16	0.16	0.19	0.10	0.10	0.27	0.30	0.30	0.22	0.19	0.19
Crit Moves:	****							****				
Green/Cycle:	0.43	0.43	0.43	0.43	0.43	0.43	0.57	0.57	0.57	0.57	0.57	0.57
Volume/Cap:	0.53	0.37	0.37	0.44	0.22	0.22	0.47	0.53	0.53	0.38	0.33	0.33
Delay/Veh:	22.1	19.3	19.3	21.1	17.9	17.9	14.2	13.5	13.5	14.2	11.6	11.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.1	19.3	19.3	21.1	17.9	17.9	14.2	13.5	13.5	14.2	11.6	11.6
LOS by Move:	C	B	B	C	B	B	B	B	B	B	B	B
HCM2kAvgQ:	5	6	6	3	3	3	3	11	11	1	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	0	Average Delay (sec/veh):	13.4
Optimal Cycle:	25	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	18	466	84	0	0	0	279	664	0	0	205	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	466	84	0	0	0	279	664	0	0	205	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	466	84	0	0	0	279	664	0	0	205	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	466	84	0	0	0	279	664	0	0	205	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	18	466	84	0	0	0	279	664	0	0	205	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.54	0.95	1.00	1.00	0.91	0.91
Lanes:	0.06	1.64	0.30	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.45	0.55
Final Sat.:	111	2882	520	0	0	0	1030	3610	0	0	2517	945
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.00	0.00	0.00	0.27	0.18	0.00	0.00	0.08	0.08
Crit Moves:		****					****					
Green/Cycle:	0.37	0.37	0.37	0.00	0.00	0.00	0.63	0.63	0.00	0.00	0.63	0.63
Volume/Cap:	0.43	0.43	0.43	0.00	0.00	0.00	0.43	0.29	0.00	0.00	0.13	0.13
Delay/Veh:	23.6	23.6	23.6	0.0	0.0	0.0	10.0	8.6	0.0	0.0	7.6	7.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.6	23.6	23.6	0.0	0.0	0.0	10.0	8.6	0.0	0.0	7.6	7.6
LOS by Move:	C	C	C	A	A	A	B	A	A	A	A	A
HCM2kAvgQ:	7	7	7	0	0	0	5	5	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.351
Loss Time (sec):	0	Average Delay (sec/veh):	13.8
Optimal Cycle:	22	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	1 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	232	186	150	0	701	46	24	206	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	232	186	150	0	701	46	24	206	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	232	186	150	0	701	46	24	206	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	232	186	150	0	701	46	24	206	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	232	186	150	0	701	46	24	206	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.94	0.94	0.29	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.88	0.12	1.00	2.00	0.00
Final Sat.:	0	0	0	1627	1627	1627	0	3357	220	556	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.11	0.09	0.00	0.21	0.21	0.04	0.06	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.41	0.41	0.41	0.00	0.59	0.59	0.59	0.59	0.00
Volume/Cap:	0.00	0.00	0.00	0.35	0.28	0.23	0.00	0.35	0.35	0.07	0.10	0.00
Delay/Veh:	0.0	0.0	0.0	20.7	20.0	19.5	0.0	10.5	10.5	8.7	8.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.7	20.0	19.5	0.0	10.5	10.5	8.7	8.7	0.0
LOS by Move:	A	A	A	C	C	B	A	B	B	A	A	A
HCM2kAvgQ:	0	0	0	5	4	3	0	6	6	0	1	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 606.8 Worst Case Level Of Service: F[1313.5]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			298	173			0	893	27			0	0	0			614
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			298	173			0	893	27			0	0	0			614
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			298	173			0	893	27			0	0	0			614
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			298	173			0	893	27			0	0	0			614
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1	6.5	xxxxx			7.1	6.5			6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5	4.0	xxxxx			3.5	4.0			3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			769	769	xxxxx			696	769			0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			321	334	xxxxx			359	334			1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			121	273	xxxxx			286	273			1091
Volume/Cap:	xxxx	xxxx	xxxx			0.18	xxxx	xxxx			7.41	0.10	xxxx			0.00	0.00			0.56
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.7	xxxx	xxxxx			44.5	xxxx	xxxxx			xxxx	xxxx			1.2
Control Del:	xxxxx	xxxx	xxxxx			7.7	xxxx	xxxxx			1292	xxxx	xxxxx			xxxxx	xxxx			9.6
LOS by Move:	*	*	*			A	*	*			F	*	*			*	*			A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			124	xxxx	xxxxx			xxxx	1091			xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			25.3	xxxx	xxxxx			xxxxx	1.2			xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			1334	xxxx	xxxxx			xxxxx	9.6			xxxxx
Shared LOS:	*	*	*			*	*	*			F	*	*			*	A			*
ApproachDel:	xxxxxx					xxxxxx					1313.5					9.6				
ApproachLOS:	*					*					F					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.675
Loss Time (sec):	0	Average Delay (sec/veh):	21.5
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	62	431	267	180	346	26	28	229	61	370	499	291
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	62	431	267	180	346	26	28	229	61	370	499	291
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	62	431	267	180	346	26	28	229	61	370	499	291
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	431	267	180	346	26	28	229	61	370	499	291
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	62	431	267	180	346	26	28	229	61	370	499	291
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	1.00	0.85	0.26	0.92	0.92	0.53	0.90	0.90
Lanes:	1.00	1.24	0.77	1.00	1.00	1.00	1.00	1.58	0.42	1.00	1.26	0.74
Final Sat.:	1805	2101	1302	1805	1900	1615	497	2761	735	999	2154	1256
Capacity Analysis Module:												
Vol/Sat:	0.03	0.21	0.21	0.10	0.18	0.02	0.06	0.08	0.08	0.37	0.23	0.23
Crit Moves:		****		****						****		
Green/Cycle:	0.07	0.30	0.30	0.38	0.38	0.38	0.55	0.55	0.55	0.55	0.55	0.55
Volume/Cap:	0.48	0.68	0.68	0.53	0.48	0.04	0.10	0.15	0.15	0.68	0.42	0.42
Delay/Veh:	47.4	32.3	32.3	24.5	24.0	19.6	11.0	11.1	11.1	19.5	13.4	13.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.4	32.3	32.3	24.5	24.0	19.6	11.0	11.1	11.1	19.5	13.4	13.4
LOS by Move:	D	C	C	C	C	B	B	B	B	B	B	B
HCM2kAvgQ:	2	11	11	5	8	0	0	2	2	9	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.565
Loss Time (sec):	0	Average Delay (sec/veh):	71.6
Optimal Cycle:	180	Level Of Service:	E

Street Name:	San Fernando Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	13	1013	123	135	447	86	397	502	16	64	142	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	1013	123	135	447	86	397	502	16	64	142	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	1013	123	135	447	86	397	502	16	64	142	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	1013	123	135	447	86	397	502	16	64	142	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	1013	123	135	447	86	397	502	16	64	142	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.43	0.98	0.98	0.07	1.00	0.85	0.39	0.95	0.95	0.66	0.66	0.66
Lanes:	1.00	0.89	0.11	1.00	1.00	1.00	1.00	1.94	0.06	0.35	0.79	0.86
Final Sat.:	817	1667	202	131	1900	1615	738	3482	111	448	993	1084
Capacity Analysis Module:												
Vol/Sat:	0.02	0.61	0.61	1.03	0.24	0.05	0.54	0.14	0.14	0.14	0.14	0.14
Crit Moves:				****			****					
Green/Cycle:	0.66	0.66	0.66	0.66	0.66	0.66	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.02	0.93	0.93	1.56	0.36	0.08	1.56	0.42	0.42	0.42	0.42	0.42
Delay/Veh:	6.0	27.0	27.0	319.8	7.9	6.3	305.2	25.4	25.4	25.5	25.5	25.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.0	27.0	27.0	319.8	7.9	6.3	305.2	25.4	25.4	25.5	25.5	25.5
LOS by Move:	A	C	C	F	A	A	F	C	C	C	C	C
HCM2kAvgQ:	0	35	35	12	6	1	31	7	7	5	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	0	Average Delay (sec/veh):	19.0
Optimal Cycle:	50	Level Of Service:	B

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	224	569	59	171	332	185	35	1061	148	78	587	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	224	569	59	171	332	185	35	1061	148	78	587	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	224	569	59	171	332	185	35	1061	148	78	587	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	224	569	59	171	332	185	35	1061	148	78	587	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	224	569	59	171	332	185	35	1061	148	78	587	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.36	0.94	0.94	0.30	0.90	0.90	0.85	0.85	0.85	0.61	0.61	0.61
Lanes:	1.00	1.81	0.19	1.00	1.28	0.72	0.06	1.71	0.24	0.19	1.47	0.34
Final Sat.:	686	3225	334	570	2194	1222	91	2762	385	227	1705	395
Capacity Analysis Module:												
Vol/Sat:	0.33	0.18	0.18	0.30	0.15	0.15	0.38	0.38	0.38	0.34	0.34	0.34
Crit Moves:	****							****				
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.54	0.54	0.54	0.54	0.54	0.54
Volume/Cap:	0.71	0.38	0.38	0.65	0.33	0.33	0.71	0.71	0.71	0.64	0.64	0.64
Delay/Veh:	29.0	17.9	17.9	26.7	17.3	17.3	18.5	18.5	18.5	17.2	17.2	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.0	17.9	17.9	26.7	17.3	17.3	18.5	18.5	18.5	17.2	17.2	17.2
LOS by Move:	C	B	B	C	B	B	B	B	B	B	B	B
HCM2kAvgQ:	7	7	7	5	5	5	16	16	16	10	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 17.9 Worst Case Level Of Service: F[195.8]

Street Name:	Ave 21									Main St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	8	103		4	114				0	1171		7		11	1012		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	8	103		4	114				0	1171		7		11	1012		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	8	103		4	114				0	1171		7		11	1012		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	8	103		4	114				0	1171		7		11	1012		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	589	1620		2212	506				xxxx	xxxx		xxxxx		1178	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	457	70		45	517				xxxx	xxxx		xxxxx		600	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	457	68		44	517				xxxx	xxxx		xxxxx		600	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.02	1.52		0.09	0.22				xxxx	xxxx		xxxx		0.02	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.1	8.8		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.1	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	13.0	398.7		xxxx	xxxxx				xxxxx	xxxx		xxxxx		11.1	xxxx		xxxxx	
LOS by Move:	*	*	B	F		*	*				*	*		*		B	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	378				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	1.3				xxxxx	xxxx		xxxxx		0.1	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	18.8				xxxxx	xxxx		xxxxx		11.1	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	C				*	*		*		B	*		*	
ApproachDel:	13.0			195.8							xxxxxx					xxxxxx				
ApproachLOS:	B			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.434
Loss Time (sec):	0	Average Delay (sec/veh):	9.5
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	505	953	737	0	0	410	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	505	953	737	0	0	410	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	505	953	737	0	0	410	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	505	953	737	0	0	410	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	505	953	737	0	0	410	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.92	0.92	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.69	1.31	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2970	2297	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.32	0.32	0.00	0.00	0.11	0.04
Crit Moves:					****		****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.74	0.74	0.74	0.00	0.00	0.26	0.26
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.24	0.43	0.43	0.00	0.00	0.43	0.16
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	4.2	5.1	5.1	0.0	0.0	31.1	28.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	4.2	5.1	5.1	0.0	0.0	31.1	28.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	C	C
HCM2kAvgQ:	0	0	0	0	0	3	7	7	0	0	6	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.712
Loss Time (sec):	0	Average Delay (sec/veh):	12.9
Optimal Cycle:	50	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	39	1456	90	117	1270	68	118	290	38	36	194	187
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	1456	90	117	1270	68	118	290	38	36	194	187
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	39	1456	90	117	1270	68	118	290	38	36	194	187
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	1456	90	117	1270	68	118	290	38	36	194	187
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	1456	90	117	1270	68	118	290	38	36	194	187
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.16	0.94	0.94	0.12	0.94	0.94	0.63	0.63	0.63	0.76	0.76	0.76
Lanes:	1.00	1.88	0.12	1.00	1.90	0.10	0.53	1.30	0.17	0.17	0.93	0.90
Final Sat.:	300	3370	208	222	3400	182	632	1554	204	251	1351	1302
Capacity Analysis Module:												
Vol/Sat:	0.13	0.43	0.43	0.53	0.37	0.37	0.19	0.19	0.19	0.14	0.14	0.14
Crit Moves:				****				****				
Green/Cycle:	0.74	0.74	0.74	0.74	0.74	0.74	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.18	0.59	0.59	0.71	0.51	0.51	0.71	0.71	0.71	0.55	0.55	0.55
Delay/Veh:	4.3	6.4	6.4	20.9	5.6	5.6	37.3	37.3	37.3	32.7	32.7	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.3	6.4	6.4	20.9	5.6	5.6	37.3	37.3	37.3	32.7	32.7	32.7
LOS by Move:	A	A	A	C	A	A	D	D	D	C	C	C
HCM2kAvgQ:	1	12	12	4	9	9	8	8	8	6	6	6

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 2
AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.660
Loss Time (sec):	0	Average Delay (sec/veh):	28.4
Optimal Cycle:	67	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	215	982	374	18	636	57	35	242	171	560	338	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	215	982	374	18	636	57	35	242	171	560	338	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	215	982	374	18	636	57	35	242	0	560	338	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	982	374	18	636	57	35	242	0	560	338	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	215	982	374	18	636	57	35	242	0	560	338	12
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.17	0.83	1.00	2.75	0.25	1.00	2.00	1.00	1.00	1.93	0.07
Final Sat.:	1805	3602	1372	1805	4703	422	1805	3610	1900	1805	3469	123
Capacity Analysis Module:												
Vol/Sat:	0.12	0.27	0.27	0.01	0.14	0.14	0.02	0.07	0.00	0.31	0.10	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.20	0.41	0.41	0.02	0.23	0.23	0.09	0.10	0.00	0.47	0.48	0.48
Volume/Cap:	0.59	0.66	0.66	0.66	0.59	0.59	0.20	0.66	0.00	0.66	0.20	0.20
Delay/Veh:	38.9	24.5	24.5	95.7	35.3	35.3	42.4	47.7	0.0	22.3	15.2	15.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.9	24.5	24.5	95.7	35.3	35.3	42.4	47.7	0.0	22.3	15.2	15.2
LOS by Move:	D	C	C	F	D	D	D	D	A	C	B	B
HCM2kAvgQ:	7	13	13	2	8	8	1	5	0	14	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 7.9 Worst Case Level Of Service: A[9.1]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	120	0	2	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	120	0	2	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	120	0	2	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	120	0	2	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.12	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1006	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				9.1		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.507
Loss Time (sec):	0	Average Delay (sec/veh):	11.6
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	222	1426	49	1	862	142	0	0	0	263	64	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	222	1426	49	1	862	142	0	0	0	263	64	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	1426	49	1	862	142	0	0	0	263	64	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	1426	49	1	862	142	0	0	0	263	64	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	222	1426	49	1	862	142	0	0	0	263	64	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.85	1.00	1.00	1.00	0.90	0.90	0.85
Lanes:	2.00	1.93	0.07	1.00	2.00	1.00	0.00	0.00	0.00	1.61	0.39	1.00
Final Sat.:	3502	3473	119	1805	3610	1615	0	0	0	2745	668	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.41	0.41	0.00	0.24	0.09	0.00	0.00	0.00	0.10	0.10	0.04
Crit Moves:		****		****						****		
Green/Cycle:	0.17	0.81	0.81	0.00	0.64	0.64	0.00	0.00	0.00	0.19	0.19	0.19
Volume/Cap:	0.37	0.51	0.51	0.51	0.37	0.14	0.00	0.00	0.00	0.51	0.51	0.20
Delay/Veh:	37.2	3.2	3.2	184.9	8.6	7.1	0.0	0.0	0.0	37.0	37.0	34.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.2	3.2	3.2	184.9	8.6	7.1	0.0	0.0	0.0	37.0	37.0	34.5
LOS by Move:	D	A	A	F	A	A	A	A	A	D	D	C
HCM2kAvgQ:	3	8	8	0	7	2	0	0	0	5	5	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.569
Loss Time (sec):	0	Average Delay (sec/veh):	19.9
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	0 0	2	0 0	0 1	0	1 0	0 0	1!	0 1
Volume Module:												
Base Vol:	0	1041	17	0	1121	0	189	90	72	5	0	468
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1041	17	0	1121	0	189	90	72	5	0	468
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1041	17	0	1121	0	189	90	72	5	0	468
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1041	17	0	1121	0	189	90	72	5	0	468
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1041	17	0	1121	0	189	90	72	5	0	468
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.90	0.90	0.90	0.85	1.00	0.85
Lanes:	0.00	2.95	0.05	0.00	2.00	0.00	1.00	0.56	0.44	0.02	0.00	1.98
Final Sat.:	0	5091	83	0	3610	0	1704	946	757	34	0	3201
Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.20	0.00	0.31	0.00	0.11	0.10	0.10	0.15	0.00	0.15
Crit Moves:					****		****			****		
Green/Cycle:	0.00	0.55	0.55	0.00	0.55	0.00	0.19	0.19	0.19	0.26	0.00	0.26
Volume/Cap:	0.00	0.37	0.37	0.00	0.57	0.00	0.57	0.49	0.49	0.57	0.00	0.56
Delay/Veh:	0.0	13.1	13.1	0.0	15.4	0.0	37.7	36.3	36.3	33.1	0.0	33.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.1	13.1	0.0	15.4	0.0	37.7	36.3	36.3	33.1	0.0	33.0
LOS by Move:	A	B	B	A	B	A	D	D	D	C	A	C
HCM2kAvgQ:	0	7	7	0	12	0	6	5	5	7	0	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.332
Loss Time (sec):	0	Average Delay (sec/veh):	11.0
Optimal Cycle:	28	Level Of Service:	B

****

Street Name:	Orange Grove Bl						ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	1 0	1	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	138	752	0	0	346	1195	0	0	0	91	0	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	752	0	0	346	1195	0	0	0	91	0	17
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	138	752	0	0	346	0	0	0	0	91	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	752	0	0	346	0	0	0	0	91	0	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	138	752	0	0	346	0	0	0	0	91	0	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.84	0.00	0.16
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1241	0	232
Capacity Analysis Module:												
Vol/Sat:	0.08	0.21	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.07	0.00	0.07
Crit Moves:	****				****					****		
Green/Cycle:	0.23	0.78	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.22	0.00	0.22
Volume/Cap:	0.33	0.27	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.33
Delay/Veh:	32.5	3.1	0.0	0.0	12.6	0.0	0.0	0.0	0.0	33.4	0.0	33.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.5	3.1	0.0	0.0	12.6	0.0	0.0	0.0	0.0	33.4	0.0	33.4
LOS by Move:	C	A	A	A	B	A	A	A	A	C	A	C
HCM2kAvgQ:	4	3	0	0	6	0	0	0	0	3	0	3

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	0	Average Delay (sec/veh):	23.3
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	408	141	23	412	0	482	3	82	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	408	141	23	412	0	482	3	82	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	408	141	23	412	0	482	3	82	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	408	141	23	412	0	482	3	82	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	408	141	23	412	0	482	3	82	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	1.74	0.01	0.25	0.00	0.00	0.00
Final Sat.:	0	2580	891	1805	1900	0	2821	15	408	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.01	0.22	0.00	0.17	0.20	0.20	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.27	0.27	0.38	0.65	0.00	0.35	0.35	0.35	0.00	0.00	0.00
Volume/Cap:	0.00	0.58	0.58	0.03	0.33	0.00	0.49	0.58	0.58	0.00	0.00	0.00
Delay/Veh:	0.0	32.1	32.1	19.7	7.9	0.0	25.9	27.4	27.4	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	32.1	32.1	19.7	7.9	0.0	25.9	27.4	27.4	0.0	0.0	0.0
LOS by Move:	A	C	C	B	A	A	C	C	C	A	A	A
HCM2kAvgQ:	0	8	8	0	6	0	7	9	9	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: A[8.8]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	35	4	0	0		31	10				5	0		90		0	0		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	35	4	0	0		31	10				5	0		90		0	0		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	35	4	0	0		31	10				5	0		90		0	0		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	35	4	0	0		31	10				5	0		90		0	0		0	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5		6.2	xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0		3.3	xxxxx	xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	41	xxxx	xxxxx	xxxx	xxxx	xxxxx					110	110		36	xxxx	xxxx	xxxxx			
Potent Cap.:	1581	xxxx	xxxxx	xxxx	xxxx	xxxxx					892	784		1042	xxxx	xxxx	xxxxx			
Move Cap.:	1581	xxxx	xxxxx	xxxx	xxxx	xxxxx					877	766		1042	xxxx	xxxx	xxxxx			
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx					0.01	0.00		0.09	xxxx	xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx			
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*					*	*	*		*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	1032	xxxxx		xxxx	xxxx	xxxxx			
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.3	xxxxx		xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.8	xxxxx		xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*	*	*	*					*	A	*		*	*	*			
ApproachDel:	xxxxxx			xxxxxx							8.8				xxxxxx					
ApproachLOS:	*			*							A				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 5.3 Worst Case Level Of Service: B[12.3]

Street Name: Bridewell St (N/S) & ASP SB Exit ASP SB Exit 30

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L -	T -	R		L -	T -	R		L -	T -	R		L -	T -	R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0 0	1!	0	0	0 0	1!	0	0	1 0	0	1	0	0 1	0	0	0
Volume Module:																
Base Vol:	9	13	20		113	0	16		11	117	107		51	15	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	9	13	20		113	0	16		11	117	107		51	15	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	9	13	20		113	0	16		11	117	107		51	15	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	9	13	20		113	0	16		11	117	107		51	15	0	
Critical Gap Module:																
Critical Gp:	7.1	6.5	6.2		7.1	6.5	6.2		4.1	xxxx	xxxxx		4.1	xxxx	xxxxx	
FollowUpTim:	3.5	4.0	3.3		3.5	4.0	3.3		2.2	xxxx	xxxxx		2.2	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	318	310	171		326	363	15		15	xxxx	xxxxx		224	xxxx	xxxxx	
Potent Cap.:	639	608	879		631	568	1070		1616	xxxx	xxxxx		1357	xxxx	xxxxx	
Move Cap.:	608	581	879		585	542	1070		1616	xxxx	xxxxx		1357	xxxx	xxxxx	
Volume/Cap:	0.01	0.02	0.02		0.19	0.00	0.01		0.01	xxxx	xxxx		0.04	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		0.1	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		7.2	xxxx	xxxxx		7.8	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		A	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	701	xxxxx		xxxx	620	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	0.2	xxxxx		xxxxx	0.8	xxxxx		xxxxx	xxxx	xxxxx		0.1	xxxx	xxxxx	
Shrd ConDel:	xxxxx	10.5	xxxxx		xxxxx	12.3	xxxxx		xxxxx	xxxx	xxxxx		7.8	xxxx	xxxxx	
Shared LOS:	*	B	*		*	B	*		*	*	*		A	*	*	
ApproachDel:	10.5				12.3				xxxxxx				xxxxxx			
ApproachLOS:	B				B				*				*			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 21.5 Worst Case Level Of Service: F[52.0]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	436		0		77	0		0		0	0		100		0	0		146		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	436		0		77	0		0		0	0		100		0	0		146		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	436		0		0	0		0		0	0		100		0	0		146		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	436		0		0	0		0		0	0		100		0	0		146		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		872	xxxxx	xxxx		872	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		291	xxxxx	xxxx		291	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		214	xxxxx	xxxx		214	xxxxx						
Volume/Cap:	0.27	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.47	xxxx	xxxx		0.68	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		2.3	xxxxx	xxxx		4.3	xxxxx						
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		35.9	xxxxx	xxxxx		52.0	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		E	*	*		F	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			35.9			52.0										
ApproachLOS:	*			*			E			F										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.883
Loss Time (sec):	0	Average Delay (sec/veh):	26.3
Optimal Cycle:	0	Level Of Service:	D

Street Name:	La Riba Wy								Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign				
Rights:	Include			Include			Include			Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0				
Volume Module:														
Base Vol:	0	0	0	88	0	50	0	0	0	0	691	52		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	88	0	50	0	0	0	0	691	52		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	88	0	50	0	0	0	0	691	52		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	0	0	0	88	0	50	0	0	0	0	691	52		
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
FinalVolume:	0	0	0	88	0	50	0	0	0	0	691	52		
Saturation Flow Module:														
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93	0.07		
Final Sat.:	0	0	0	530	0	642	0	0	0	0	783	59		
Capacity Analysis Module:														
Vol/Sat:	xxxx	xxxx	xxxx	0.17	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	0.88	0.88		
Crit Moves:				****								****		
Delay/Veh:	0.0	0.0	0.0	10.5	0.0	8.5	0.0	0.0	0.0	0.0	29.3	29.3		
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
AdjDel/Veh:	0.0	0.0	0.0	10.5	0.0	8.5	0.0	0.0	0.0	0.0	29.3	29.3		
LOS by Move:	*	*	*	B	*	A	*	*	*	*	D	D		
ApproachDel:	xxxxxx			9.8			xxxxxx			29.3				
Delay Adj:	xxxxx			1.00			xxxxx			1.00				
ApprAdjDel:	xxxxxx			9.8			xxxxxx			29.3				
LOS by Appr:	*			A			*			D				
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	5.2	5.2	5.2		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[14.6]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	6	0	55	114	584	0	0	429	214								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	6	0	55	114	584	0	0	429	214								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	6	0	55	114	584	0	0	429	214								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	6	0	55	114	584	0	0	429	214								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1348	1348	536	643	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	168	152	549	951	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	153	134	549	951	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.10	0.12	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	437	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	14.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				14.6		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	7.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	14	1	3	1	1	5	5	247	8	5	84	2	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	14	1	3	1	1	5	5	247	8	5	84	2	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	14	1	3	1	1	5	5	247	8	5	84	2	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	14	1	3	1	1	5	5	247	8	5	84	2	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.78	0.06	0.17	0.14	0.14	0.71	0.02	0.95	0.03	0.05	0.92	0.02	
Final Sat.:	203	15	44	0	0	1	17	822	27	41	685	16	
Capacity Analysis Module:													
Vol/Sat:	0.07	0.07	0.07	7.00	7.00	7.00	0.30	0.30	0.30	0.12	0.12	0.12	
Crit Moves:			****			****			****			****	
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.07	0.07	0.07	7.00	7.00	7.00	0.30	0.30	0.30	0.12	0.12	0.12	
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.1	3.1	3.1	1.6	1.6	1.6	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.1	3.1	3.1	1.6	1.6	1.6	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: C[20.7]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	92	0	176	0	0	0	0	440	0	0	543	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	0	176	0	0	0	0	440	0	0	543	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	0	176	0	0	0	0	440	0	0	543	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	92	0	176	0	0	0	0	440	0	0	543	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	983	983	220	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	278	251	825	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	278	251	825	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.33	0.00	0.21	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	493	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	20.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:	20.7			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	C			*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[12.0]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		402		7			14	0		0		0		0		60
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		402		7			14	0		0		0		0		60
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		402		7			14	0		0		0		0		60
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		402		7			14	0		0		0		0		60
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			406	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			559	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			529	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.03	xxxx		xxxx		xxxx		xxxx		0.05
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			0.1	xxxx		xxxxx		xxxx		xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			12.0	xxxx		xxxxx		xxxxx		xxxx		8.5
LOS by Move:	*	*	*	*		*		*			B	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							12.0							8.5		
ApproachLOS:	*			*							B							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.458
Loss Time (sec):	0	Average Delay (sec/veh):	10.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	118	28	65	10	202	339	7	295	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	118	28	65	10	202	339	7	295	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	118	28	65	10	202	339	7	295	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	118	28	65	10	202	339	7	295	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	118	28	65	10	202	339	7	295	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.56	0.13	0.31	0.05	0.95	1.00	0.04	1.89	0.07
Final Sat.:	0	526	0	341	81	188	30	613	741	27	1164	44
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.35	0.35	0.35	0.33	0.33	0.46	0.25	0.25	0.25
Crit Moves:		****		****					****	****		
Delay/Veh:	0.0	0.0	0.0	11.3	11.3	11.3	10.8	10.8	11.2	10.2	10.2	10.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.3	11.3	11.3	10.8	10.8	11.2	10.2	10.2	10.1
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			11.3			11.1			10.2		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.3			11.1			10.2		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.8	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.268
Loss Time (sec):	0	Average Delay (sec/veh):	8.5
Optimal Cycle:	0	Level Of Service:	A

Street Name:	ASP NB Exit 28A									Ave 52							
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																	
Base Vol:	137	0	81	0	0	0	0	116	0	0	100	0					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	137	0	81	0	0	0	0	116	0	0	100	0					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Volume:	137	0	81	0	0	0	0	116	0	0	100	0					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0					
Reduced Vol:	137	0	81	0	0	0	0	116	0	0	100	0					
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
FinalVolume:	137	0	81	0	0	0	0	116	0	0	100	0					
Saturation Flow Module:																	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Lanes:	0.63	0.00	0.37	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00					
Final Sat.:	511	0	302	0	0	0	0	769	0	0	765	0					
Capacity Analysis Module:																	
Vol/Sat:	0.27	xxxx	0.27	xxxx	xxxx	xxxx	xxxx	0.15	xxxx	xxxx	0.13	xxxx					
Crit Moves:	****							****			****						
Delay/Veh:	8.8	0.0	8.8	0.0	0.0	0.0	0.0	8.2	0.0	0.0	8.1	0.0					
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
AdjDel/Veh:	8.8	0.0	8.8	0.0	0.0	0.0	0.0	8.2	0.0	0.0	8.1	0.0					
LOS by Move:	A	*	A	*	*	*	*	A	*	*	A	*					
ApproachDel:	8.8			xxxxxx			8.2			8.1							
Delay Adj:	1.00			xxxxx			1.00			1.00							
ApprAdjDel:	8.8			xxxxxx			8.2			8.1							
LOS by Appr:	A			*			A			A							
AllWayAvgQ:	0.3	0.3	0.3	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.742
Loss Time (sec):	0	Average Delay (sec/veh):	18.2
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43					
Approach:	North Bound				South Bound				East Bound				West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R					
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0			
Volume Module:															
Base Vol:	9	23	48	78	62	111	175	274	13	48	275	104			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	9	23	48	78	62	111	175	274	13	48	275	104			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	9	23	48	78	62	111	175	274	13	48	275	104			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	9	23	48	78	62	111	175	274	13	48	275	104			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
FinalVolume:	9	23	48	78	62	111	175	274	13	48	275	104			
Saturation Flow Module:															
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Lanes:	0.11	0.29	0.60	0.31	0.25	0.44	0.38	0.59	0.03	0.11	0.64	0.24			
Final Sat.:	52	132	276	167	132	237	236	369	18	71	406	154			
Capacity Analysis Module:															
Vol/Sat:	0.17	0.17	0.17	0.47	0.47	0.47	0.74	0.74	0.74	0.68	0.68	0.68			
Crit Moves:	****					****		****			****				
Delay/Veh:	10.5	10.5	10.5	13.6	13.6	13.6	21.9	21.9	21.9	18.4	18.4	18.4			
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	10.5	10.5	10.5	13.6	13.6	13.6	21.9	21.9	21.9	18.4	18.4	18.4			
LOS by Move:	B	B	B	B	B	B	C	C	C	C	C	C			
ApproachDel:	10.5			13.6			21.9			18.4					
Delay Adj:	1.00			1.00			1.00			1.00					
ApprAdjDel:	10.5			13.6			21.9			18.4					
LOS by Appr:	B			B			C			C					
AllWayAvgQ:	0.1	0.1	0.1	0.7	0.7	0.7	2.3	2.3	2.3	1.7	1.7	1.7			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	142	6	70	8	6	22	11	212	166	60	266	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	142	6	70	8	6	22	11	212	166	60	266	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	142	6	70	8	6	22	11	212	166	60	266	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	6	70	8	6	22	11	212	166	60	266	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	142	6	70	8	6	22	11	212	166	60	266	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.36	0.64	0.22	0.17	0.61	0.03	0.55	0.43	0.18	0.81	0.01
Final Sat.:	502	207	372	119	89	326	20	393	308	123	544	8
Capacity Analysis Module:												
Vol/Sat:	0.28	0.03	0.19	0.07	0.07	0.07	0.54	0.54	0.54	0.49	0.49	0.49
Crit Moves:	****				****		****					****
Delay/Veh:	11.8	9.3	9.3	9.2	9.2	9.2	13.0	13.0	13.0	12.7	12.7	12.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.8	9.3	9.3	9.2	9.2	9.2	13.0	13.0	13.0	12.7	12.7	12.7
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	10.9			9.2			13.0			12.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.9			9.2			13.0			12.7		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.3	0.1	0.1	0.1	0.1	0.1	1.0	1.0	1.0	0.9	0.9	0.9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 92.3 Worst Case Level Of Service: F[799.9]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	236	0	107	0	1640	0	0	990	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	236	0	107	0	1640	0	0	990	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	236	0	107	0	1640	0	0	990	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	236	0	107	0	1640	0	0	990	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2135	2630	820	1810	2630	495	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	29	24	322	72	24	525	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	23	24	322	72	24	525	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	3.30	0.00	0.20	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.8	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	72	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	24.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	1156	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			799.9			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.6]

Street Name:	ASP NB on-ramp																							
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Yield Sign						Yield Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	0	0	0		0	1	2	0	0		0	0	1	1	0	
Volume Module:																								
Base Vol:	0	0	0	0	0	0	87	1200	0	0	1039	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	87	1200	0	0	1039	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	87	1200	0	0	1039	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	87	1200	0	0	1039	82
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1121	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	631	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	631	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.14	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.788
Loss Time (sec):	0	Average Delay (sec/veh):	16.8
Optimal Cycle:	180	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2
Volume Module:												
Base Vol:	0	284	163	797	748	212	89	38	19	0	0	524
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	284	163	797	748	212	89	38	19	0	0	524
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	284	163	797	748	212	89	38	19	0	0	524
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	284	163	797	748	212	89	38	19	0	0	524
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	284	163	797	748	212	89	38	19	0	0	524
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.92	0.97	0.97	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.00	1.27	0.73	2.00	0.78	0.22	0.61	0.26	0.13	0.00	0.00	2.00
Final Sat.:	0	2168	1244	3502	1431	406	1104	471	236	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.23	0.52	0.52	0.08	0.08	0.08	0.00	0.00	0.18
Crit Moves:					****			****				****
Green/Cycle:	0.00	0.14	0.14	0.57	0.71	0.71	0.09	0.09	0.09	0.00	0.00	0.77
Volume/Cap:	0.00	0.92	0.92	0.40	0.73	0.73	0.92	0.92	0.92	0.00	0.00	0.24
Delay/Veh:	0.0	49.6	49.6	7.8	7.8	7.8	76.9	76.9	76.9	0.0	0.0	2.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	49.6	49.6	7.8	7.8	7.8	76.9	76.9	76.9	0.0	0.0	2.1
LOS by Move:	A	D	D	A	A	A	E	E	E	A	A	A
HCM2kAvgQ:	0	8	8	5	13	13	6	6	6	0	0	2

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[12.4]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	76	1102	0	0	0	1181	73			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	76	1102	0	0	0	1181	73			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	76	1102	0	0	0	1181	73			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	76	1102	0	0	0	1181	73			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1254	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					562	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					562	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.14	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.6]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	1		7	195		0		0	0		0		0	17		0		1
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	0	1		7	195		0		0	0		0		0	17		0		1
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	0	1		7	195		0		0	0		0		0	17		0		1
Reduct Vol:	0	0	0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0	0	1		7	195		0		0	0		0		0	17		0		1
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4		6.5		6.2				
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5		4.0		3.3				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		1	xxxx	xxxxx	xxxx	xxxx	xxxxx		209		209		0				
Potent Cap.:	xxxx	xxxx	xxxxx		1635	xxxx	xxxxx	xxxx	xxxx	xxxxx		784		692		1091				
Move Cap.:	xxxx	xxxx	xxxxx		1635	xxxx	xxxxx	xxxx	xxxx	xxxxx		781		689		1091				
Volume/Cap:	xxxx	xxxx	xxxx		0.00	xxxx	xxxx	xxxx	xxxx	xxxx		0.02		0.00		0.00				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
Control Del:	xxxxx	xxxx	xxxxx		7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							
LOS by Move:	*	*	*		A	*	*	*	*	*	*	*	*							
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT					
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		0.1		xxxxx					
Shrd ConDel:	xxxxx	xxxx	xxxxx		7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		9.6		xxxxx					
Shared LOS:	*	*	*		A	*	*	*	*	*	*		A		*					
ApproachDel:	xxxxxx				xxxxxx			xxxxxx					9.6							
ApproachLOS:	*				*			*					A							

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[13.8]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0	18	8	15	27	164	277	75	119	103								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	18	8	15	27	164	277	75	119	103								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	18	8	15	27	164	277	75	119	103								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	18	8	15	27	164	277	75	119	103								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	677	816	171	222	xxxx	xxxxx	441	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	421	314	879	1359	xxxx	xxxxx	1130	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	393	286	879	1359	xxxx	xxxxx	1130	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.03	0.02	0.02	xxxx	xxxx	0.07	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	8.4	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	451	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.8	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*								
ApproachDel:	xxxxxx				13.8		xxxxxx			xxxxxx										
ApproachLOS:	*				B		*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.507
Loss Time (sec):	0	Average Delay (sec/veh):	12.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	1 0	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	0	261	0	0	323	0	0	0	0	136	1	107	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	261	0	0	323	0	0	0	0	136	1	107	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	261	0	0	323	0	0	0	0	136	1	107	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	261	0	0	323	0	0	0	0	136	1	107	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	261	0	0	323	0	0	0	0	136	1	107	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	580	632	0	0	638	0	0	0	0	530	571	642	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.41	xxxx	xxxx	0.51	xxxx	xxxx	xxxx	xxxx	0.26	0.00	0.17	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	11.9	0.0	0.0	13.9	0.0	0.0	0.0	0.0	11.2	8.7	8.9	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	11.9	0.0	0.0	13.9	0.0	0.0	0.0	0.0	11.2	8.7	8.9	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		11.9			13.9			xxxxxx			10.2		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		11.9			13.9			xxxxxx			10.2		
LOS by Appr:		B			B			*			B		
AllWayAvgQ:	0.0	0.6	0.0	0.9	0.9	0.9	0.0	0.0	0.0	0.3	0.0	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.549
Loss Time (sec):	0	Average Delay (sec/veh):	12.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L - T - R			L - T - R			L - T - R			L - T - R			
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	178	289	280	352	0	0	0	1	82	1	85	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	178	289	280	352	0	0	0	1	82	1	85	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	178	289	280	352	0	0	0	1	82	1	85	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	178	289	280	352	0	0	0	1	82	1	85	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	178	289	280	352	0	0	0	1	82	1	85	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.98	0.02	1.00	
Final Sat.:	0	607	692	587	641	0	0	456	500	453	11	547	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.29	0.42	0.48	0.55	xxxx	xxxx	0.00	0.00	0.18	0.09	0.16	
Crit Moves:			****		****				****	****			
Delay/Veh:	0.0	10.8	11.2	14.0	14.6	0.0	0.0	0.0	9.2	11.5	11.5	9.8	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.8	11.2	14.0	14.6	0.0	0.0	0.0	9.2	11.5	11.5	9.8	
LOS by Move:	*	B	B	B	B	*	*	*	A	B	B	A	
ApproachDel:	11.1			14.3			9.2			10.7			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	11.1			14.3			9.2			10.7			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.4	0.7	0.9	1.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.683
Loss Time (sec):	0	Average Delay (sec/veh):	7.7
Optimal Cycle:	59	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1088	78	190	1093	0	0	0	0	191	0	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1088	78	190	1093	0	0	0	0	191	0	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1088	78	190	1093	0	0	0	0	191	0	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1088	78	190	1093	0	0	0	0	191	0	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1088	78	190	1093	0	0	0	0	191	0	130
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.59	0.59	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.87	0.13	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3335	239	329	1894	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.33	0.58	0.58	0.00	0.00	0.00	0.00	0.11	0.00	0.08
Crit Moves:					****					****		
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.39	0.39	0.68	0.68	0.00	0.00	0.00	0.00	0.68	0.00	0.52
Delay/Veh:	0.0	1.9	1.9	3.9	3.9	0.0	0.0	0.0	0.0	46.7	0.0	40.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.9	1.9	3.9	3.9	0.0	0.0	0.0	0.0	46.7	0.0	40.8
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	5	5	9	9	0	0	0	0	7	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.599
Loss Time (sec):	0	Average Delay (sec/veh):	15.3
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	32	1067	167	40	708	194	50	237	9	67	190	245
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1067	167	40	708	194	50	237	9	67	190	245
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1067	167	40	708	194	50	237	9	67	190	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1067	167	40	708	194	50	237	9	67	190	245
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1067	167	40	708	194	50	237	9	67	190	245
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.23	0.93	0.93	0.14	0.92	0.92	0.28	0.99	0.99	0.47	0.92	0.92
Lanes:	1.00	1.73	0.27	1.00	1.57	0.43	1.00	0.96	0.04	1.00	0.44	0.56
Final Sat.:	445	3059	479	257	2743	752	536	1820	69	887	760	980
Capacity Analysis Module:												
Vol/Sat:	0.07	0.35	0.35	0.16	0.26	0.26	0.09	0.13	0.13	0.08	0.25	0.25
Crit Moves:		****									****	
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.42	0.42	0.42	0.42
Volume/Cap:	0.12	0.60	0.60	0.27	0.44	0.44	0.22	0.31	0.31	0.18	0.60	0.60
Delay/Veh:	9.6	13.9	13.9	11.3	11.9	11.9	19.2	19.7	19.7	18.6	24.0	24.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	13.9	13.9	11.3	11.9	11.9	19.2	19.7	19.7	18.6	24.0	24.0
LOS by Move:	A	B	B	B	B	B	B	B	B	B	C	C
HCM2kAvgQ:	1	13	13	1	8	8	1	5	5	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.271
Loss Time (sec):	0	Average Delay (sec/veh):	8.5
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	105	0	128	154	383	0	0	365	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	105	0	128	154	383	0	0	365	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	105	0	128	154	383	0	0	365	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	105	0	128	154	383	0	0	365	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	105	0	128	154	383	0	0	365	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.47	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	899	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.17	0.11	0.00	0.00	0.19	0.09
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.29	0.00	0.29	0.71	0.71	0.00	0.00	0.71	1.00
Volume/Cap:	0.00	0.00	0.00	0.10	0.00	0.27	0.24	0.15	0.00	0.00	0.27	0.09
Delay/Veh:	0.0	0.0	0.0	25.9	0.0	27.5	5.3	4.8	0.0	0.0	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.9	0.0	27.5	5.3	4.8	0.0	0.0	5.4	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	2	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
Loss Time (sec):	0	Average Delay (sec/veh):	16.1
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	85	262	3	19	174	261	245	281	101	2	505	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	262	3	19	174	261	245	281	101	2	505	61
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	262	3	19	174	261	245	281	101	2	505	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	262	3	19	174	261	245	281	101	2	505	61
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	262	3	19	174	261	245	281	101	2	505	61
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.96	0.96	0.85	0.34	1.00	0.85	0.52	0.98	0.98
Lanes:	0.24	0.75	0.01	0.10	0.90	1.00	1.00	1.00	1.00	1.00	0.89	0.11
Final Sat.:	402	1240	14	179	1636	1615	637	1900	1615	992	1668	201
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.11	0.11	0.16	0.38	0.15	0.06	0.00	0.30	0.30
Crit Moves:		****					****					
Green/Cycle:	0.35	0.35	0.35	0.35	0.35	0.35	0.65	0.65	0.65	0.65	0.65	0.65
Volume/Cap:	0.60	0.60	0.60	0.30	0.30	0.46	0.60	0.23	0.10	0.00	0.47	0.47
Delay/Veh:	28.1	28.1	28.1	23.6	23.6	25.4	12.6	7.5	6.7	6.3	9.3	9.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.1	28.1	28.1	23.6	23.6	25.4	12.6	7.5	6.7	6.3	9.3	9.3
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	9	9	9	4	4	6	5	4	1	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.794
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	70	Level Of Service:	B

Street Name:	Orange Grove Bl							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!	0	0	0	1	0	0	1
Volume Module:													
Base Vol:	3	613	295	109	1337	19	18	50	17	354	28	47	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	3	613	295	109	1337	19	18	50	17	354	28	47	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	3	613	295	109	1337	19	18	50	17	354	28	47	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	3	613	295	109	1337	19	18	50	17	354	28	47	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	3	613	295	109	1337	19	18	50	17	354	28	47	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.90	0.90	0.85	0.80	0.80	0.80	0.89	0.89	0.89	0.65	0.65	0.85	
Lanes:	0.01	1.99	1.00	0.15	1.82	0.03	0.21	0.59	0.20	0.93	0.07	1.00	
Final Sat.:	17	3413	1615	225	2765	39	357	991	337	1141	90	1615	
Capacity Analysis Module:													
Vol/Sat:	0.18	0.18	0.18	0.48	0.48	0.48	0.05	0.05	0.05	0.31	0.31	0.03	
Crit Moves:					****						****		
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39	
Volume/Cap:	0.29	0.29	0.30	0.79	0.79	0.79	0.13	0.13	0.13	0.79	0.79	0.07	
Delay/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.6	19.6	19.6	35.7	35.7	19.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	9.4	9.4	9.5	17.2	17.2	17.2	19.6	19.6	19.6	35.7	35.7	19.2	
LOS by Move:	A	A	A	B	B	B	B	B	B	D	D	B	
HCM2kAvgQ:	5	5	4	20	20	20	2	2	2	12	12	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.524
Loss Time (sec):	0	Average Delay (sec/veh):	9.5
Optimal Cycle:	30	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	173	1306	8	5	919	61	178	10	96	13	23	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	1306	8	5	919	61	178	10	96	13	23	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	1306	8	5	919	61	178	10	96	13	23	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	1306	8	5	919	61	178	10	96	13	23	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	1306	8	5	919	61	178	10	96	13	23	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	0.95	0.95	0.16	0.94	0.94	0.65	0.65	0.85	0.88	0.88	0.88
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.95	0.05	1.00	0.15	0.27	0.58
Final Sat.:	466	3584	22	296	3355	223	1169	66	1615	259	459	958
Capacity Analysis Module:												
Vol/Sat:	0.37	0.36	0.36	0.02	0.27	0.27	0.15	0.15	0.06	0.05	0.05	0.05
Crit Moves:	****							****				
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.52	0.51	0.51	0.02	0.39	0.39	0.52	0.52	0.20	0.17	0.17	0.17
Delay/Veh:	8.3	6.8	6.8	4.3	5.9	5.9	31.1	31.1	27.0	26.7	26.7	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.3	6.8	6.8	4.3	5.9	5.9	31.1	31.1	27.0	26.7	26.7	26.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	3	10	10	0	6	6	5	5	2	2	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.532
Loss Time (sec):	0	Average Delay (sec/veh):	12.3
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	184	0	300	388	404	0	0	338	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	184	0	300	388	404	0	0	338	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	184	0	300	388	404	0	0	338	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	184	0	300	388	404	0	0	338	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	184	0	300	388	404	0	0	338	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.89	1.00	0.89	0.48	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.38	0.00	1.62	1.00	2.00	0.00	0.00	1.59	0.41
Final Sat.:	0	0	0	2334	0	2739	919	3610	0	0	2790	710
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.11	0.42	0.11	0.00	0.00	0.12	0.12
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.79	0.79	0.00	0.00	0.79	0.79
Volume/Cap:	0.00	0.00	0.00	0.38	0.00	0.53	0.53	0.14	0.00	0.00	0.15	0.15
Delay/Veh:	0.0	0.0	0.0	34.4	0.0	36.0	4.4	2.4	0.0	0.0	2.4	2.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	34.4	0.0	36.0	4.4	2.4	0.0	0.0	2.4	2.4
LOS by Move:	A	A	A	C	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	6	5	2	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	0	Average Delay (sec/veh):	14.7
Optimal Cycle:	30	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	56	685	21	116	589	51	135	303	106	21	233	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	685	21	116	589	51	135	303	106	21	233	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	685	21	116	589	51	135	303	106	21	233	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	685	21	116	589	51	135	303	106	21	233	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	685	21	116	589	51	135	303	106	21	233	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.28	1.00	0.85	0.43	0.91	0.91	0.36	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.43	0.57
Final Sat.:	647	1900	1615	542	1900	1615	810	2570	899	684	2478	978
Capacity Analysis Module:												
Vol/Sat:	0.09	0.36	0.01	0.21	0.31	0.03	0.17	0.12	0.12	0.03	0.09	0.09
Crit Moves:		****					****					
Green/Cycle:	0.68	0.68	0.68	0.68	0.68	0.68	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.13	0.53	0.02	0.31	0.45	0.05	0.53	0.37	0.37	0.10	0.30	0.30
Delay/Veh:	5.6	8.2	5.1	6.8	7.5	5.2	30.1	26.7	26.7	24.3	26.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.6	8.2	5.1	6.8	7.5	5.2	30.1	26.7	26.7	24.3	26.0	26.0
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	11	0	2	8	1	4	5	5	1	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.577
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	54	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	64	988	26	88	977	34	62	219	82	59	215	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	988	26	88	977	34	62	219	82	59	215	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	988	26	88	977	34	62	219	82	59	215	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	988	26	88	977	34	62	219	82	59	215	161
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	988	26	88	977	34	62	219	82	59	215	161
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.95	0.94	0.94
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.73	0.27	1.00	0.57	0.43
Final Sat.:	1805	3504	92	1805	3471	121	1805	1326	496	1805	1017	761
Capacity Analysis Module:												
Vol/Sat:	0.04	0.28	0.28	0.05	0.28	0.28	0.03	0.17	0.17	0.03	0.21	0.21
Crit Moves:		****		****			****				****	
Green/Cycle:	0.06	0.49	0.49	0.08	0.51	0.51	0.36	0.36	0.36	0.07	0.37	0.37
Volume/Cap:	0.55	0.58	0.58	0.58	0.55	0.55	0.26	0.46	0.46	0.46	0.58	0.58
Delay/Veh:	51.1	18.7	18.7	49.4	17.1	17.1	23.5	25.4	25.4	47.3	26.7	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.1	18.7	18.7	49.4	17.1	17.1	23.5	25.4	25.4	47.3	26.7	26.7
LOS by Move:	D	B	B	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	3	12	12	4	11	11	2	7	7	2	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.477
Loss Time (sec):	0	Average Delay (sec/veh):	12.7
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	161	0	127	0	0	0	0	888	119	96	747	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	0	127	0	0	0	0	888	119	96	747	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	0	127	0	0	0	0	888	119	96	747	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	0	127	0	0	0	0	888	119	96	747	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	0	127	0	0	0	0	888	119	96	747	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	1.00	0.79	1.00	1.00	1.00	1.00	0.93	0.93	0.20	0.95	1.00
Lanes:	0.56	0.00	0.44	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00
Final Sat.:	835	0	658	0	0	0	0	3127	419	388	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.28	0.28	0.25	0.21	0.00
Crit Moves:	****							****				
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.60	0.60	0.60	0.60	0.00
Volume/Cap:	0.48	0.00	0.48	0.00	0.00	0.00	0.00	0.48	0.48	0.42	0.35	0.00
Delay/Veh:	22.6	0.0	22.6	0.0	0.0	0.0	0.0	11.6	11.6	12.1	10.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.6	0.0	22.6	0.0	0.0	0.0	0.0	11.6	11.6	12.1	10.4	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	7	0	7	0	0	0	0	9	9	2	6	0

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	20.8
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	90	0	326	291	734	0	0	633	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	0	326	291	734	0	0	633	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	0	326	291	734	0	0	633	124
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	0	326	291	734	0	0	633	124
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	90	0	326	291	734	0	0	633	124
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.67	0.33
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	2944	577
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.20	0.16	0.20	0.00	0.00	0.21	0.21
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.28	0.65	0.00	0.00	0.37	0.37
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.58	0.58	0.31	0.00	0.00	0.58	0.58
Delay/Veh:	0.0	0.0	0.0	21.8	0.0	28.0	32.7	7.7	0.0	0.0	25.8	25.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.8	0.0	28.0	32.7	7.7	0.0	0.0	25.8	25.8
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	9	8	5	0	0	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.693
Loss Time (sec):	0	Average Delay (sec/veh):	30.5
Optimal Cycle:	61	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	150	0	291	0	0	304	0	723	266	230	418	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	150	0	291	0	0	304	0	723	266	230	418	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	150	0	291	0	0	304	0	723	266	230	418	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	0	291	0	0	304	0	723	266	230	418	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	150	0	291	0	0	304	0	723	266	230	418	294
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.18	0.00	0.00	0.18	0.00	0.20	0.16	0.13	0.12	0.18
Crit Moves:			****			****		****		****		
Green/Cycle:	0.26	0.00	0.26	0.00	0.00	0.27	0.00	0.29	0.29	0.18	0.47	0.47
Volume/Cap:	0.16	0.00	0.69	0.00	0.00	0.69	0.00	0.69	0.57	0.69	0.24	0.38
Delay/Veh:	28.7	0.0	38.3	0.0	0.0	37.7	0.0	33.6	31.9	44.4	15.8	17.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	38.3	0.0	0.0	37.7	0.0	33.6	31.9	44.4	15.8	17.3
LOS by Move:	C	A	D	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	9	0	0	10	0	11	8	8	4	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.618
Loss Time (sec):	0	Average Delay (sec/veh):	18.5
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	151	596	41	53	594	43	107	827	198	36	762	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	151	596	41	53	594	43	107	827	198	36	762	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	151	596	41	53	594	43	107	827	198	36	762	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	596	41	53	594	43	107	827	198	36	762	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	151	596	41	53	594	43	107	827	198	36	762	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	1.00	0.85	0.24	1.00	0.85	0.22	0.92	0.92	0.15	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.61	0.39	1.00	1.84	0.16
Final Sat.:	463	1900	1615	461	1900	1615	410	2828	677	278	3278	288
Capacity Analysis Module:												
Vol/Sat:	0.33	0.31	0.03	0.12	0.31	0.03	0.26	0.29	0.29	0.13	0.23	0.23
Crit Moves:	****							****				
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	0.62	0.60	0.05	0.22	0.59	0.05	0.55	0.62	0.62	0.27	0.49	0.49
Delay/Veh:	21.3	17.3	11.5	13.1	17.2	11.5	22.2	20.3	20.3	17.1	18.3	18.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.3	17.3	11.5	13.1	17.2	11.5	22.2	20.3	20.3	17.1	18.3	18.3
LOS by Move:	C	B	B	B	B	B	C	C	C	B	B	B
HCM2kAvgQ:	4	13	1	1	13	1	3	13	13	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.898
Loss Time (sec):	0	Average Delay (sec/veh):	29.7
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	403	841	69	55	1176	60	79	269	536	98	332	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	403	841	69	55	1176	60	79	269	536	98	332	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	403	841	69	55	1176	60	79	269	536	98	332	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	403	841	69	55	1176	60	79	269	536	98	332	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	403	841	69	55	1176	60	79	269	536	98	332	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.42	0.86	0.86	0.16	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.76	0.24
Final Sat.:	1805	3610	1615	1805	3410	174	789	1625	1625	306	3122	423
Capacity Analysis Module:												
Vol/Sat:	0.22	0.23	0.04	0.03	0.34	0.34	0.10	0.17	0.33	0.32	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.63	0.56	0.56	0.46	0.38	0.38	0.37	0.37	0.37	0.37	0.37	0.37
Volume/Cap:	0.77	0.42	0.08	0.15	0.90	0.90	0.27	0.45	0.90	0.87	0.29	0.29
Delay/Veh:	32.3	12.8	10.2	15.4	37.1	37.1	22.8	24.2	41.6	77.0	22.5	22.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.3	12.8	10.2	15.4	37.1	37.1	22.8	24.2	41.6	77.0	22.5	22.5
LOS by Move:	C	B	B	B	D	D	C	C	D	E	C	C
HCM2kAvgQ:	11	8	1	1	23	23	2	7	20	5	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.382
Loss Time (sec):	0	Average Delay (sec/veh):	101.2
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	105	656	311	67	1045	188	190	671	53	737	1744	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	656	311	67	1045	188	190	671	53	737	1744	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	656	311	67	1045	188	190	671	53	737	1744	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	656	311	67	1045	188	190	671	53	737	1744	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	656	311	67	1045	188	190	671	53	737	1744	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.07	1.00	0.85	0.25	1.00	0.85	0.95	0.90	0.90	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	3.00	1.00
Final Sat.:	126	1900	1615	484	1900	1615	1805	4754	376	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.83	0.35	0.19	0.14	0.55	0.12	0.11	0.14	0.14	0.41	0.34	0.04
Crit Moves:	****							****		****		
Green/Cycle:	0.60	0.60	0.60	0.60	0.60	0.60	0.09	0.10	0.10	0.30	0.30	0.30
Volume/Cap:	1.38	0.57	0.32	0.23	0.91	0.19	1.11	1.38	1.38	1.38	1.11	0.14
Delay/Veh:	254.4	12.8	10.0	9.6	28.7	9.0	146.7	228	228.3	218.4	94.1	25.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	254.4	12.8	10.0	9.6	28.7	9.0	146.7	228	228.3	218.4	94.1	25.5
LOS by Move:	F	B	A	A	C	A	F	F	F	F	F	C
HCM2kAvgQ:	9	12	5	1	32	3	11	19	19	49	31	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.044
Loss Time (sec):	0	Average Delay (sec/veh):	42.9
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	904	0	608	415	522	0	0	1398	887
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	904	0	608	415	522	0	0	1398	887
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	904	0	608	415	522	0	0	1398	887
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	904	0	608	415	522	0	0	1398	887
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	904	0	608	415	522	0	0	1398	887
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.00	0.38	0.12	0.10	0.00	0.00	0.27	0.55
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.11	0.64	0.00	0.00	0.53	0.53
Volume/Cap:	0.00	0.00	0.00	0.72	0.00	1.04	1.04	0.16	0.00	0.00	0.51	1.04
Delay/Veh:	0.0	0.0	0.0	29.6	0.0	81.3	101.5	7.2	0.0	0.0	15.5	66.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.6	0.0	81.3	101.5	7.2	0.0	0.0	15.5	66.7
LOS by Move:	A	A	A	C	A	F	F	A	A	A	B	E
HCM2kAvgQ:	0	0	0	13	0	27	12	2	0	0	10	38

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.910
Loss Time (sec):	0	Average Delay (sec/veh):	29.8
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	139	709	3	194	891	72	146	914	192	294	797	166
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	709	3	194	891	72	146	914	192	294	797	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	709	3	194	891	72	146	914	192	294	797	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	709	3	194	891	72	146	914	192	294	797	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	709	3	194	891	72	146	914	192	294	797	166
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.17	0.95	0.85	0.27	0.94	0.94	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.85	0.15	1.00	1.65	0.35	1.00	1.66	0.34
Final Sat.:	322	3610	1615	507	3303	267	1805	2906	610	1805	2910	606
Capacity Analysis Module:												
Vol/Sat:	0.43	0.20	0.00	0.38	0.27	0.27	0.08	0.31	0.31	0.16	0.27	0.27
Crit Moves:	****							****		****		
Green/Cycle:	0.48	0.48	0.48	0.48	0.48	0.48	0.12	0.35	0.35	0.41	0.41	0.41
Volume/Cap:	0.91	0.41	0.00	0.81	0.57	0.57	0.68	0.91	0.91	0.74	0.68	0.68
Delay/Veh:	71.3	17.3	13.8	40.1	19.3	19.3	50.4	41.4	41.4	28.2	25.7	25.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.3	17.3	13.8	40.1	19.3	19.3	50.4	41.4	41.4	28.2	25.7	25.7
LOS by Move:	E	B	B	D	B	B	D	D	D	C	C	C
HCM2kAvgQ:	7	7	0	7	11	11	6	21	21	9	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 0 Average Delay (sec/veh): 19.5
Optimal Cycle: 46 Level Of Service: B

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	167	137	25	218	278	81	104	722	174	47	838	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	167	137	25	218	278	81	104	722	174	47	838	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	167	137	25	218	278	81	104	722	174	47	838	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	137	25	218	278	81	104	722	174	47	838	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	167	137	25	218	278	81	104	722	174	47	838	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.18	0.92	0.92	0.21	0.93	0.93
Lanes:	1.00	0.85	0.15	1.00	0.77	0.23	1.00	1.61	0.39	1.00	1.69	0.31
Final Sat.:	1805	1570	286	1805	1422	414	339	2824	681	401	2975	550
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.09	0.12	0.20	0.20	0.31	0.26	0.26	0.12	0.28	0.28
Crit Moves:	****				****		****					
Green/Cycle:	0.36	0.20	0.20	0.48	0.33	0.33	0.52	0.52	0.52	0.52	0.52	0.52
Volume/Cap:	0.37	0.43	0.43	0.33	0.60	0.60	0.60	0.50	0.50	0.23	0.55	0.55
Delay/Veh:	23.3	35.6	35.6	15.8	29.6	29.6	22.4	15.9	15.9	13.8	16.7	16.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.3	35.6	35.6	15.8	29.6	29.6	22.4	15.9	15.9	13.8	16.7	16.7
LOS by Move:	C	D	D	B	C	C	C	B	B	B	B	B
HCM2kAvgQ:	4	5	5	4	10	10	3	9	9	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.613
Loss Time (sec):	0	Average Delay (sec/veh):	19.1
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	0	518	135	436	725	4	1	1	1	137	2	298	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	518	135	436	725	4	1	1	1	137	2	298	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	518	135	436	725	4	1	1	1	137	2	298	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	518	135	436	725	4	1	1	1	137	2	298	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	518	135	436	725	4	1	1	1	137	2	298	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	1.00	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.74	0.74	0.85	
Lanes:	1.00	1.59	0.41	1.00	1.99	0.01	0.33	0.33	0.33	0.99	0.01	1.00	
Final Sat.:	1900	2775	723	1805	3587	20	584	584	584	1385	20	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.19	0.19	0.24	0.20	0.20	0.00	0.00	0.00	0.10	0.10	0.18	
Crit Moves:		****		****								****	
Green/Cycle:	0.00	0.30	0.30	0.70	0.70	0.70	0.30	0.30	0.30	0.30	0.30	0.30	
Volume/Cap:	0.00	0.61	0.61	0.53	0.29	0.29	0.01	0.01	0.01	0.33	0.33	0.61	
Delay/Veh:	0.0	30.8	30.8	12.1	5.7	5.7	24.5	24.5	24.5	27.6	27.6	32.3	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	30.8	30.8	12.1	5.7	5.7	24.5	24.5	24.5	27.6	27.6	32.3	
LOS by Move:	A	C	C	B	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	0	10	10	7	4	4	0	0	0	3	3	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.712
Loss Time (sec):	0	Average Delay (sec/veh):	30.5
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Permitted						Protected					
Rights:			Include						Include						Include						Include			
Min. Green:	0	0		0			0	0		0			0	0		0			0	0		0		
Y+R:	4.0	4.0		4.0			4.0	4.0		4.0			4.0	4.0		4.0			4.0	4.0		4.0		
Lanes:	1	0	1	0	1		1	0	1	0	1		1	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	361	163		34			93	271		45			11	228		305			67	320		33		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	361	163		34			93	271		45			11	228		305			67	320		33		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Volume:	361	163		34			93	271		45			11	228		305			67	320		33		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Reduced Vol:	361	163		34			93	271		45			11	228		305			67	320		33		
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
FinalVolume:	361	163		34			93	271		45			11	228		305			67	320		33		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900	1900		1900			1900	1900		1900		
Adjustment:	0.92	0.96		0.82			0.92	0.96		0.82			0.38	0.88		0.88			0.92	0.95		0.95		
Lanes:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	0.43		0.57			1.00	0.91		0.09		
Final Sat.:	1742	1833		1558			1742	1833		1558			729	717		959			1742	1639		169		
Capacity Analysis Module:																								
Vol/Sat:	0.21	0.09		0.02			0.05	0.15		0.03			0.02	0.32		0.32			0.04	0.20		0.20		
Crit Moves:	****							****						****					****					
Green/Cycle:	0.29	0.29		0.29			0.21	0.21		0.21			0.45	0.45		0.45			0.05	0.50		0.50		
Volume/Cap:	0.71	0.31		0.07			0.26	0.71		0.14			0.03	0.71		0.71			0.71	0.39		0.39		
Delay/Veh:	36.4	27.9		25.7			33.5	43.0		32.5			15.6	25.6		25.6			68.8	15.8		15.8		
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	36.4	27.9		25.7			33.5	43.0		32.5			15.6	25.6		25.6			68.8	15.8		15.8		
LOS by Move:	D	C		C			C	D		C			B	C		C			E	B		B		
HCM2kAvgQ:	11	4		1			3	9		1			0	14		14			3	7		7		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	0	Average Delay (sec/veh):	17.2
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	0	1! 0 0 0 0 1! 0 0
Volume Module:													
Base Vol:	13	532	183	140	795	13	16	74	7	240	102	78	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	13	532	183	140	795	13	16	74	7	240	102	78	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	13	532	183	140	795	13	16	74	7	240	102	78	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	13	532	183	140	795	13	16	74	7	240	102	78	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	13	532	183	140	795	13	16	74	7	240	102	78	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.23	0.91	0.91	0.27	0.95	0.95	0.92	0.92	0.92	0.76	0.76	0.76	
Lanes:	1.00	1.49	0.51	1.00	1.97	0.03	0.16	0.76	0.07	0.57	0.24	0.19	
Final Sat.:	437	2583	888	511	3543	58	288	1333	126	830	353	270	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.21	0.21	0.27	0.22	0.22	0.06	0.06	0.06	0.29	0.29	0.29	
Crit Moves:				****							****		
Green/Cycle:	0.49	0.49	0.49	0.49	0.49	0.49	0.51	0.51	0.51	0.51	0.51	0.51	
Volume/Cap:	0.06	0.42	0.42	0.56	0.46	0.46	0.11	0.11	0.11	0.56	0.56	0.56	
Delay/Veh:	13.7	16.8	16.8	21.1	17.2	17.2	12.6	12.6	12.6	17.7	17.7	17.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	13.7	16.8	16.8	21.1	17.2	17.2	12.6	12.6	12.6	17.7	17.7	17.7	
LOS by Move:	B	B	B	C	B	B	B	B	B	B	B	B	
HCM2kAvgQ:	0	7	7	4	9	9	2	2	2	9	9	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.644
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Monterey Rd						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	240	348	21	58	505	76	56	166	437	33	242	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	240	348	21	58	505	76	56	166	437	33	242	153
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	240	348	21	58	505	76	56	166	437	33	242	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	240	348	21	58	505	76	56	166	437	33	242	153
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	240	348	21	58	505	76	56	166	437	33	242	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.45	1.00	0.85	0.46	0.85	0.85	0.31	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	644	1900	1615	861	1900	1615	874	1609	1609	596	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.37	0.18	0.01	0.07	0.27	0.05	0.06	0.10	0.27	0.06	0.13	0.09
Crit Moves:	****								****			
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.42	0.42	0.42	0.42
Volume/Cap:	0.64	0.32	0.02	0.12	0.46	0.08	0.15	0.24	0.64	0.13	0.30	0.22
Delay/Veh:	18.0	11.1	9.0	9.6	12.4	9.4	18.1	18.7	24.5	17.9	19.4	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.0	11.1	9.0	9.6	12.4	9.4	18.1	18.7	24.5	17.9	19.4	18.6
LOS by Move:	B	B	A	A	B	A	B	B	C	B	B	B
HCM2kAvgQ:	6	5	0	1	9	1	1	3	12	1	5	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	0	Average Delay (sec/veh):	22.1
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	84	410	64	85	914	74	54	290	163	74	190	56	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	84	410	64	85	914	74	54	290	163	74	190	56	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	84	410	64	85	914	74	54	290	163	74	190	56	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	84	410	64	85	914	74	54	290	163	74	190	56	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	84	410	64	85	914	74	54	290	163	74	190	56	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.90	0.90	0.90	0.79	0.79	0.79	
Lanes:	1.00	1.73	0.27	1.00	1.85	0.15	0.11	0.57	0.32	0.23	0.59	0.17	
Final Sat.:	1805	3059	478	1805	3302	267	181	974	547	346	890	262	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.13	0.13	0.05	0.28	0.28	0.30	0.30	0.30	0.21	0.21	0.21	
Crit Moves:					****			****					
Green/Cycle:	0.07	0.39	0.39	0.45	0.45	0.45	0.48	0.48	0.48	0.48	0.48	0.48	
Volume/Cap:	0.62	0.35	0.35	0.22	0.62	0.62	0.62	0.62	0.62	0.45	0.45	0.45	
Delay/Veh:	53.5	22.0	22.0	17.6	22.0	22.0	20.8	20.8	20.8	17.7	17.7	17.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	53.5	22.0	22.0	17.6	22.0	22.0	20.8	20.8	20.8	17.7	17.7	17.7	
LOS by Move:	D	C	C	B	C	C	C	C	C	B	B	B	
HCM2kAvgQ:	4	5	5	2	13	13	12	12	12	7	7	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.667
Loss Time (sec):	0	Average Delay (sec/veh):	12.1
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	11	475	156	304	1255	1	8	10	0	137	21	184	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	11	475	156	304	1255	1	8	10	0	137	21	184	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	11	475	156	304	1255	1	8	10	0	137	21	184	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	11	475	156	304	1255	1	8	10	0	137	21	184	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	11	475	156	304	1255	1	8	10	0	137	21	184	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.16	0.91	0.91	0.36	0.95	0.95	0.89	0.89	1.00	0.81	0.81	0.81	
Lanes:	1.00	1.51	0.49	1.00	2.00	0.00	0.44	0.56	0.00	0.40	0.06	0.54	
Final Sat.:	299	2617	859	685	3607	3	749	937	0	615	94	826	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.18	0.18	0.44	0.35	0.35	0.01	0.01	0.00	0.22	0.22	0.22	
Crit Moves:				****							****		
Green/Cycle:	0.67	0.67	0.67	0.67	0.67	0.67	0.33	0.33	0.00	0.33	0.33	0.33	
Volume/Cap:	0.06	0.27	0.27	0.67	0.52	0.52	0.03	0.03	0.00	0.67	0.67	0.67	
Delay/Veh:	5.9	6.9	6.9	13.8	8.8	8.8	22.4	22.4	0.0	31.9	31.9	31.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	5.9	6.9	6.9	13.8	8.8	8.8	22.4	22.4	0.0	31.9	31.9	31.9	
LOS by Move:	A	A	A	B	A	A	C	C	A	C	C	C	
HCM2kAvgQ:	0	4	4	7	10	10	0	0	0	10	10	10	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.631
Loss Time (sec):	0	Average Delay (sec/veh):	13.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	87	67	52	113	295	79	16	149	59	39	132	34	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	87	67	52	113	295	79	16	149	59	39	132	34	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	87	67	52	113	295	79	16	149	59	39	132	34	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	87	67	52	113	295	79	16	149	59	39	132	34	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	87	67	52	113	295	79	16	149	59	39	132	34	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.56	0.44	1.00	0.79	0.21	0.07	0.67	0.26	0.19	0.64	0.17	
Final Sat.:	487	307	238	534	467	125	40	376	149	105	356	92	
Capacity Analysis Module:													
Vol/Sat:	0.18	0.22	0.22	0.21	0.63	0.63	0.40	0.40	0.40	0.37	0.37	0.37	
Crit Moves:		****			****			****			****		
Delay/Veh:	11.0	10.4	10.4	11.0	17.6	17.6	12.4	12.4	12.4	12.2	12.2	12.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	11.0	10.4	10.4	11.0	17.6	17.6	12.4	12.4	12.4	12.2	12.2	12.2	
LOS by Move:	B	B	B	B	C	C	B	B	B	B	B	B	
ApproachDel:		10.7			16.0			12.4			12.2		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		10.7			16.0			12.4			12.2		
LOS by Appr:		B			C			B			B		
AllWayAvgQ:	0.2	0.2	0.2	0.3	1.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0	Average Delay (sec/veh):	24.1
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	129	397	104	397	776	25	59	288	370	81	89	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	397	104	397	776	25	59	288	370	81	89	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	129	397	104	397	776	25	59	288	370	81	89	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	397	104	397	776	25	59	288	370	81	89	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	397	104	397	776	25	59	288	370	81	89	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.64	1.00	0.85	0.40	1.00	0.85
Lanes:	1.00	1.58	0.42	1.00	1.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2772	726	1805	3481	112	1216	1900	1615	766	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.14	0.14	0.22	0.22	0.22	0.05	0.15	0.23	0.11	0.05	0.07
Crit Moves:		****		****					****			
Green/Cycle:	0.15	0.24	0.24	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.48	0.59	0.59	0.53	0.48	0.48	0.13	0.39	0.59	0.27	0.12	0.19
Delay/Veh:	40.4	34.7	34.7	19.1	18.7	18.7	19.9	22.5	25.9	21.5	19.8	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.4	34.7	34.7	19.1	18.7	18.7	19.9	22.5	25.9	21.5	19.8	20.4
LOS by Move:	D	C	C	B	B	B	B	C	C	C	B	C
HCM2kAvgQ:	4	8	8	9	9	9	1	6	10	2	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.536
Loss Time (sec):	0	Average Delay (sec/veh):	7.7
Optimal Cycle:	31	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	143	581	37	24	1142	231	71	43	60	81	89	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	581	37	24	1142	231	71	43	60	81	89	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	143	581	37	24	1142	231	71	43	60	81	89	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	581	37	24	1142	231	71	43	60	81	89	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	143	581	37	24	1142	231	71	43	60	81	89	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.17	0.94	0.94	0.39	0.93	0.93	0.60	0.91	0.91	0.46	0.87	0.87
Lanes:	1.00	1.88	0.12	1.00	1.66	0.34	1.00	0.42	0.58	1.00	2.15	0.85
Final Sat.:	322	3363	214	747	2927	592	1134	724	1010	877	3565	1402
Capacity Analysis Module:												
Vol/Sat:	0.44	0.17	0.17	0.03	0.39	0.39	0.06	0.06	0.06	0.09	0.02	0.02
Crit Moves:	****									****		
Green/Cycle:	0.83	0.83	0.83	0.83	0.83	0.83	0.17	0.17	0.17	0.17	0.17	0.17
Volume/Cap:	0.54	0.21	0.21	0.04	0.47	0.47	0.36	0.34	0.34	0.54	0.14	0.14
Delay/Veh:	4.8	1.8	1.8	1.6	2.6	2.6	37.7	37.1	37.1	41.5	35.2	35.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.8	1.8	1.8	1.6	2.6	2.6	37.7	37.1	37.1	41.5	35.2	35.2
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	7	7	2	3	3	3	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.811
Loss Time (sec):	0	Average Delay (sec/veh):	37.2
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	266	351	225	378	1212	52	13	969	187	219	676	173	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	266	351	225	378	1212	52	13	969	187	219	676	173	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	266	351	225	378	1212	52	13	969	187	219	676	173	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	266	351	225	378	1212	52	13	969	187	219	676	173	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	266	351	225	378	1212	52	13	969	187	219	676	173	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.93	0.93	0.95	0.92	0.92	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.68	0.32	1.00	1.59	0.41	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2952	570	1805	2786	713	
Capacity Analysis Module:													
Vol/Sat:	0.15	0.10	0.14	0.21	0.34	0.03	0.01	0.33	0.33	0.12	0.24	0.24	
Crit Moves:	****				****			****					
Green/Cycle:	0.36	0.21	0.21	0.52	0.36	0.36	0.35	0.35	0.35	0.13	0.47	0.47	
Volume/Cap:	0.74	0.47	0.67	0.56	0.93	0.09	0.13	0.93	0.93	0.93	0.52	0.52	
Delay/Veh:	33.4	35.3	41.9	16.4	43.0	21.2	25.9	43.9	43.9	83.6	19.0	19.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	33.4	35.3	41.9	16.4	43.0	21.2	25.9	43.9	43.9	83.6	19.0	19.0	
LOS by Move:	C	D	D	B	D	C	C	D	D	F	B	B	
HCM2kAvgQ:	9	5	8	8	24	1	0	23	23	10	10	10	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.429
Loss Time (sec):	0	Average Delay (sec/veh):	16.8
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	0	1	0	0	0 1	1	0	2 0	0
Volume Module:												
Base Vol:	307	33	34	32	0	105	91	760	0	0	840	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	307	33	34	32	0	105	91	760	0	0	840	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	307	33	34	32	0	105	91	760	0	0	840	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	307	33	34	32	0	105	91	760	0	0	840	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	307	33	34	32	0	105	91	760	0	0	840	29
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.24	0.95	1.00	1.00	0.95	0.95
Lanes:	1.70	0.15	0.15	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.93	0.07
Final Sat.:	3054	269	278	1805	0	1615	453	3610	0	0	3472	120
Capacity Analysis Module:												
Vol/Sat:	0.10	0.12	0.12	0.02	0.00	0.07	0.20	0.21	0.00	0.00	0.24	0.24
Crit Moves:		****				****					****	
Green/Cycle:	0.29	0.29	0.29	0.15	0.00	0.15	0.56	0.56	0.00	0.00	0.56	0.56
Volume/Cap:	0.35	0.43	0.43	0.12	0.00	0.43	0.36	0.37	0.00	0.00	0.43	0.43
Delay/Veh:	28.6	29.5	29.5	36.8	0.0	39.7	12.8	12.2	0.0	0.0	12.7	12.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.6	29.5	29.5	36.8	0.0	39.7	12.8	12.2	0.0	0.0	12.7	12.7
LOS by Move:	C	C	C	D	A	D	B	B	A	A	B	B
HCM2kAvgQ:	5	6	6	1	0	3	2	7	0	0	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.772
Loss Time (sec):	0	Average Delay (sec/veh):	14.0
Optimal Cycle:	63	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	117	302	59	79	465	109	86	975	173	90	1691	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	302	59	79	465	109	86	975	173	90	1691	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	117	302	59	79	465	109	86	975	173	90	1691	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	302	59	79	465	109	86	975	173	90	1691	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	117	302	59	79	465	109	86	975	173	90	1691	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	0.93	0.93	0.40	0.92	0.92	0.09	0.89	0.89	0.20	0.90	0.90
Lanes:	1.00	1.67	0.33	1.00	1.62	0.38	1.00	2.55	0.45	1.00	2.83	0.17
Final Sat.:	475	2946	576	765	2841	666	164	4306	764	382	4850	293
Capacity Analysis Module:												
Vol/Sat:	0.25	0.10	0.10	0.10	0.16	0.16	0.53	0.23	0.23	0.24	0.35	0.35
Crit Moves:	****						****					
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.68	0.68	0.68	0.68	0.68	0.68
Volume/Cap:	0.77	0.32	0.32	0.32	0.51	0.51	0.77	0.33	0.33	0.35	0.51	0.51
Delay/Veh:	52.2	26.0	26.0	26.6	28.1	28.1	38.4	6.6	6.6	7.5	7.9	7.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.2	26.0	26.0	26.6	28.1	28.1	38.4	6.6	6.6	7.5	7.9	7.9
LOS by Move:	D	C	C	C	C	C	D	A	A	A	A	A
HCM2kAvgQ:	5	4	4	2	8	8	4	5	5	2	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.372
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	23	Level Of Service:	B

****

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	27	337	39	0	0	0	54	186	0	0	748	158
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	337	39	0	0	0	54	186	0	0	748	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	337	39	0	0	0	54	186	0	0	748	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	337	39	0	0	0	54	186	0	0	748	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	337	39	0	0	0	54	186	0	0	748	158
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	1.00	1.00	1.00	0.26	0.95	1.00	1.00	0.93	0.93
Lanes:	0.13	1.67	0.19	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.65	0.35
Final Sat.:	236	2945	341	0	0	0	501	3610	0	0	2902	613
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.00	0.00	0.00	0.11	0.05	0.00	0.00	0.26	0.26
Crit Moves:		****									****	
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.69	0.69
Volume/Cap:	0.37	0.37	0.37	0.00	0.00	0.00	0.16	0.07	0.00	0.00	0.37	0.37
Delay/Veh:	27.3	27.3	27.3	0.0	0.0	0.0	5.5	5.0	0.0	0.0	6.5	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.3	27.3	27.3	0.0	0.0	0.0	5.5	5.0	0.0	0.0	6.5	6.5
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	5	5	0	0	0	1	1	0	0	6	6

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.282
Loss Time (sec):	0	Average Delay (sec/veh):	12.1
Optimal Cycle:	20	Level Of Service:	B

****

Street Name:	I-5 SB ramps									Pasadena Av								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted					Permitted					Permitted					Permitted				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Y+R:	4.0	4.0	4.0			4.0	4.0	4.0			4.0	4.0	4.0			4.0	4.0	4.0		
Lanes:	0	0	0	0	0	0	1	0	1	1	0	0	1	1	0	1	0	2	0	0
Volume Module:																				
Base Vol:	0	0	0			38	132	297			0	182	119			111	671	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			38	132	297			0	182	119			111	671	0		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	0			38	132	297			0	182	119			111	671	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Reduced Vol:	0	0	0			38	132	297			0	182	119			111	671	0		
PCE Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
FinalVolume:	0	0	0			38	132	297			0	182	119			111	671	0		
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900			1900	1900	1900			1900	1900	1900			1900	1900	1900		
Adjustment:	1.00	1.00	1.00			0.85	0.85	0.85			1.00	0.89	0.89			0.54	0.95	1.00		
Lanes:	0.00	0.00	0.00			0.24	0.85	1.91			0.00	1.21	0.79			1.00	2.00	0.00		
Final Sat.:	0	0	0			394	1368	3077			0	2053	1343			1017	3610	0		
Capacity Analysis Module:																				
Vol/Sat:	0.00	0.00	0.00			0.10	0.10	0.10			0.00	0.09	0.09			0.11	0.19	0.00		
Crit Moves:							****										****			
Green/Cycle:	0.00	0.00	0.00			0.34	0.34	0.34			0.00	0.66	0.66			0.66	0.66	0.00		
Volume/Cap:	0.00	0.00	0.00			0.28	0.28	0.28			0.00	0.13	0.13			0.17	0.28	0.00		
Delay/Veh:	0.0	0.0	0.0			24.1	24.1	24.1			0.0	6.4	6.4			6.7	7.2	0.0		
User DelAdj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
AdjDel/Veh:	0.0	0.0	0.0			24.1	24.1	24.1			0.0	6.4	6.4			6.7	7.2	0.0		
LOS by Move:	A	A	A			C	C	C			A	A	A			A	A	A		
HCM2kAvgQ:	0	0	0			4	4	4			0	2	2			1	5	0		

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 353.6 Worst Case Level Of Service: F[6652.4]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			729	1312			0	134		1		0	0		0		392
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	0	0			729	1312			0	134		1		0	0		0		392
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	0	0			729	1312			0	134		1		0	0		0		392
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			729	1312			0	134		1		0	0		0		392
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2770		2770	xxxxx		2115		2770		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			13		20	xxxxx		37		20		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			5		11	xxxxx		23		11		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.45	xxxx	xxxx			25.49		0.09	xxxx		0.00		0.00		0.36
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			2.4	xxxx	xxxxx			10.2		xxxx	xxxxx		xxxx		xxxx		0.7
Control Del:	xxxxx	xxxx	xxxxx			9.0	xxxx	xxxxx			6636		xxxx	xxxxx		xxxxx		xxxx		9.0
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			5		xxxx	xxxxx		xxxx		1091		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6.0		xxxx	xxxxx		xxxxx		0.7		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6668		xxxx	xxxxx		xxxxx		9.0		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					6652.4							9.0		
ApproachLOS:	*					*					F							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.818
Loss Time (sec):	0	Average Delay (sec/veh):	26.1
Optimal Cycle:	102	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	71	210	409	423	372	19	117	485	126	179	302	163
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	210	409	423	372	19	117	485	126	179	302	163
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	71	210	409	423	372	19	117	485	126	179	302	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	210	409	423	372	19	117	485	126	179	302	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	71	210	409	423	372	19	117	485	126	179	302	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	1.00	0.85	0.37	0.92	0.92	0.28	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.59	0.41	1.00	1.30	0.70
Final Sat.:	1805	1626	1626	1805	1900	1615	704	2777	721	538	2221	1199
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.25	0.23	0.20	0.01	0.17	0.17	0.17	0.33	0.14	0.14
Crit Moves:			****	****						****		
Green/Cycle:	0.10	0.31	0.31	0.49	0.49	0.49	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.40	0.42	0.82	0.71	0.40	0.02	0.41	0.43	0.43	0.82	0.33	0.33
Delay/Veh:	43.7	27.7	39.0	24.3	16.2	12.9	22.1	21.6	21.6	47.3	20.5	20.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.7	27.7	39.0	24.3	16.2	12.9	22.1	21.6	21.6	47.3	20.5	20.5
LOS by Move:	D	C	D	C	B	B	C	C	C	D	C	C
HCM2kAvgQ:	2	6	15	11	7	0	3	7	7	7	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.033
Loss Time (sec):	0	Average Delay (sec/veh):	28.6
Optimal Cycle:	180	Level Of Service:	C

Street Name:	San Fernando Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0
Volume Module:													
Base Vol:	9	588	60	136	781	498	135	119	13	101	790	71	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	588	60	136	781	498	135	119	13	101	790	71	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	588	60	136	781	498	135	119	13	101	790	71	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	9	588	60	136	781	498	135	119	13	101	790	71	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	9	588	60	136	781	498	135	119	13	101	790	71	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.09	0.99	0.99	0.10	1.00	0.85	0.21	0.94	0.94	0.85	0.85	0.85	
Lanes:	1.00	0.91	0.09	1.00	1.00	1.00	1.00	1.80	0.20	0.21	1.64	0.15	
Final Sat.:	178	1700	173	195	1900	1615	402	3206	350	337	2638	237	
Capacity Analysis Module:													
Vol/Sat:	0.05	0.35	0.35	0.70	0.41	0.31	0.34	0.04	0.04	0.30	0.30	0.30	
Crit Moves:				****			****						
Green/Cycle:	0.67	0.67	0.67	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33	
Volume/Cap:	0.08	0.51	0.51	1.03	0.61	0.46	1.03	0.11	0.11	0.92	0.92	0.92	
Delay/Veh:	5.8	8.5	8.5	103.8	9.8	8.0	121.6	23.7	23.7	45.3	45.3	45.3	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	5.8	8.5	8.5	103.8	9.8	8.0	121.6	23.7	23.7	45.3	45.3	45.3	
LOS by Move:	A	A	A	F	A	A	F	C	C	D	D	D	
HCM2kAvgQ:	0	10	10	8	14	7	8	1	1	19	19	19	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.035
Loss Time (sec):	0	Average Delay (sec/veh):	36.4
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	193	350	34	184	578	405	33	536	307	79	1167	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	350	34	184	578	405	33	536	307	79	1167	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	193	350	34	184	578	405	33	536	307	79	1167	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	350	34	184	578	405	33	536	307	79	1167	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	193	350	34	184	578	405	33	536	307	79	1167	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.94	0.94	0.46	0.89	0.89	0.68	0.68	0.68	0.72	0.72	0.72
Lanes:	1.00	1.82	0.18	1.00	1.18	0.82	0.08	1.22	0.70	0.12	1.75	0.13
Final Sat.:	354	3247	315	883	1991	1395	97	1573	901	161	2384	182
Capacity Analysis Module:												
Vol/Sat:	0.54	0.11	0.11	0.21	0.29	0.29	0.34	0.34	0.34	0.49	0.49	0.49
Crit Moves:	****										****	
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	1.03	0.20	0.20	0.40	0.55	0.55	0.72	0.72	0.72	1.03	1.03	1.03
Delay/Veh:	98.9	12.6	12.6	14.7	16.1	16.1	23.2	23.2	23.2	60.7	60.7	60.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	98.9	12.6	12.6	14.7	16.1	16.1	23.2	23.2	23.2	60.7	60.7	60.7
LOS by Move:	F	B	B	B	B	B	C	C	C	E	E	E
HCM2kAvgQ:	11	3	3	4	11	11	13	13	13	30	30	30

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 122.1 Worst Case Level Of Service: F[1225.4]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	151		1	125		0	735		0	2	1765		0				
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00				
Initial Bse:	0	0	2	151		1	125		0	735		0	2	1765		0				
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00				
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00				
PHF Volume:	0	0	2	151		1	125		0	735		0	2	1765		0				
Reduct Vol:	0	0	0	0		0	0		0	0		0	0	0		0				
FinalVolume:	0	0	2	151		1	125		0	735		0	2	1765		0				
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9		xxxxx	xxxx		xxxxx	4.1	xxxx		xxxxx				
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3		xxxxx	xxxx		xxxxx	2.2	xxxx		xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	368	2137		2504	883		xxxx	xxxx		xxxxx	735	xxxx		xxxxx				
Potent Cap.:	xxxx	xxxx	635	28		29	293		xxxx	xxxx		xxxxx	879	xxxx		xxxxx				
Move Cap.:	xxxx	xxxx	635	28		29	293		xxxx	xxxx		xxxxx	879	xxxx		xxxxx				
Volume/Cap:	xxxx	xxxx	0.00	5.33		0.03	0.43		xxxx	xxxx		xxxx	0.00	xxxx		xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	18.4		xxxx	xxxxx		xxxx	xxxx		xxxxx	0.0	xxxx		xxxxx				
Control Del:	xxxxx	xxxx	10.7	2224		xxxx	xxxxx		xxxxx	xxxx		xxxxx	9.1	xxxx		xxxxx				
LOS by Move:	*	*	B	F		*	*		*	*		*	A	*		*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	273		xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.3		xxxxx	xxxx		xxxxx	0.0	xxxx		xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	29.0		xxxxx	xxxx		xxxxx	9.1	xxxx		xxxxx				
Shared LOS:	*	*	*	*		*	D		*	*		*	A	*		*				
ApproachDel:	10.7			1225.4					xxxxxx				xxxxxx							
ApproachLOS:	B			F					*				*							

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.893
Loss Time (sec):	0	Average Delay (sec/veh):	749.2
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	1858	307	478	0	0	863	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1858	307	478	0	0	863	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1858	307	478	0	0	863	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	1858	307	478	0	0	863	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	1858	307	478	0	0	863	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.93	0.93	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.17	1.83	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	2077	3234	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.15	0.15	0.00	0.00	0.24	0.00
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.17	0.00	0.00	0.27	0.27
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	3.95	0.89	0.89	0.00	0.00	0.89	0.02
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	1373	52.3	52.3	0.0	0.0	45.8	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	1373	52.3	52.3	0.0	0.0	45.8	27.0
LOS by Move:	A	A	A	A	A	F	D	D	A	A	D	C
HCM2kAvgQ:	0	0	0	0	0	129	12	12	0	0	17	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.632
Loss Time (sec):	0	Average Delay (sec/veh):	14.5
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	16	266	7	95	1540	67	60	211	94	116	315	42
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	266	7	95	1540	67	60	211	94	116	315	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	266	7	95	1540	67	60	211	94	116	315	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	266	7	95	1540	67	60	211	94	116	315	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	266	7	95	1540	67	60	211	94	116	315	42
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.10	0.95	0.95	0.56	0.94	0.94	0.71	0.71	0.71	0.67	0.67	0.67
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.33	1.16	0.52	0.49	1.33	0.18
Final Sat.:	188	3504	92	1059	3438	150	442	1553	692	629	1708	228
Capacity Analysis Module:												
Vol/Sat:	0.09	0.08	0.08	0.09	0.45	0.45	0.14	0.14	0.14	0.18	0.18	0.18
Crit Moves:					****						****	
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29
Volume/Cap:	0.12	0.11	0.11	0.13	0.63	0.63	0.47	0.47	0.47	0.63	0.63	0.63
Delay/Veh:	5.1	4.6	4.6	4.7	8.2	8.2	29.5	29.5	29.5	32.5	32.5	32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.1	4.6	4.6	4.7	8.2	8.2	29.5	29.5	29.5	32.5	32.5	32.5
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	14	14	5	5	5	8	8	8

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 2
PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.961
Loss Time (sec):	0	Average Delay (sec/veh):	37.7
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	112	814	752	55	897	76	48	431	423	618	334	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	814	752	55	897	76	48	431	423	618	334	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	112	814	752	55	897	76	48	431	0	618	334	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	814	752	55	897	76	48	431	0	618	334	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	112	814	752	55	897	76	48	431	0	618	334	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.84	0.84	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.94	0.94
Lanes:	1.00	2.00	1.00	1.00	2.77	0.23	1.00	2.00	1.00	1.00	1.82	0.18
Final Sat.:	1805	3209	1605	1805	4724	400	1805	3610	1900	1805	3231	329
Capacity Analysis Module:												
Vol/Sat:	0.06	0.25	0.47	0.03	0.19	0.19	0.03	0.12	0.00	0.34	0.10	0.10
Crit Moves:			****	****				****		****		
Green/Cycle:	0.13	0.49	0.49	0.03	0.39	0.39	0.10	0.12	0.00	0.36	0.38	0.38
Volume/Cap:	0.48	0.52	0.96	0.96	0.48	0.48	0.27	0.96	0.00	0.96	0.27	0.27
Delay/Veh:	42.1	17.7	38.8	152.8	23.0	23.0	42.6	76.0	0.0	57.5	21.4	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.1	17.7	38.8	152.8	23.0	23.0	42.6	76.0	0.0	57.5	21.4	21.4
LOS by Move:	D	B	D	F	C	C	D	E	A	E	C	C
HCM2kAvgQ:	4	10	30	4	8	8	2	11	0	24	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 8.5 Worst Case Level Of Service: A[9.7]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0			220	0			8	0		13	0		0		22	0	
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Initial Bse:	0	0	0			220	0			8	0		13	0		0		22	0	
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00	1.00		1.00		1.00	1.00	
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00	1.00		1.00		1.00	1.00	
PHF Volume:	0	0	0			220	0			8	0		13	0		0		22	0	
Reduct Vol:	0	0	0			0	0			0	0		0	0		0		0	0	
FinalVolume:	0	0	0			220	0			8	0		13	0		0		22	0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			35	35			22	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			983	861			1061	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			983	861			1061	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.22	0.00			0.01	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx			xxxxx	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx			xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
LOS by Move:	*	*	*			*	*			*	*	*	*	*		*		*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	986			xxxxx	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.9			xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	9.7			xxxxx	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
Shared LOS:	*	*	*			*	A			*	*	*	*	*		*		*		
ApproachDel:	xxxxxx					9.7				xxxxxx				xxxxxx						
ApproachLOS:	*					A				*				*						

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.496
Loss Time (sec):	0	Average Delay (sec/veh):	10.8
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	234	1355	102	10	946	199	0	0	0	242	35	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	234	1355	102	10	946	199	0	0	0	242	35	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	234	1355	102	10	946	199	0	0	0	242	35	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	234	1355	102	10	946	199	0	0	0	242	35	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	234	1355	102	10	946	199	0	0	0	242	35	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.89	0.89	0.85
Lanes:	2.00	1.86	0.14	1.00	2.00	1.00	0.00	0.00	0.00	1.75	0.25	1.00
Final Sat.:	3502	3322	250	1805	3610	1615	0	0	0	2941	425	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.41	0.41	0.01	0.26	0.12	0.00	0.00	0.00	0.08	0.08	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.17	0.82	0.82	0.01	0.66	0.66	0.00	0.00	0.00	0.17	0.17	0.17
Volume/Cap:	0.39	0.50	0.50	0.50	0.39	0.19	0.00	0.00	0.00	0.50	0.50	0.15
Delay/Veh:	37.4	2.8	2.8	67.0	7.7	6.5	0.0	0.0	0.0	38.6	38.6	36.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	2.8	2.8	67.0	7.7	6.5	0.0	0.0	0.0	38.6	38.6	36.0
LOS by Move:	D	A	A	E	A	A	A	A	A	D	D	D
HCM2kAvgQ:	4	7	7	1	7	2	0	0	0	4	4	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.647
Loss Time (sec):	0	Average Delay (sec/veh):	21.8
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1	0	0	0	2	0	0	0	1
	0	1	0	1	0	0	0	1!	0	1		
Volume Module:												
Base Vol:	0	1196	33	0	1196	0	221	323	221	13	0	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1196	33	0	1196	0	221	323	221	13	0	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1196	33	0	1196	0	221	323	221	13	0	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1196	33	0	1196	0	221	323	221	13	0	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1196	33	0	1196	0	221	323	221	13	0	271
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.90	0.90	0.90	0.85	1.00	0.85
Lanes:	0.00	2.92	0.08	0.00	2.00	0.00	0.58	0.84	0.58	0.09	0.00	1.91
Final Sat.:	0	5028	139	0	3610	0	984	1438	984	142	0	3107
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.24	0.00	0.33	0.00	0.22	0.22	0.22	0.09	0.00	0.09
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.51	0.51	0.00	0.51	0.00	0.35	0.35	0.35	0.14	0.00	0.14
Volume/Cap:	0.00	0.46	0.46	0.00	0.65	0.00	0.65	0.65	0.65	0.65	0.00	0.62
Delay/Veh:	0.0	15.8	15.8	0.0	18.6	0.0	28.8	28.8	28.8	44.0	0.0	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.8	15.8	0.0	18.6	0.0	28.8	28.8	28.8	44.0	0.0	42.9
LOS by Move:	A	B	B	A	B	A	C	C	C	D	A	D
HCM2kAvgQ:	0	9	9	0	15	0	11	11	11	5	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.495
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	176	1131	0	0	382	608	0	0	0	235	0	19	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	176	1131	0	0	382	608	0	0	0	235	0	19	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	176	1131	0	0	382	0	0	0	0	235	0	19	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	176	1131	0	0	382	0	0	0	0	235	0	19	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	176	1131	0	0	382	0	0	0	0	235	0	19	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	1.00	0.74	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.93	0.00	0.07	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1294	0	105	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.31	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.18	0.00	0.18	
Crit Moves:		****								****			
Green/Cycle:	0.45	0.74	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.26	0.00	0.26	
Volume/Cap:	0.22	0.42	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.70	0.00	0.70	
Delay/Veh:	16.9	5.1	0.0	0.0	35.5	0.0	0.0	0.0	0.0	39.2	0.0	39.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	16.9	5.1	0.0	0.0	35.5	0.0	0.0	0.0	0.0	39.2	0.0	39.2	
LOS by Move:	B	A	A	A	D	A	A	A	A	D	A	D	
HCM2kAvgQ:	3	7	0	0	12	0	0	0	0	8	0	8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.688
Loss Time (sec):	0	Average Delay (sec/veh):	28.3
Optimal Cycle:	121	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	418	132	29	585	0	888	5	167	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	418	132	29	585	0	888	5	167	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	418	132	29	585	0	888	5	167	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	418	132	29	585	0	888	5	167	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	418	132	29	585	0	888	5	167	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.92	0.92	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.52	0.48	1.00	1.00	0.00	1.72	0.01	0.27	0.00	0.00	0.00
Final Sat.:	0	2645	835	1805	1900	0	2791	13	440	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.02	0.31	0.00	0.32	0.38	0.38	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.19	0.19	0.36	0.55	0.00	0.45	0.45	0.45	0.00	0.00	0.00
Volume/Cap:	0.00	0.85	0.85	0.04	0.56	0.00	0.71	0.85	0.85	0.00	0.00	0.00
Delay/Veh:	0.0	49.2	49.2	20.6	15.3	0.0	23.8	30.0	30.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	49.2	49.2	20.6	15.3	0.0	23.8	30.0	30.0	0.0	0.0	0.0
LOS by Move:	A	D	D	C	B	A	C	C	C	A	A	A
HCM2kAvgQ:	0	11	11	1	12	0	14	19	19	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A[8.8]

Street Name:	Bridewell St									Hough St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	30	0	0	0		34	54				5	0	56			0	0	0		
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	30	0	0	0		34	54				5	0	56			0	0	0		
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	30	0	0	0		34	54				5	0	56			0	0	0		
Reduct Vol:	0	0	0	0		0	0				0	0	0			0	0	0		
FinalVolume:	30	0	0	0		34	54				5	0	56			0	0	0		
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4	6.5	6.2	xxxxx	xxxx	xxxxx				
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0	3.3	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	88	xxxx	xxxxx	xxxx	xxxx	xxxxx					121	121	61	xxxx	xxxx	xxxxx				
Potent Cap.:	1520	xxxx	xxxxx	xxxx	xxxx	xxxxx					879	773	1010	xxxx	xxxx	xxxxx				
Move Cap.:	1520	xxxx	xxxxx	xxxx	xxxx	xxxxx					866	758	1010	xxxx	xxxx	xxxxx				
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx					0.01	0.00	0.06	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	A	*	*	*	*	*					*	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	996	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.8	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					*	A	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							8.8			xxxxxx						
ApproachLOS:	*			*							A			*						

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[12.4]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	9	4	2	63	5	8	5	103	11	14	241	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	4	2	63	5	8	5	103	11	14	241	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	4	2	63	5	8	5	103	11	14	241	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	4	2	63	5	8	5	103	11	14	241	31
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	410	419	109	406	409	257	272	xxxx	xxxxx	114	xxxx	xxxxx
Potent Cap.:	556	529	951	559	535	787	1303	xxxx	xxxxx	1488	xxxx	xxxxx
Move Cap.:	541	522	951	549	528	787	1303	xxxx	xxxxx	1488	xxxx	xxxxx
Volume/Cap:	0.02	0.01	0.00	0.11	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	568	xxxxx	xxxx	565	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.5	xxxxx	xxxxx	12.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			12.4			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 267.3 Worst Case Level Of Service: F[930.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	685	0	313		0	0		0		0	0	134		0		0	243		0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	685	0	313		0	0		0		0	0	134		0		0	243		0	
User Adj:	1.00	1.00	0.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	685	0	0		0	0		0		0	0	134		0		0	243		0	
Reduct Vol:	0	0	0		0	0		0		0	0	0		0		0	0		0	
FinalVolume:	685	0	0		0	0		0		0	0	134		0		0	243		0	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx		xxxxx	xxxx		xxxxx		xxxxx	6.5	xxxxx		xxxxx		6.5	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx		xxxxx	xxxx		xxxxx		xxxxx	4.0	xxxxx		xxxxx		4.0	xxxxx			
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx		xxxx	xxxx		xxxxx		xxxx	1370	xxxxx		xxxx		1370	xxxxx			
Potent Cap.:	1636	xxxx	xxxxx		xxxx	xxxx		xxxxx		xxxx	148	xxxxx		xxxx		148	xxxxx			
Move Cap.:	1636	xxxx	xxxxx		xxxx	xxxx		xxxxx		xxxx	86	xxxxx		xxxx		86	xxxxx			
Volume/Cap:	0.42	xxxx	xxxx		xxxx	xxxx		xxxx		xxxx	1.56	xxxx		xxxx		2.83	xxxx			
Level Of Service Module:																				
2Way95thQ:	2.1	xxxx	xxxxx		xxxx	xxxx		xxxxx		xxxx	10.7	xxxxx		xxxx		23.5	xxxxx			
Control Del:	8.8	xxxx	xxxxx		xxxxx	xxxx		xxxxx		xxxxx	386	xxxxx		xxxxx		931	xxxxx			
LOS by Move:	A	*	*		*	*		*		*	F	*		*		F	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx	xxxxx		xxxxx		xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx	xxxxx		xxxxx		xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*		*	*		*		*	*	*		*		*	*	*		
ApproachDel:	xxxxxx				xxxxxx					386.0						930.8				
ApproachLOS:	*				*					F						F				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.718
Loss Time (sec):	0	Average Delay (sec/veh):	15.5
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy									Ave 66											
Approach:	North Bound					South Bound					East Bound					West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign					
Rights:	Include					Include					Include					Include					
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0			
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
Volume Module:																					
Base Vol:	0	0	0			133	0	19			0	0	0			0	420	195			
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
Initial Bse:	0	0	0			133	0	19			0	0	0			0	420	195			
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
PHF Volume:	0	0	0			133	0	19			0	0	0			0	420	195			
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0			
Reduced Vol:	0	0	0			133	0	19			0	0	0			0	420	195			
PCE Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
FinalVolume:	0	0	0			133	0	19			0	0	0			0	420	195			
Saturation Flow Module:																					
Adjustment:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
Lanes:	0.00	0.00	0.00			1.00	0.00	1.00			0.00	0.00	0.00			0.00	0.68	0.32			
Final Sat.:	0	0	0			538	0	654			0	0	0			0	585	272			
Capacity Analysis Module:																					
Vol/Sat:	xxxx	xxxx	xxxx			0.25	xxxx	0.03			xxxx	xxxx	xxxx			xxxx	0.72	0.72			
Crit Moves:						****											****				
Delay/Veh:	0.0	0.0	0.0			10.9	0.0	7.9			0.0	0.0	0.0			0.0	16.7	16.7			
Delay Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			
AdjDel/Veh:	0.0	0.0	0.0			10.9	0.0	7.9			0.0	0.0	0.0			0.0	16.7	16.7			
LOS by Move:	*	*	*			B	*	A			*	*	*			*	C	C			
ApproachDel:	xxxxxx					10.5					xxxxxx					16.7					
Delay Adj:	xxxxx					1.00					xxxxx					1.00					
ApprAdjDel:	xxxxxx					10.5					xxxxxx					16.7					
LOS by Appr:	*					B					*					C					
AllWayAvgQ:	0.0	0.0	0.0			0.3	0.0	0.0			0.0	0.0	0.0			2.3	2.3	2.3			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: C[17.2]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	16	0	76	130	442	0	0	466	196								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	16	0	76	130	442	0	0	466	196								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	16	0	76	130	442	0	0	466	196								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	16	0	76	130	442	0	0	466	196								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1266	1266	564	662	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	188	171	529	936	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	168	147	529	936	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.10	0.00	0.14	0.14	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	385	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	17.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				17.2		xxxxxx				xxxxxx									
ApproachLOS:	*				C		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	13.001
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	9	0	1	2	1	10	11	145	13	4	151	1	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	9	0	1	2	1	10	11	145	13	4	151	1	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	9	0	1	2	1	10	11	145	13	4	151	1	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	9	0	1	2	1	10	11	145	13	4	151	1	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.90	0.00	0.10	0.15	0.08	0.77	0.07	0.86	0.08	0.03	0.97	0.01	
Final Sat.:	236	0	26	0	0	1	58	766	69	23	856	6	
Capacity Analysis Module:													
Vol/Sat:	0.04	0.00	0.04	13.00	13.00	13.00	0.19	0.19	0.19	0.18	0.18	0.18	
Crit Moves:			****		****		****				****		
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.04	0.00	0.04	13.00	13.00	13.00	0.19	0.19	0.19	0.18	0.18	0.18	
Delay/Veh:	1.2	0.0	1.2	xxxxx	xxxx	xxxxx	2.1	2.1	2.1	2.0	2.0	2.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.2	0.0	1.2	xxxxx	xxxx	xxxxx	2.1	2.1	2.1	2.0	2.0	2.0	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 8.1 Worst Case Level Of Service: C[23.5]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	109	0	336	0	0	0	0	345	0	0	503	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	0	336	0	0	0	0	345	0	0	503	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	0	336	0	0	0	0	345	0	0	503	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	109	0	336	0	0	0	0	345	0	0	503	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	848	848	173	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	334	301	876	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	334	301	876	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.33	0.00	0.38	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	627	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	5.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	23.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:	23.5			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	C			*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 5.7 Worst Case Level Of Service: B[12.9]

Street Name:	Ave 57							ASP SB Exit 28B/Carlota Bl							
Approach:	North Bound				South Bound			East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R	L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled			Stop Sign				Yield Sign			
Rights:	Include				Include			Include				Include			
Lanes:	0 0 0 0 0				0 0 0 1 0			1 0 0 0 0				0 0 0 0 1			
Volume Module:															
Base Vol:	0	0	0	0	257	4		82	0	0	0	0	254		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	257	4		82	0	0	0	0	254		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	257	4		82	0	0	0	0	254		
Reduct Vol:	0	0	0	0	0	0		0	0	0	0	0	0		
FinalVolume:	0	0	0	0	257	4		82	0	0	0	0	254		
Critical Gap Module:															
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		7.1	xxxx	xxxxx	xxxxx	xxxx	6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx	xxxxx	xxxxx	xxxx	3.3		
Capacity Module:															
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		259	xxxx	xxxxx	xxxx	xxxx	0		
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		698	xxxx	xxxxx	xxxx	xxxx	1091		
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		536	xxxx	xxxxx	xxxx	xxxx	1091		
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.15	xxxx	xxxx	xxxx	xxxx	0.23		
Level Of Service Module:															
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		0.5	xxxx	xxxxx	xxxx	xxxx	0.9		
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		12.9	xxxx	xxxxx	xxxxx	xxxx	9.3		
LOS by Move:	*	*	*	*	*	*		B	*	*	*	*	A		
Movement:	LT -	LTR -	RT	LT -	LTR -	RT		LT -	LTR -	RT	LT -	LTR -	RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*		*	*	*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx				12.9			9.3				
ApproachLOS:	*			*				B			A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.590
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	115	11	133	12	159	260	39	660	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	115	11	133	12	159	260	39	660	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	115	11	133	12	159	260	39	660	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	115	11	133	12	159	260	39	660	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	115	11	133	12	159	260	39	660	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.44	0.04	0.51	0.07	0.93	1.00	0.11	1.84	0.05
Final Sat.:	0	469	0	260	25	300	40	525	641	66	1127	29
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.44	0.44	0.44	0.30	0.30	0.41	0.59	0.59	0.58
Crit Moves:		****				****			****	****		
Delay/Veh:	0.0	0.0	0.0	13.2	13.2	13.2	11.5	11.5	11.7	16.4	16.2	16.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.2	13.2	13.2	11.5	11.5	11.7	16.4	16.2	16.0
LOS by Move:	*	*	*	B	B	B	B	B	B	C	C	C
ApproachDel:	xxxxxx			13.2			11.6			16.2		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			13.2			11.6			16.2		
LOS by Appr:	*			B			B			C		
AllWayAvgQ:	0.0	0.0	0.0	0.7	0.7	0.7	0.4	0.4	0.6	1.3	1.3	1.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.522
Loss Time (sec):	0	Average Delay (sec/veh):	11.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	402	0	0	0	0	0	0	0	0	0	169	0	0	30	0					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	402	0	0	0	0	0	0	0	0	0	169	0	0	30	0					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Volume:	402	0	0	0	0	0	0	0	0	0	169	0	0	30	0					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Reduced Vol:	402	0	0	0	0	0	0	0	0	0	169	0	0	30	0					
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
FinalVolume:	402	0	0	0	0	0	0	0	0	0	169	0	0	30	0					
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Lanes:	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00					
Final Sat.:	771	0	0	0	0	0	0	0	0	0	695	0	0	658	0					
Capacity Analysis Module:																				
Vol/Sat:	0.52	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.24	xxxx	xxxx	0.05	xxxx					
Crit Moves:	****										****			****						
Delay/Veh:	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	8.3	0.0					
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
AdjDel/Veh:	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0	8.3	0.0					
LOS by Move:	B	*	*	*	*	*	*	*	*	*	A	*	*	A	*					
ApproachDel:	12.3			xxxxxx						9.3				8.3						
Delay Adj:	1.00			xxxxx						1.00				1.00						
ApprAdjDel:	12.3			xxxxxx						9.3				8.3						
LOS by Appr:	B			*						A				A						
AllWayAvgQ:	1.0	1.0	1.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	0	Average Delay (sec/veh):	13.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	9	35	23	15	21	104	167	166	27	44	368	42
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	35	23	15	21	104	167	166	27	44	368	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	35	23	15	21	104	167	166	27	44	368	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	35	23	15	21	104	167	166	27	44	368	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	35	23	15	21	104	167	166	27	44	368	42
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.52	0.34	0.11	0.15	0.74	0.46	0.46	0.08	0.10	0.81	0.09
Final Sat.:	71	275	181	62	87	433	318	316	51	69	581	66
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.24	0.24	0.24	0.53	0.53	0.53	0.63	0.63	0.63
Crit Moves:		****		****			****				****	
Delay/Veh:	9.6	9.6	9.6	10.0	10.0	10.0	13.2	13.2	13.2	15.5	15.5	15.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	9.6	9.6	10.0	10.0	10.0	13.2	13.2	13.2	15.5	15.5	15.5
LOS by Move:	A	A	A	A	A	A	B	B	B	C	C	C
ApproachDel:	9.6			10.0			13.2			15.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.6			10.0			13.2			15.5		
LOS by Appr:	A			A			B			C		
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	1.0	1.0	1.0	1.5	1.5	1.5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.501
Loss Time (sec):	0	Average Delay (sec/veh):	12.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	247	27	110	1	3	2	3	45	155	198	120	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	247	27	110	1	3	2	3	45	155	198	120	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	247	27	110	1	3	2	3	45	155	198	120	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	247	27	110	1	3	2	3	45	155	198	120	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	247	27	110	1	3	2	3	45	155	198	120	12
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.43	0.57	0.17	0.50	0.33	0.01	0.22	0.76	0.60	0.36	0.04
Final Sat.:	551	272	365	92	275	183	10	153	528	395	240	24
Capacity Analysis Module:												
Vol/Sat:	0.45	0.10	0.30	0.01	0.01	0.01	0.29	0.29	0.29	0.50	0.50	0.50
Crit Moves:	****				****				****		****	
Delay/Veh:	13.8	9.5	9.5	8.8	8.8	8.8	9.8	9.8	9.8	13.2	13.2	13.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.8	9.5	9.5	8.8	8.8	8.8	9.8	9.8	9.8	13.2	13.2	13.2
LOS by Move:	B	A	A	A	A	A	A	A	A	B	B	B
ApproachDel:	12.3			8.8			9.8			13.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.3			8.8			9.8			13.2		
LOS by Appr:	B			A			A			B		
AllWayAvgQ:	0.7	0.2	0.2	0.0	0.0	0.0	0.4	0.4	0.4	0.9	0.9	0.9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 53.0 Worst Case Level Of Service: F[479.9]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	168	0	142	0	1236	0	0	1263	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	168	0	142	0	1236	0	0	1263	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	168	0	142	0	1236	0	0	1263	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	168	0	142	0	1236	0	0	1263	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1868	2499	618	1881	2499	632	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	46	29	437	64	29	428	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	30	29	437	64	29	428	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.62	0.00	0.33	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	17.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	64	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	16.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	870.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			479.9			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[15.3]

Street Name:	ASP NB on-ramp																							
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Yield Sign						Yield Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	0	0	0		0	1	2	0	0		0	0	1	1	0	
Volume Module:																								
Base Vol:	0	0	0	0	0	0	111	939	0	0	1310	171												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	0	0	0	0	0	0	111	939	0	0	1310	171												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Volume:	0	0	0	0	0	0	111	939	0	0	1310	171												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
FinalVolume:	0	0	0	0	0	0	111	939	0	0	1310	171												
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1481	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	460	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	460	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.24	xxxx	xxxx	xxxx	xxxx	xxxx												
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	15.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	*	*	*	*	*	*	C	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	15.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx														
ApproachLOS:	*			*			*			*														

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

****

Cycle (sec):	64	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	15.9
Optimal Cycle:	44	Level Of Service:	B

****

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	2	0 0	1 0	0	0 1!	0 0	0	0 0	0 2
Volume Module:												
Base Vol:	2	601	63	448	328	152	105	24	16	0	0	494
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	601	63	448	328	152	105	24	16	0	0	494
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	601	63	448	328	152	105	24	16	0	0	494
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	601	63	448	328	152	105	24	16	0	0	494
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	601	63	448	328	152	105	24	16	0	0	494
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.92	0.95	0.95	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.01	1.80	0.19	2.00	0.68	0.32	0.72	0.17	0.11	0.00	0.00	2.00
Final Sat.:	10	3064	321	3502	1237	573	1308	299	199	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.20	0.13	0.27	0.27	0.08	0.08	0.08	0.00	0.00	0.17
Crit Moves:		****		****				****				****
Green/Cycle:	0.34	0.34	0.34	0.22	0.56	0.56	0.14	0.14	0.14	0.00	0.00	0.52
Volume/Cap:	0.58	0.58	0.58	0.58	0.47	0.47	0.58	0.58	0.58	0.00	0.00	0.33
Delay/Veh:	18.1	18.1	18.1	23.3	8.8	8.8	29.1	29.1	29.1	0.0	0.0	9.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.1	18.1	18.1	23.3	8.8	8.8	29.1	29.1	29.1	0.0	0.0	9.0
LOS by Move:	B	B	B	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	6	6	6	5	6	6	4	4	4	0	0	3

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.8]

Street Name:	ASP NB on-ramp									San Fernando Rd									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	29	681	0	0	0	1326	80			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	29	681	0	0	0	1326	80			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	29	681	0	0	0	1326	80			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	29	681	0	0	0	1326	80			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1406	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					492	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					492	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.06	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					12.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: A[8.4]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	1			1	0	0			0	0	0			2	0	2		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	1			1	0	0			0	0	0			2	0	2		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	1			1	0	0			0	0	0			2	0	2		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	1			1	0	0			0	0	0			2	0	2		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6.4	6.5	6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3.5	4.0	3.3		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1	xxxx	xxxxx			xxxx	xxxx	xxxxx			2	2	0		
Potent Cap.:	xxxx	xxxx	xxxxx			1635	xxxx	xxxxx			xxxx	xxxx	xxxxx			1026	898	1091		
Move Cap.:	xxxx	xxxx	xxxxx			1635	xxxx	xxxxx			xxxx	xxxx	xxxxx			1025	897	1091		
Volume/Cap:	xxxx	xxxx	xxxx			0.00	xxxx	xxxx			xxxx	xxxx	xxxx			0.00	0.00	0.00		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.0	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			7.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			A	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	1057	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	0.0	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	8.4	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx						8.4			
ApproachLOS:	*					*					*						A			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.8]

Street Name:	Amador Pl						Amador St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	0	0	21	3	8	6	120	127	17	252	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	21	3	8	6	120	127	17	252	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	21	3	8	6	120	127	17	252	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	21	3	8	6	120	127	17	252	22
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	493	556	263	274	xxxx	xxxxx	247	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	539	442	781	1301	xxxx	xxxxx	1331	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	532	434	781	1301	xxxx	xxxxx	1331	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	565	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.8	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			11.8			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.865
Loss Time (sec):	0	Average Delay (sec/veh):	23.6
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	2	559	0	0	286	2	0	0	0	166	5	35	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	559	0	0	286	2	0	0	0	166	5	35	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	559	0	0	286	2	0	0	0	166	5	35	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	559	0	0	286	2	0	0	0	166	5	35	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	559	0	0	286	2	0	0	0	166	5	35	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	589	646	0	0	586	4	0	0	0	486	520	578	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.86	xxxx	xxxx	0.49	0.49	xxxx	xxxx	xxxx	0.34	0.01	0.06	
Crit Moves:		****				****				****			
Delay/Veh:	8.8	32.6	0.0	0.0	14.3	14.3	0.0	0.0	0.0	13.2	9.4	9.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.8	32.6	0.0	0.0	14.3	14.3	0.0	0.0	0.0	13.2	9.4	9.0	
LOS by Move:	A	D	*	*	B	B	*	*	*	B	A	A	
ApproachDel:		32.5			14.3			xxxxxx			12.4		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		32.5			14.3			xxxxxx			12.4		
LOS by Appr:		D			B			*			B		
AllWayAvgQ:	0.0	4.4	0.0	0.9	0.9	0.9	0.0	0.0	0.0	0.5	0.0	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.762
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1	0 1	0	0 1	0 1	0	
Volume Module:													
Base Vol:	0	524	59	119	355	0	0	4	2	22	0	51	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	524	59	119	355	0	0	4	2	22	0	51	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	524	59	119	355	0	0	4	2	22	0	51	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	524	59	119	355	0	0	4	2	22	0	51	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	524	59	119	355	0	0	4	2	22	0	51	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.33	0.67	0.60	0.40	1.00	
Final Sat.:	0	687	778	613	677	0	0	639	335	284	187	542	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.76	0.08	0.19	0.52	xxxx	xxxx	0.01	0.01	0.08	0.00	0.09	
Crit Moves:		****			****			****				****	
Delay/Veh:	0.0	22.3	7.6	9.8	13.5	0.0	0.0	9.6	9.2	10.1	10.1	9.4	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	22.3	7.6	9.8	13.5	0.0	0.0	9.6	9.2	10.1	10.1	9.4	
LOS by Move:	*	C	A	A	B	*	*	A	A	B	B	A	
ApproachDel:		20.8			12.6			9.4			9.6		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		20.8			12.6			9.4			9.6		
LOS by Appr:		C			B			A			A		
AllWayAvgQ:	0.0	2.8	0.1	0.2	1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.637
Loss Time (sec):	0	Average Delay (sec/veh):	6.9
Optimal Cycle:	51	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	1065	84	200	980	0	0	0	0	132	0	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1065	84	200	980	0	0	0	0	132	0	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1065	84	200	980	0	0	0	0	132	0	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1065	84	200	980	0	0	0	0	132	0	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1065	84	200	980	0	0	0	0	132	0	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.57	0.57	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.85	0.15	0.34	1.66	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3309	261	370	1811	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.32	0.54	0.54	0.00	0.00	0.00	0.00	0.07	0.00	0.10
Crit Moves:					****							****
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.38	0.38	0.64	0.64	0.00	0.00	0.00	0.00	0.49	0.00	0.64
Delay/Veh:	0.0	1.8	1.8	3.2	3.2	0.0	0.0	0.0	0.0	40.3	0.0	45.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.8	1.8	3.2	3.2	0.0	0.0	0.0	0.0	40.3	0.0	45.4
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	4	4	7	7	0	0	0	0	4	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.063
Loss Time (sec):	0	Average Delay (sec/veh):	28.6
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	20	1039	101	325	1013	42	42	216	15	114	251	196
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	1039	101	325	1013	42	42	216	15	114	251	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	1039	101	325	1013	42	42	216	15	114	251	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	1039	101	325	1013	42	42	216	15	114	251	196
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	1039	101	325	1013	42	42	216	15	114	251	196
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.23	0.94	0.94	0.21	0.94	0.94	0.17	0.99	0.99	0.32	0.93	0.93
Lanes:	1.00	1.82	0.18	1.00	1.92	0.08	1.00	0.94	0.06	1.00	0.56	0.44
Final Sat.:	445	3247	316	401	3445	143	321	1759	122	608	996	778
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.32	0.81	0.29	0.29	0.13	0.12	0.12	0.19	0.25	0.25
Crit Moves:				****							****	
Green/Cycle:	0.76	0.76	0.76	0.76	0.76	0.76	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.06	0.42	0.42	1.06	0.39	0.39	0.55	0.52	0.52	0.79	1.06	1.06
Delay/Veh:	3.0	4.2	4.2	80.8	4.1	4.1	41.9	34.3	34.3	60.7	99.6	99.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.0	4.2	4.2	80.8	4.1	4.1	41.9	34.3	34.3	60.7	99.6	99.6
LOS by Move:	A	A	A	F	A	A	D	C	C	E	F	F
HCM2kAvgQ:	0	7	7	17	6	6	2	7	7	5	22	22

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.333
Loss Time (sec):	0	Average Delay (sec/veh):	10.8
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	184	0	187	152	526	0	0	413	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	184	0	187	152	526	0	0	413	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	184	0	187	152	526	0	0	413	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	184	0	187	152	526	0	0	413	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	184	0	187	152	526	0	0	413	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.42	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	800	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.12	0.19	0.15	0.00	0.00	0.22	0.06
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.65	0.65	0.00	0.00	0.65	1.00
Volume/Cap:	0.00	0.00	0.00	0.15	0.00	0.33	0.29	0.22	0.00	0.00	0.33	0.06
Delay/Veh:	0.0	0.0	0.0	22.5	0.0	24.4	7.8	7.1	0.0	0.0	7.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.5	0.0	24.4	7.8	7.1	0.0	0.0	7.9	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	4	2	3	0	0	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.879
Loss Time (sec):	0	Average Delay (sec/veh):	23.0
Optimal Cycle:	119	Level Of Service:	C

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	154	264	15	41	279	402	391	644	211	9	397	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	264	15	41	279	402	391	644	211	9	397	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	264	15	41	279	402	391	644	211	9	397	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	264	15	41	279	402	391	644	211	9	397	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	264	15	41	279	402	391	644	211	9	397	27
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.62	0.62	0.62	0.92	0.92	0.85	0.40	1.00	0.85	0.25	0.99	0.99
Lanes:	0.36	0.61	0.03	0.13	0.87	1.00	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	421	722	41	223	1521	1615	762	1900	1615	475	1761	120
Capacity Analysis Module:												
Vol/Sat:	0.37	0.37	0.37	0.18	0.18	0.25	0.51	0.34	0.13	0.02	0.23	0.23
Crit Moves:		****					****					
Green/Cycle:	0.42	0.42	0.42	0.42	0.42	0.42	0.58	0.58	0.58	0.58	0.58	0.58
Volume/Cap:	0.88	0.88	0.88	0.44	0.44	0.60	0.88	0.58	0.22	0.03	0.39	0.39
Delay/Veh:	43.3	43.3	43.3	21.3	21.3	24.2	35.7	13.9	10.1	8.9	11.4	11.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.3	43.3	43.3	21.3	21.3	24.2	35.7	13.9	10.1	8.9	11.4	11.4
LOS by Move:	D	D	D	C	C	C	D	B	B	A	B	B
HCM2kAvgQ:	16	16	16	7	7	10	14	13	3	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	0	Average Delay (sec/veh):	14.8
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	6	884	385	91	819	33	25	44	13	288	49	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	884	385	91	819	33	25	44	13	288	49	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	884	385	91	819	33	25	44	13	288	49	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	884	385	91	819	33	25	44	13	288	49	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	884	385	91	819	33	25	44	13	288	49	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.71	0.71	0.71	0.86	0.86	0.86	0.69	0.69	0.85
Lanes:	0.01	1.99	1.00	0.19	1.74	0.07	0.30	0.54	0.16	0.85	0.15	1.00
Final Sat.:	23	3410	1615	259	2330	94	496	872	258	1112	189	1615
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.24	0.35	0.35	0.35	0.05	0.05	0.05	0.26	0.26	0.03
Crit Moves:					****						****	
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.42	0.42	0.42	0.42	0.42	0.42
Volume/Cap:	0.45	0.45	0.41	0.61	0.61	0.61	0.12	0.12	0.12	0.61	0.61	0.07
Delay/Veh:	12.3	12.3	12.1	14.6	14.6	14.6	17.5	17.5	17.5	24.4	24.4	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.3	12.3	12.1	14.6	14.6	14.6	17.5	17.5	17.5	24.4	24.4	17.1
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	8	8	7	11	11	11	2	2	2	9	9	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.451
Loss Time (sec):	0	Average Delay (sec/veh):	7.0
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	119	1194	23	31	1069	167	127	22	107	2	15	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	1194	23	31	1069	167	127	22	107	2	15	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	1194	23	31	1069	167	127	22	107	2	15	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	1194	23	31	1069	167	127	22	107	2	15	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	1194	23	31	1069	167	127	22	107	2	15	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.95	0.95	0.19	0.93	0.93	0.77	0.77	0.85	0.91	0.91	0.91
Lanes:	1.00	1.96	0.04	1.00	1.73	0.27	0.85	0.15	1.00	0.05	0.37	0.58
Final Sat.:	359	3531	68	369	3060	478	1244	215	1615	85	634	1015
Capacity Analysis Module:												
Vol/Sat:	0.33	0.34	0.34	0.08	0.35	0.35	0.10	0.10	0.07	0.02	0.02	0.02
Crit Moves:					****			****				
Green/Cycle:	0.77	0.77	0.77	0.77	0.77	0.77	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.43	0.44	0.44	0.11	0.45	0.45	0.45	0.45	0.29	0.10	0.10	0.10
Delay/Veh:	4.9	4.0	4.0	3.0	4.0	4.0	34.3	34.3	32.5	30.8	30.8	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.9	4.0	4.0	3.0	4.0	4.0	34.3	34.3	32.5	30.8	30.8	30.8
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	2	7	7	0	7	7	4	4	3	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.643
Loss Time (sec):	0	Average Delay (sec/veh):	14.2
Optimal Cycle:	52	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	217	0	443	357	436	0	0	495	113
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	217	0	443	357	436	0	0	495	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	217	0	443	357	436	0	0	495	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	217	0	443	357	436	0	0	495	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	217	0	443	357	436	0	0	495	113
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.39	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.33	0.00	1.67	1.00	2.00	0.00	0.00	1.63	0.37
Final Sat.:	0	0	0	2234	0	2809	736	3610	0	0	2857	652
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.16	0.49	0.12	0.00	0.00	0.17	0.17
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.25	0.00	0.25	0.75	0.75	0.00	0.00	0.75	0.75
Volume/Cap:	0.00	0.00	0.00	0.40	0.00	0.64	0.64	0.16	0.00	0.00	0.23	0.23
Delay/Veh:	0.0	0.0	0.0	31.7	0.0	35.2	8.4	3.5	0.0	0.0	3.7	3.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.7	0.0	35.2	8.4	3.5	0.0	0.0	3.7	3.7
LOS by Move:	A	A	A	C	A	D	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	8	6	2	0	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0	Average Delay (sec/veh):	16.8
Optimal Cycle:	35	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	108	658	21	124	688	60	148	444	143	40	415	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	108	658	21	124	688	60	148	444	143	40	415	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	108	658	21	124	688	60	148	444	143	40	415	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	108	658	21	124	688	60	148	444	143	40	415	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	108	658	21	124	688	60	148	444	143	40	415	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.24	1.00	0.85	0.26	1.00	0.85	0.34	0.92	0.92	0.29	0.93	0.93
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	0.49	1.00	1.66	0.34
Final Sat.:	458	1900	1615	493	1900	1615	644	2631	847	546	2913	604
Capacity Analysis Module:												
Vol/Sat:	0.24	0.35	0.01	0.25	0.36	0.04	0.23	0.17	0.17	0.07	0.14	0.14
Crit Moves:					****		****					
Green/Cycle:	0.61	0.61	0.61	0.61	0.61	0.61	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.39	0.57	0.02	0.41	0.59	0.06	0.59	0.43	0.43	0.19	0.37	0.37
Delay/Veh:	10.8	12.2	7.6	11.0	12.6	7.9	28.0	22.7	22.7	20.6	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.8	12.2	7.6	11.0	12.6	7.9	28.0	22.7	22.7	20.6	22.0	22.0
LOS by Move:	B	B	A	B	B	A	C	C	C	C	C	C
HCM2kAvgQ:	2	12	0	2	13	1	5	7	7	1	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.688
Loss Time (sec):	0	Average Delay (sec/veh):	27.5
Optimal Cycle:	77	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	119	1133	52	125	1145	52	95	343	111	101	292	134
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	1133	52	125	1145	52	95	343	111	101	292	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	1133	52	125	1145	52	95	343	111	101	292	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	1133	52	125	1145	52	95	343	111	101	292	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	1133	52	125	1145	52	95	343	111	101	292	134
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.96	0.96	0.95	0.95	0.95
Lanes:	1.00	1.91	0.09	1.00	1.91	0.09	1.00	0.76	0.24	1.00	0.69	0.31
Final Sat.:	1805	3429	157	1805	3431	156	1805	1383	447	1805	1241	569
Capacity Analysis Module:												
Vol/Sat:	0.07	0.33	0.33	0.07	0.33	0.33	0.05	0.25	0.25	0.06	0.24	0.24
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.47	0.47	0.10	0.47	0.47	0.35	0.35	0.35	0.08	0.35	0.35
Volume/Cap:	0.70	0.70	0.70	0.70	0.70	0.70	0.43	0.70	0.70	0.70	0.67	0.67
Delay/Veh:	56.6	22.4	22.4	55.7	22.1	22.1	23.5	31.4	31.4	59.5	30.1	30.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.6	22.4	22.4	55.7	22.1	22.1	23.5	31.4	31.4	59.5	30.1	30.1
LOS by Move:	E	C	C	E	C	C	C	C	C	E	C	C
HCM2kAvgQ:	5	16	16	5	16	16	3	13	13	5	12	12

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
Loss Time (sec):	0	Average Delay (sec/veh):	14.9
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	74	0	334	0	0	0	0	816	153	136	1058	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	74	0	334	0	0	0	0	816	153	136	1058	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	74	0	334	0	0	0	0	816	153	136	1058	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	0	334	0	0	0	0	816	153	136	1058	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	0	334	0	0	0	0	816	153	136	1058	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.93	0.93	0.21	0.95	1.00
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.68	0.32	1.00	2.00	0.00
Final Sat.:	291	0	1312	0	0	0	0	2968	556	398	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.27	0.27	0.34	0.29	0.00
Crit Moves:	****									****		
Green/Cycle:	0.43	0.00	0.43	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.57	0.00
Volume/Cap:	0.60	0.00	0.60	0.00	0.00	0.00	0.00	0.48	0.48	0.60	0.51	0.00
Delay/Veh:	23.5	0.0	23.5	0.0	0.0	0.0	0.0	12.7	12.7	18.1	13.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.5	0.0	23.5	0.0	0.0	0.0	0.0	12.7	12.7	18.1	13.1	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	10	0	10	0	0	0	0	9	9	4	10	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.716
Loss Time (sec):	0	Average Delay (sec/veh):	25.8
Optimal Cycle:	66	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	122	0	434	405	622	0	0	696	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	122	0	434	405	622	0	0	696	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	122	0	434	405	622	0	0	696	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	122	0	434	405	622	0	0	696	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	122	0	434	405	622	0	0	696	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.76	0.24
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3119	426
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.27	0.22	0.17	0.00	0.00	0.22	0.22
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.38	0.00	0.38	0.31	0.62	0.00	0.00	0.31	0.31
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.72	0.72	0.28	0.00	0.00	0.72	0.72
Delay/Veh:	0.0	0.0	0.0	20.3	0.0	30.8	34.8	8.6	0.0	0.0	32.8	32.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.3	0.0	30.8	34.8	8.6	0.0	0.0	32.8	32.8
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	13	12	5	0	0	13	13

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.324
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	28	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	325	0	96	0	0	0	0	676	311	70	536	314
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	325	0	96	0	0	0	0	676	311	70	536	314
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	325	0	96	0	0	0	0	676	311	70	536	314
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	325	0	96	0	0	0	0	676	311	70	536	314
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	325	0	96	0	0	0	0	676	311	70	536	314
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1900	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.06	0.00	0.00	0.00	0.00	0.19	0.19	0.04	0.15	0.19
Crit Moves:	****								****	****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.59	0.59	0.12	0.71	0.71
Volume/Cap:	0.32	0.00	0.21	0.00	0.00	0.00	0.00	0.32	0.32	0.32	0.21	0.27
Delay/Veh:	28.3	0.0	27.3	0.0	0.0	0.0	0.0	10.2	10.4	41.2	4.9	5.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.3	0.0	27.3	0.0	0.0	0.0	0.0	10.2	10.4	41.2	4.9	5.2
LOS by Move:	C	A	C	A	A	A	A	B	B	D	A	A
HCM2kAvgQ:	4	0	2	0	0	0	0	5	5	2	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.869
Loss Time (sec):	0	Average Delay (sec/veh):	22.2
Optimal Cycle:	110	Level Of Service:	C

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	183	574	41	171	600	79	113	858	160	33	996	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	183	574	41	171	600	79	113	858	160	33	996	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	183	574	41	171	600	79	113	858	160	33	996	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	183	574	41	171	600	79	113	858	160	33	996	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	183	574	41	171	600	79	113	858	160	33	996	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.21	1.00	0.85	0.23	1.00	0.85	0.14	0.93	0.93	0.16	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.69	0.31	1.00	1.83	0.17
Final Sat.:	405	1900	1615	441	1900	1615	271	2971	554	313	3266	298
Capacity Analysis Module:												
Vol/Sat:	0.45	0.30	0.03	0.39	0.32	0.05	0.42	0.29	0.29	0.11	0.30	0.30
Crit Moves:	****						****					
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.87	0.58	0.05	0.74	0.61	0.09	0.87	0.60	0.60	0.22	0.64	0.64
Delay/Veh:	50.7	17.3	11.8	31.1	17.9	12.1	65.4	19.7	19.7	15.9	20.3	20.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.7	17.3	11.8	31.1	17.9	12.1	65.4	19.7	19.7	15.9	20.3	20.3
LOS by Move:	D	B	B	C	B	B	E	B	B	B	C	C
HCM2kAvgQ:	8	12	1	6	13	1	6	12	12	1	14	14

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.053
Loss Time (sec):	0	Average Delay (sec/veh):	42.7
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	554	1079	68	70	1321	61	109	353	462	90	335	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	554	1079	68	70	1321	61	109	353	462	90	335	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	554	1079	68	70	1321	61	109	353	462	90	335	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	554	1079	68	70	1321	61	109	353	462	90	335	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	554	1079	68	70	1321	61	109	353	462	90	335	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.61	0.95	0.85	0.95	0.94	0.94	0.38	0.87	0.87	0.12	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.70	0.30
Final Sat.:	1164	3610	1615	1805	3428	158	714	1652	1652	236	2992	536
Capacity Analysis Module:												
Vol/Sat:	0.48	0.30	0.04	0.04	0.39	0.39	0.15	0.21	0.28	0.38	0.11	0.11
Crit Moves:	****				****					****		
Green/Cycle:	0.64	0.57	0.57	0.43	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.94	0.52	0.07	0.22	1.07	1.07	0.43	0.60	0.79	1.07	0.31	0.31
Delay/Veh:	31.9	13.4	9.7	16.0	79.7	79.7	25.7	27.2	32.9	152.2	23.5	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.9	13.4	9.7	16.0	79.7	79.7	25.7	27.2	32.9	152.2	23.5	23.5
LOS by Move:	C	B	A	B	E	E	C	C	C	F	C	C
HCM2kAvgQ:	20	11	1	2	33	33	3	10	15	6	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.798
Loss Time (sec):	0	Average Delay (sec/veh):	161.5
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	75	1144	512	144	708	94	234	1297	36	480	707	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	1144	512	144	708	94	234	1297	36	480	707	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	1144	512	144	708	94	234	1297	36	480	707	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1144	512	144	708	94	234	1297	36	480	707	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	1144	512	144	708	94	234	1297	36	480	707	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	1.00	0.85	0.06	1.00	0.85	0.95	0.91	0.91	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.92	0.08	1.00	3.00	1.00
Final Sat.:	506	1900	1615	113	1900	1615	1805	5027	140	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.60	0.32	1.27	0.37	0.06	0.13	0.26	0.26	0.27	0.14	0.06
Crit Moves:				****				****		****		
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.14	0.14	0.14	0.15	0.15	0.15
Volume/Cap:	0.21	0.85	0.45	1.80	0.53	0.08	0.91	1.80	1.80	1.80	0.91	0.37
Delay/Veh:	5.3	16.0	6.5	418.5	7.2	4.5	76.1	407	407.1	416.1	56.9	39.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.3	16.0	6.5	418.5	7.2	4.5	76.1	407	407.1	416.1	56.9	39.3
LOS by Move:	A	B	A	F	A	A	E	F	F	F	E	D
HCM2kAvgQ:	1	28	7	14	10	1	11	43	43	42	11	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.163
Loss Time (sec):	0	Average Delay (sec/veh):	78.7
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	1259	0	546	632	1137	0	0	701	1006
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1259	0	546	632	1137	0	0	701	1006
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1259	0	546	632	1137	0	0	701	1006
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1259	0	546	632	1137	0	0	701	1006
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1259	0	546	632	1137	0	0	701	1006
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.36	0.00	0.34	0.18	0.22	0.00	0.00	0.14	0.62
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.16	0.69	0.00	0.00	0.54	0.54
Volume/Cap:	0.00	0.00	0.00	1.16	0.00	1.09	1.16	0.32	0.00	0.00	0.25	1.16
Delay/Veh:	0.0	0.0	0.0	118.2	0.0	102.6	134.4	6.2	0.0	0.0	12.5	109.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	118.2	0.0	102.6	134.4	6.2	0.0	0.0	12.5	109.2
LOS by Move:	A	A	A	F	A	F	F	A	A	A	B	F
HCM2kAvgQ:	0	0	0	34	0	27	19	5	0	0	4	51

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.939
Loss Time (sec):	0	Average Delay (sec/veh):	32.3
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	255	700	4	140	610	72	132	973	134	290	947	243
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	700	4	140	610	72	132	973	134	290	947	243
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	255	700	4	140	610	72	132	973	134	290	947	243
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	255	700	4	140	610	72	132	973	134	290	947	243
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	255	700	4	140	610	72	132	973	134	290	947	243
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	0.95	0.85	0.28	0.93	0.93	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.79	0.21	1.00	1.76	0.24	1.00	1.59	0.41
Final Sat.:	547	3610	1615	531	3178	375	1805	3116	429	1805	2785	715
Capacity Analysis Module:												
Vol/Sat:	0.47	0.19	0.00	0.26	0.19	0.19	0.07	0.31	0.31	0.16	0.34	0.34
Crit Moves:	****							****		****		
Green/Cycle:	0.50	0.50	0.50	0.50	0.50	0.50	0.09	0.33	0.33	0.41	0.41	0.41
Volume/Cap:	0.94	0.39	0.00	0.53	0.39	0.39	0.82	0.94	0.94	0.75	0.82	0.82
Delay/Veh:	62.2	15.9	12.7	19.3	15.8	15.8	72.0	46.4	46.4	28.6	29.8	29.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.2	15.9	12.7	19.3	15.8	15.8	72.0	46.4	46.4	28.6	29.8	29.8
LOS by Move:	E	B	B	B	B	B	E	D	D	C	C	C
HCM2kAvgQ:	11	7	0	4	7	7	6	22	22	9	19	19

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.983
Loss Time (sec):	0	Average Delay (sec/veh):	28.4
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	340	347	73	310	208	69	113	925	188	43	1199	205
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	347	73	310	208	69	113	925	188	43	1199	205
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	347	73	310	208	69	113	925	188	43	1199	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	347	73	310	208	69	113	925	188	43	1199	205
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	347	73	310	208	69	113	925	188	43	1199	205
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.96	0.96	0.10	0.93	0.93	0.17	0.93	0.93
Lanes:	1.00	0.83	0.17	1.00	0.75	0.25	1.00	1.66	0.34	1.00	1.71	0.29
Final Sat.:	1805	1529	322	1805	1373	456	193	2924	594	329	3015	516
Capacity Analysis Module:												
Vol/Sat:	0.19	0.23	0.23	0.17	0.15	0.15	0.58	0.32	0.32	0.13	0.40	0.40
Crit Moves:		****		****			****					
Green/Cycle:	0.41	0.23	0.23	0.36	0.18	0.18	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.70	0.98	0.98	0.79	0.84	0.84	0.98	0.53	0.53	0.22	0.67	0.67
Delay/Veh:	27.9	77.2	77.2	35.6	56.4	56.4	98.1	12.3	12.3	10.0	14.5	14.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.9	77.2	77.2	35.6	56.4	56.4	98.1	12.3	12.3	10.0	14.5	14.5
LOS by Move:	C	E	E	D	E	E	F	B	B	B	B	B
HCM2kAvgQ:	10	18	18	11	11	11	7	11	11	1	16	16

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.628
Loss Time (sec):	0	Average Delay (sec/veh):	18.8
Optimal Cycle:	50	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1	
Volume Module:													
Base Vol:	7	762	197	318	702	6	3	5	8	208	4	287	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	7	762	197	318	702	6	3	5	8	208	4	287	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	7	762	197	318	702	6	3	5	8	208	4	287	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	7	762	197	318	702	6	3	5	8	208	4	287	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	7	762	197	318	702	6	3	5	8	208	4	287	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.90	0.90	0.90	0.73	0.73	0.85	
Lanes:	1.00	1.59	0.41	1.00	1.98	0.02	0.19	0.31	0.50	0.98	0.02	1.00	
Final Sat.:	1805	2780	719	1805	3575	31	321	535	856	1353	26	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.27	0.27	0.18	0.20	0.20	0.01	0.01	0.01	0.15	0.15	0.18	
Crit Moves:		****		****								****	
Green/Cycle:	0.01	0.44	0.44	0.72	0.70	0.70	0.28	0.28	0.28	0.28	0.28	0.28	
Volume/Cap:	0.28	0.63	0.63	0.50	0.28	0.28	0.03	0.03	0.03	0.54	0.54	0.63	
Delay/Veh:	54.8	22.7	22.7	12.5	5.5	5.5	26.0	26.0	26.0	32.0	32.0	34.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	54.8	22.7	22.7	12.5	5.5	5.5	26.0	26.0	26.0	32.0	32.0	34.0	
LOS by Move:	D	C	C	B	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	13	13	5	4	4	0	0	0	6	6	9	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.611
Loss Time (sec):	0	Average Delay (sec/veh):	27.5
Optimal Cycle:	48	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound				South Bound				East Bound				West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Protected					
Rights:	Include				Include				Include				Include					
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	320	213	79		136	248	58		57	213	247		34	297	52			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	320	213	79		136	248	58		57	213	247		34	297	52			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	320	213	79		136	248	58		57	213	247		34	297	52			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	320	213	79		136	248	58		57	213	247		34	297	52			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	320	213	79		136	248	58		57	213	247		34	297	52			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900			
Adjustment:	0.92	0.96	0.82		0.92	0.96	0.82		0.38	0.89	0.89		0.92	0.94	0.94			
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.46	0.54		1.00	0.85	0.15			
Final Sat.:	1742	1833	1558		1742	1833	1558		723	781	905		1742	1525	267			
Capacity Analysis Module:																		
Vol/Sat:	0.18	0.12	0.05		0.08	0.14	0.04		0.08	0.27	0.27		0.02	0.19	0.19			
Crit Moves:	****					****				****			****					
Green/Cycle:	0.30	0.30	0.30		0.22	0.22	0.22		0.45	0.45	0.45		0.03	0.48	0.48			
Volume/Cap:	0.61	0.39	0.17		0.35	0.61	0.17		0.18	0.61	0.61		0.61	0.41	0.41			
Delay/Veh:	32.1	28.1	25.9		33.4	37.8	31.7		16.9	22.6	22.6		66.2	17.2	17.2			
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
AdjDel/Veh:	32.1	28.1	25.9		33.4	37.8	31.7		16.9	22.6	22.6		66.2	17.2	17.2			
LOS by Move:	C	C	C		C	D	C		B	C	C		E	B	B			
HCM2kAvgQ:	9	5	2		4	8	2		1	11	11		2	7	7			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.831
Loss Time (sec):	0	Average Delay (sec/veh):	19.3
Optimal Cycle:	85	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	45	857	211	153	758	31	35	69	16	252	78	186	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	45	857	211	153	758	31	35	69	16	252	78	186	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	45	857	211	153	758	31	35	69	16	252	78	186	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	45	857	211	153	758	31	35	69	16	252	78	186	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	45	857	211	153	758	31	35	69	16	252	78	186	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.27	0.92	0.92	0.17	0.94	0.94	0.83	0.83	0.83	0.74	0.74	0.74	
Lanes:	1.00	1.60	0.40	1.00	1.92	0.08	0.29	0.57	0.13	0.49	0.15	0.36	
Final Sat.:	505	2811	692	328	3448	141	459	905	210	690	214	510	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.30	0.30	0.47	0.22	0.22	0.08	0.08	0.08	0.37	0.37	0.37	
Crit Moves:				****							****		
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.44	0.44	0.44	0.44	0.44	0.44	
Volume/Cap:	0.16	0.54	0.54	0.83	0.39	0.39	0.17	0.17	0.17	0.83	0.83	0.83	
Delay/Veh:	10.8	14.2	14.2	44.2	12.5	12.5	17.2	17.2	17.2	34.1	34.1	34.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.8	14.2	14.2	44.2	12.5	12.5	17.2	17.2	17.2	34.1	34.1	34.1	
LOS by Move:	B	B	B	D	B	B	B	B	B	C	C	C	
HCM2kAvgQ:	1	11	11	6	7	7	2	2	2	16	16	16	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.502
Loss Time (sec):	0	Average Delay (sec/veh):	15.2
Optimal Cycle:	29	Level Of Service:	B

Street Name:	Monterey Rd							Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1	
Volume Module:													
Base Vol:	315	417	40	83	337	108	142	273	275	23	147	60	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	315	417	40	83	337	108	142	273	275	23	147	60	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	315	417	40	83	337	108	142	273	275	23	147	60	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	315	417	40	83	337	108	142	273	275	23	147	60	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	315	417	40	83	337	108	142	273	275	23	147	60	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.49	1.00	0.85	0.44	1.00	0.85	0.53	0.88	0.88	0.29	1.00	0.85	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Sat.:	934	1900	1615	838	1900	1615	1001	1669	1669	547	1900	1615	
Capacity Analysis Module:													
Vol/Sat:	0.34	0.22	0.02	0.10	0.18	0.07	0.14	0.16	0.16	0.04	0.08	0.04	
Crit Moves:	****								****				
Green/Cycle:	0.67	0.67	0.67	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33	
Volume/Cap:	0.50	0.33	0.04	0.15	0.26	0.10	0.43	0.50	0.50	0.13	0.24	0.11	
Delay/Veh:	8.8	7.0	5.5	6.1	6.7	5.8	27.2	27.3	27.4	23.9	24.7	23.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.8	7.0	5.5	6.1	6.7	5.8	27.2	27.3	27.4	23.9	24.7	23.5	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	5	5	0	1	4	1	4	7	7	1	3	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.629
Loss Time (sec):	0	Average Delay (sec/veh):	24.3
Optimal Cycle:	50	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	108	664	62	108	578	66	79	215	78	90	365	144	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	108	664	62	108	578	66	79	215	78	90	365	144	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	108	664	62	108	578	66	79	215	78	90	365	144	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	108	664	62	108	578	66	79	215	78	90	365	144	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	108	664	62	108	578	66	79	215	78	90	365	144	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.80	0.80	0.80	0.86	0.86	0.86	
Lanes:	1.00	1.83	0.17	1.00	1.80	0.21	0.21	0.58	0.21	0.15	0.61	0.24	
Final Sat.:	1805	3259	304	1805	3190	364	322	876	318	246	999	394	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.20	0.20	0.06	0.18	0.18	0.25	0.25	0.25	0.37	0.37	0.37	
Crit Moves:		****		****							****		
Green/Cycle:	0.10	0.32	0.32	0.31	0.31	0.31	0.58	0.58	0.58	0.58	0.58	0.58	
Volume/Cap:	0.58	0.63	0.63	0.44	0.58	0.58	0.42	0.42	0.42	0.63	0.63	0.63	
Delay/Veh:	47.0	29.8	29.8	27.9	29.4	29.4	12.0	12.0	12.0	15.2	15.2	15.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	47.0	29.8	29.8	27.9	29.4	29.4	12.0	12.0	12.0	15.2	15.2	15.2	
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B	
HCM2kAvgQ:	4	11	11	3	9	9	6	6	6	13	13	13	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.695
Loss Time (sec):	0	Average Delay (sec/veh):	15.4
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 0	0	0	1! 0	0
Volume Module:													
Base Vol:	10	712	124	203	550	1	8	7	0	119	40	290	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	712	124	203	550	1	8	7	0	119	40	290	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	712	124	203	550	1	8	7	0	119	40	290	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	10	712	124	203	550	1	8	7	0	119	40	290	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	10	712	124	203	550	1	8	7	0	119	40	290	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.38	0.93	0.93	0.26	0.95	0.95	0.86	0.86	1.00	0.83	0.83	0.83	
Lanes:	1.00	1.70	0.30	1.00	2.00	0.00	0.53	0.47	0.00	0.27	0.09	0.65	
Final Sat.:	730	3006	524	492	3602	7	873	764	0	420	141	1024	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.24	0.24	0.41	0.15	0.15	0.01	0.01	0.00	0.28	0.28	0.28	
Crit Moves:				****							****		
Green/Cycle:	0.59	0.59	0.59	0.59	0.59	0.59	0.41	0.41	0.00	0.41	0.41	0.41	
Volume/Cap:	0.02	0.40	0.40	0.70	0.26	0.26	0.02	0.02	0.00	0.70	0.70	0.70	
Delay/Veh:	8.4	11.0	11.0	21.2	9.9	9.9	17.7	17.7	0.0	27.8	27.8	27.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.4	11.0	11.0	21.2	9.9	9.9	17.7	17.7	0.0	27.8	27.8	27.8	
LOS by Move:	A	B	B	C	A	A	B	B	A	C	C	C	
HCM2kAvgQ:	0	7	7	6	4	4	0	0	0	12	12	12	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.368
Loss Time (sec):	0	Average Delay (sec/veh):	10.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	202	106	53	26	149	80	24	81	76	18	94	11	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	202	106	53	26	149	80	24	81	76	18	94	11	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	202	106	53	26	149	80	24	81	76	18	94	11	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	202	106	53	26	149	80	24	81	76	18	94	11	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	202	106	53	26	149	80	24	81	76	18	94	11	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.67	0.33	1.00	0.65	0.35	0.13	0.45	0.42	0.15	0.76	0.09	
Final Sat.:	569	429	214	550	405	218	82	277	260	85	444	52	
Capacity Analysis Module:													
Vol/Sat:	0.35	0.25	0.25	0.05	0.37	0.37	0.29	0.29	0.29	0.21	0.21	0.21	
Crit Moves:	****					****	****				****		
Delay/Veh:	12.0	9.8	9.8	9.3	11.2	11.2	10.4	10.4	10.4	10.1	10.1	10.1	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	12.0	9.8	9.8	9.3	11.2	11.2	10.4	10.4	10.4	10.1	10.1	10.1	
LOS by Move:	B	A	A	A	B	B	B	B	B	B	B	B	
ApproachDel:	11.0			11.0			10.4			10.1			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	11.0			11.0			10.4			10.1			
LOS by Appr:	B			B			B			B			
AllWayAvgQ:	0.5	0.3	0.3	0.0	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.441
Loss Time (sec):	0	Average Delay (sec/veh):	23.2
Optimal Cycle:	33	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	196	580	94	185	531	39	42	104	200	98	158	238
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	196	580	94	185	531	39	42	104	200	98	158	238
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	196	580	94	185	531	39	42	104	200	98	158	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	196	580	94	185	531	39	42	104	200	98	158	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	196	580	94	185	531	39	42	104	200	98	158	238
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.53	1.00	0.85	0.60	1.00	0.85
Lanes:	1.00	1.72	0.28	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3042	493	1805	3328	244	1000	1900	1615	1146	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.19	0.10	0.16	0.16	0.04	0.05	0.12	0.09	0.08	0.15
Crit Moves:		****		****								****
Green/Cycle:	0.27	0.43	0.43	0.40	0.40	0.40	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.40	0.44	0.44	0.37	0.40	0.40	0.13	0.16	0.37	0.26	0.25	0.44
Delay/Veh:	30.5	20.1	20.1	21.8	21.9	21.9	23.3	23.5	25.7	24.6	24.4	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.5	20.1	20.1	21.8	21.9	21.9	23.3	23.5	25.7	24.6	24.4	26.5
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	8	8	4	7	7	1	2	5	2	4	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.493
Loss Time (sec):	0	Average Delay (sec/veh):	4.0
Optimal Cycle:	28	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	248	869	38	28	600	366	36	11	25	40	43	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	248	869	38	28	600	366	36	11	25	40	43	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	248	869	38	28	600	366	36	11	25	40	43	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	869	38	28	600	366	36	11	25	40	43	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	869	38	28	600	366	36	11	25	40	43	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.29	0.94	0.94	0.30	0.90	0.90	0.61	0.90	0.90	0.54	0.86	0.86
Lanes:	1.00	1.92	0.08	1.00	1.24	0.76	1.00	0.31	0.69	1.00	2.00	1.00
Final Sat.:	546	3437	150	578	2115	1290	1157	520	1182	1030	3272	1636
Capacity Analysis Module:												
Vol/Sat:	0.45	0.25	0.25	0.05	0.28	0.28	0.03	0.02	0.02	0.04	0.01	0.01
Crit Moves:	****									****		
Green/Cycle:	0.92	0.92	0.92	0.92	0.92	0.92	0.08	0.08	0.08	0.08	0.08	0.08
Volume/Cap:	0.49	0.27	0.27	0.05	0.31	0.31	0.39	0.27	0.27	0.49	0.17	0.19
Delay/Veh:	1.3	0.5	0.5	0.4	0.5	0.5	46.6	44.4	44.4	48.8	43.2	43.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1.3	0.5	0.5	0.4	0.5	0.5	46.6	44.4	44.4	48.8	43.2	43.3
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	2	2	2	0	2	2	2	1	1	2	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.755
Loss Time (sec):	0	Average Delay (sec/veh):	31.7
Optimal Cycle:	105	Level Of Service:	C

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	366	602	232	244	584	88	94	730	171	293	1010	183	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	366	602	232	244	584	88	94	730	171	293	1010	183	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	366	602	232	244	584	88	94	730	171	293	1010	183	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	366	602	232	244	584	88	94	730	171	293	1010	183	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	366	602	232	244	584	88	94	730	171	293	1010	183	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.62	0.38	1.00	1.69	0.31	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2842	666	1805	2986	541	
Capacity Analysis Module:													
Vol/Sat:	0.20	0.17	0.14	0.14	0.16	0.05	0.05	0.26	0.26	0.16	0.34	0.34	
Crit Moves:	****				****		****				****		
Green/Cycle:	0.47	0.26	0.26	0.41	0.21	0.21	0.33	0.33	0.33	0.21	0.46	0.46	
Volume/Cap:	0.67	0.65	0.56	0.54	0.78	0.26	0.46	0.78	0.78	0.78	0.73	0.73	
Delay/Veh:	23.0	34.8	34.0	21.9	43.0	33.7	25.5	34.0	34.0	47.9	23.5	23.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	23.0	34.8	34.0	21.9	43.0	33.7	25.5	34.0	34.0	47.9	23.5	23.5	
LOS by Move:	C	C	C	C	D	C	C	C	C	D	C	C	
HCM2kAvgQ:	10	10	7	6	11	2	3	15	15	11	17	17	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	0	Average Delay (sec/veh):	15.7
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	0	1	0	0	0 1	1	0	2 0	0
	0	0	1	1	0							
Volume Module:												
Base Vol:	301	17	18	27	0	154	64	828	0	0	1118	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	301	17	18	27	0	154	64	828	0	0	1118	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	301	17	18	27	0	154	64	828	0	0	1118	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	301	17	18	27	0	154	64	828	0	0	1118	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	301	17	18	27	0	154	64	828	0	0	1118	27
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.17	0.95	1.00	1.00	0.95	0.95
Lanes:	1.81	0.09	0.10	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.95	0.05
Final Sat.:	3268	165	175	1805	0	1615	324	3610	0	0	3513	85
Capacity Analysis Module:												
Vol/Sat:	0.09	0.10	0.10	0.01	0.00	0.10	0.20	0.23	0.00	0.00	0.32	0.32
Crit Moves:			****			****					****	
Green/Cycle:	0.20	0.20	0.20	0.18	0.00	0.18	0.62	0.62	0.00	0.00	0.62	0.62
Volume/Cap:	0.46	0.52	0.52	0.08	0.00	0.52	0.32	0.37	0.00	0.00	0.52	0.52
Delay/Veh:	35.8	36.5	36.5	33.9	0.0	38.3	10.1	9.7	0.0	0.0	11.0	11.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	36.5	36.5	33.9	0.0	38.3	10.1	9.7	0.0	0.0	11.0	11.0
LOS by Move:	D	D	D	C	A	D	B	A	A	A	B	B
HCM2kAvgQ:	5	6	6	1	0	5	1	7	0	0	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.620
Loss Time (sec):	0	Average Delay (sec/veh):	16.6
Optimal Cycle:	38	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	244	520	105	112	285	111	125	1407	191	52	881	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	244	520	105	112	285	111	125	1407	191	52	881	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	244	520	105	112	285	111	125	1407	191	52	881	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	244	520	105	112	285	111	125	1407	191	52	881	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	244	520	105	112	285	111	125	1407	191	52	881	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.44	0.93	0.93	0.31	0.91	0.91	0.22	0.89	0.89	0.08	0.90	0.90
Lanes:	1.00	1.66	0.34	1.00	1.44	0.56	1.00	2.64	0.36	1.00	2.69	0.31
Final Sat.:	838	2928	591	583	2489	969	412	4485	609	158	4576	530
Capacity Analysis Module:												
Vol/Sat:	0.29	0.18	0.18	0.19	0.11	0.11	0.30	0.31	0.31	0.33	0.19	0.19
Crit Moves:	****									****		
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.62	0.38	0.38	0.41	0.24	0.24	0.57	0.59	0.59	0.62	0.36	0.36
Delay/Veh:	22.9	17.3	17.3	18.4	16.0	16.0	19.4	16.4	16.4	29.8	13.7	13.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.9	17.3	17.3	18.4	16.0	16.0	19.4	16.4	16.4	29.8	13.7	13.7
LOS by Move:	C	B	B	B	B	B	B	B	B	C	B	B
HCM2kAvgQ:	7	6	6	3	4	4	4	13	13	2	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.414
Loss Time (sec):	0	Average Delay (sec/veh):	13.6
Optimal Cycle:	25	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	16	465	91	0	0	0	255	665	0	0	208	84
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	465	91	0	0	0	255	665	0	0	208	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	465	91	0	0	0	255	665	0	0	208	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	465	91	0	0	0	255	665	0	0	208	84
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	465	91	0	0	0	255	665	0	0	208	84
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.53	0.95	1.00	1.00	0.91	0.91
Lanes:	0.06	1.63	0.32	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.42	0.58
Final Sat.:	98	2853	558	0	0	0	1014	3610	0	0	2460	994
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.00	0.00	0.00	0.25	0.18	0.00	0.00	0.08	0.08
Crit Moves:		****					****					
Green/Cycle:	0.39	0.39	0.39	0.00	0.00	0.00	0.61	0.61	0.00	0.00	0.61	0.61
Volume/Cap:	0.41	0.41	0.41	0.00	0.00	0.00	0.41	0.30	0.00	0.00	0.14	0.14
Delay/Veh:	22.2	22.2	22.2	0.0	0.0	0.0	10.8	9.6	0.0	0.0	8.5	8.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	22.2	22.2	0.0	0.0	0.0	10.8	9.6	0.0	0.0	8.5	8.5
LOS by Move:	C	C	C	A	A	A	B	A	A	A	A	A
HCM2kAvgQ:	7	7	7	0	0	0	4	5	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.336
Loss Time (sec):	0	Average Delay (sec/veh):	13.5
Optimal Cycle:	22	Level Of Service:	B

****

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	1 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	198	187	174	0	712	55	21	211	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	198	187	174	0	712	55	21	211	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	198	187	174	0	712	55	21	211	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	198	187	174	0	712	55	21	211	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	198	187	174	0	712	55	21	211	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.94	0.94	0.30	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.86	0.14	1.00	2.00	0.00
Final Sat.:	0	0	0	1629	1629	1629	0	3315	256	564	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.11	0.11	0.00	0.21	0.21	0.04	0.06	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.36	0.36	0.36	0.00	0.64	0.64	0.64	0.64	0.00
Volume/Cap:	0.00	0.00	0.00	0.34	0.32	0.30	0.00	0.34	0.34	0.06	0.09	0.00
Delay/Veh:	0.0	0.0	0.0	23.3	23.1	22.9	0.0	8.4	8.4	6.8	7.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.3	23.1	22.9	0.0	8.4	8.4	6.8	7.0	0.0
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	5	4	4	0	6	6	0	1	0

****

Note: Queue reported is the number of cars per lane.

****

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 837.2 Worst Case Level Of Service: F[1773.1]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			330	179			0	965	42			0	0	0			627
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			330	179			0	965	42			0	0	0			627
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			330	179			0	965	42			0	0	0			627
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			330	179			0	965	42			0	0	0			627
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1	6.5	xxxxx			7.1	6.5			6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5	4.0	xxxxx			3.5	4.0			3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			839	839	xxxxx			771	839			0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			288	304	xxxxx			320	304			1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			103	243	xxxxx			235	243			1091
Volume/Cap:	xxxx	xxxx	xxxx			0.20	xxxx	xxxx			9.34	0.17	xxxx			0.00	0.00			0.57
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.8	xxxx	xxxxx			50.9	xxxx	xxxxx			xxxx	xxxx			1.2
Control Del:	xxxxx	xxxx	xxxxx			7.8	xxxx	xxxxx			1735	xxxx	xxxxx			xxxxx	xxxx			9.6
LOS by Move:	*	*	*			A	*	*			F	*	*			*	*			A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			108	xxxx	xxxxx			xxxx	1091			xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			29.4	xxxx	xxxxx			xxxxx	1.2			xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			1809	xxxx	xxxxx			xxxxx	9.6			xxxxx
Shared LOS:	*	*	*			*	*	*			F	*	*			*	A			*
ApproachDel:	xxxxxx					xxxxxx					1773.1					9.6				
ApproachLOS:	*					*					F					A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.893
Loss Time (sec):	0	Average Delay (sec/veh):	26.4
Optimal Cycle:	174	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	62	390	371	149	300	15	22	270	75	565	523	276
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	62	390	371	149	300	15	22	270	75	565	523	276
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	62	390	371	149	300	15	22	270	75	565	523	276
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	390	371	149	300	15	22	270	75	565	523	276
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	62	390	371	149	300	15	22	270	75	565	523	276
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.88	0.88	0.95	1.00	0.85	0.29	0.92	0.92	0.51	0.90	0.90
Lanes:	1.00	1.02	0.98	1.00	1.00	1.00	1.00	1.57	0.43	1.00	1.31	0.69
Final Sat.:	1805	1715	1631	1805	1900	1615	549	2733	759	969	2241	1182
Capacity Analysis Module:												
Vol/Sat:	0.03	0.23	0.23	0.08	0.16	0.01	0.04	0.10	0.10	0.58	0.23	0.23
Crit Moves:		****		****						****		
Green/Cycle:	0.06	0.25	0.25	0.29	0.29	0.29	0.65	0.65	0.65	0.65	0.65	0.65
Volume/Cap:	0.55	0.89	0.89	0.61	0.55	0.03	0.06	0.15	0.15	0.89	0.36	0.36
Delay/Veh:	51.5	47.7	47.7	32.5	31.6	25.8	6.3	6.7	6.7	29.5	8.0	8.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.5	47.7	47.7	32.5	31.6	25.8	6.3	6.7	6.7	29.5	8.0	8.0
LOS by Move:	D	D	D	C	C	C	A	A	A	C	A	A
HCM2kAvgQ:	3	15	15	5	8	0	0	2	2	18	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.987
Loss Time (sec):	0	Average Delay (sec/veh):	103.9
Optimal Cycle:	180	Level Of Service:	F

Street Name:	San Fernando Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0
Volume Module:													
Base Vol:	11	1204	145	151	572	69	386	484	18	86	120	184	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	11	1204	145	151	572	69	386	484	18	86	120	184	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	11	1204	145	151	572	69	386	484	18	86	120	184	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	11	1204	145	151	572	69	386	484	18	86	120	184	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	11	1204	145	151	572	69	386	484	18	86	120	184	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.36	0.98	0.98	0.06	1.00	0.85	0.35	0.94	0.94	0.61	0.61	0.61	
Lanes:	1.00	0.89	0.11	1.00	1.00	1.00	1.00	1.93	0.07	0.44	0.62	0.94	
Final Sat.:	687	1668	201	107	1900	1615	674	3462	129	514	717	1099	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.72	0.72	1.41	0.30	0.04	0.57	0.14	0.14	0.17	0.17	0.17	
Crit Moves:				****			****						
Green/Cycle:	0.71	0.71	0.71	0.71	0.71	0.71	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.02	1.01	1.01	1.99	0.42	0.06	1.99	0.49	0.49	0.58	0.58	0.58	
Delay/Veh:	4.2	42.5	42.5	501.8	6.2	4.4	497.5	29.8	29.8	31.7	31.7	31.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	4.2	42.5	42.5	501.8	6.2	4.4	497.5	29.8	29.8	31.7	31.7	31.7	
LOS by Move:	A	D	D	F	A	A	F	C	C	C	C	C	
HCM2kAvgQ:	0	52	52	15	7	1	37	7	7	6	6	6	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.046
Loss Time (sec):	0	Average Delay (sec/veh):	46.4
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	333	619	56	120	453	204	43	1142	309	108	656	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	333	619	56	120	453	204	43	1142	309	108	656	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	333	619	56	120	453	204	43	1142	309	108	656	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	333	619	56	120	453	204	43	1142	309	108	656	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	333	619	56	120	453	204	43	1142	309	108	656	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.31	0.94	0.94	0.30	0.91	0.91	0.81	0.81	0.81	0.50	0.50	0.50
Lanes:	1.00	1.83	0.17	1.00	1.38	0.62	0.06	1.53	0.41	0.25	1.50	0.26
Final Sat.:	595	3269	296	579	2373	1069	88	2345	635	233	1413	241
Capacity Analysis Module:												
Vol/Sat:	0.56	0.19	0.19	0.21	0.19	0.19	0.49	0.49	0.49	0.46	0.46	0.46
Crit Moves:	****							****				
Green/Cycle:	0.53	0.53	0.53	0.53	0.53	0.53	0.47	0.47	0.47	0.47	0.47	0.47
Volume/Cap:	1.05	0.35	0.35	0.39	0.36	0.36	1.05	1.05	1.05	1.00	1.00	1.00
Delay/Veh:	86.3	13.5	13.5	14.5	13.5	13.5	63.6	63.6	63.6	56.3	56.3	56.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.3	13.5	13.5	14.5	13.5	13.5	63.6	63.6	63.6	56.3	56.3	56.3
LOS by Move:	F	B	B	B	B	B	E	E	E	E	E	E
HCM2kAvgQ:	17	6	6	3	6	6	34	34	34	20	20	20

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 146.2 Worst Case Level Of Service: F[1263.0]

Street Name:	Ave 21									Main St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	9	209	5	119	0	1313	5	16	1203	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	9	209	5	119	0	1313	5	16	1203	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	9	209	5	119	0	1313	5	16	1203	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	9	209	5	119	0	1313	5	16	1203	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	659	1892	2553	602	xxxx	xxxx	xxxxx	1318	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	411	44	27	448	xxxx	xxxx	xxxxx	531	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	411	42	26	448	xxxx	xxxx	xxxxx	531	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	0.02	5.00	0.19	0.27	xxxx	xxxx	xxxx	0.03	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.1	24.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	14.0	1995	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx								
LOS by Move:	*	*	B	F	*	*	*	*	*	B	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	272	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	2.2	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	28.9	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	D	*	*	*	B	*	*								
ApproachDel:	14.0			1263.0			xxxxxx			xxxxxx										
ApproachLOS:	B			F			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.441
Loss Time (sec):	0	Average Delay (sec/veh):	8.4
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	497	1063	722	0	0	368	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	497	1063	722	0	0	368	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	497	1063	722	0	0	368	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	497	1063	722	0	0	368	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	497	1063	722	0	0	368	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.92	0.92	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.79	1.21	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	3132	2127	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.17	0.34	0.34	0.00	0.00	0.10	0.03
Crit Moves:					****		****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.23	0.23
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.23	0.44	0.44	0.00	0.00	0.44	0.13
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	3.3	4.1	4.1	0.0	0.0	33.3	30.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	3.3	4.1	4.1	0.0	0.0	33.3	30.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	C	C
HCM2kAvgQ:	0	0	0	0	0	2	7	7	0	0	5	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.739
Loss Time (sec):	0	Average Delay (sec/veh):	13.4
Optimal Cycle:	55	Level Of Service:	B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	40	1457	93	119	1312	69	120	304	41	38	204	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	1457	93	119	1312	69	120	304	41	38	204	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	40	1457	93	119	1312	69	120	304	41	38	204	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	1457	93	119	1312	69	120	304	41	38	204	191
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	1457	93	119	1312	69	120	304	41	38	204	191
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.15	0.94	0.94	0.12	0.94	0.94	0.62	0.62	0.62	0.75	0.75	0.75
Lanes:	1.00	1.88	0.12	1.00	1.90	0.10	0.52	1.31	0.18	0.18	0.94	0.88
Final Sat.:	281	3363	215	219	3404	179	612	1549	209	251	1347	1262
Capacity Analysis Module:												
Vol/Sat:	0.14	0.43	0.43	0.54	0.39	0.39	0.20	0.20	0.20	0.15	0.15	0.15
Crit Moves:				****				****				
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	0.19	0.59	0.59	0.74	0.52	0.52	0.74	0.74	0.74	0.57	0.57	0.57
Delay/Veh:	4.6	6.6	6.6	24.2	5.9	5.9	38.2	38.2	38.2	32.8	32.8	32.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.6	6.6	6.6	24.2	5.9	5.9	38.2	38.2	38.2	32.8	32.8	32.8
LOS by Move:	A	A	A	C	A	A	D	D	D	C	C	C
HCM2kAvgQ:	1	12	12	4	10	10	9	9	9	7	7	7

Note: Queue reported is the number of cars per lane.

APPENDIX B

HCM WORKSHEETS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

AM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
Loss Time (sec):	0	Average Delay (sec/veh):	27.3
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	233	855	356	11	408	42	33	251	177	505	348	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	233	855	356	11	408	42	33	251	177	505	348	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	233	855	356	11	408	42	33	251	0	505	348	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	233	855	356	11	408	42	33	251	0	505	348	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	233	855	356	11	408	42	33	251	0	505	348	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.95	0.95
Lanes:	1.00	2.12	0.88	1.00	2.72	0.28	1.00	2.00	1.00	1.00	1.94	0.06
Final Sat.:	1805	3501	1458	1805	4637	477	1805	3610	1900	1805	3495	100
Capacity Analysis Module:												
Vol/Sat:	0.13	0.24	0.24	0.01	0.09	0.09	0.02	0.07	0.00	0.28	0.10	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.25	0.41	0.41	0.01	0.17	0.17	0.09	0.12	0.00	0.47	0.49	0.49
Volume/Cap:	0.52	0.60	0.60	0.60	0.52	0.52	0.20	0.60	0.00	0.60	0.20	0.20
Delay/Veh:	33.5	23.7	23.7	94.0	38.4	38.4	42.8	44.4	0.0	21.0	14.4	14.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.5	23.7	23.7	94.0	38.4	38.4	42.8	44.4	0.0	21.0	14.4	14.4
LOS by Move:	C	C	C	F	D	D	D	D	A	C	B	B
HCM2kAvgQ:	7	11	11	1	5	5	1	5	0	12	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A[8.7]

Street Name:	ASP SB Exit 31B									State St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	34	0	2	0	17	0	0	1	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	34	0	2	0	17	0	0	1	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	34	0	2	0	17	0	0	1	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	34	0	2	0	17	0	0	1	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	18	18	1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	1005	880	1090	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.03	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1009	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				8.7		xxxxxx				xxxxxx									
ApproachLOS:	*				A		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	0	Average Delay (sec/veh):	11.6
Optimal Cycle:	39	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	243	1204	49	1	521	191	0	0	0	155	85	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	243	1204	49	1	521	191	0	0	0	155	85	61
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	243	1204	49	1	521	191	0	0	0	155	85	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	243	1204	49	1	521	191	0	0	0	155	85	61
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	243	1204	49	1	521	191	0	0	0	155	85	61
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.92	0.92	0.85
Lanes:	2.00	1.92	0.08	1.00	2.00	1.00	0.00	0.00	0.00	1.29	0.71	1.00
Final Sat.:	3502	3448	140	1805	3610	1615	0	0	0	2265	1242	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.35	0.35	0.00	0.14	0.12	0.00	0.00	0.00	0.07	0.07	0.04
Crit Moves:		****		****						****		
Green/Cycle:	0.27	0.83	0.83	0.00	0.56	0.56	0.00	0.00	0.00	0.16	0.16	0.16
Volume/Cap:	0.26	0.42	0.42	0.42	0.26	0.21	0.00	0.00	0.00	0.42	0.42	0.23
Delay/Veh:	28.7	2.2	2.2	138.7	11.1	10.9	0.0	0.0	0.0	38.0	38.0	36.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	2.2	2.2	138.7	11.1	10.9	0.0	0.0	0.0	38.0	38.0	36.8
LOS by Move:	C	A	A	F	B	B	A	A	A	D	D	D
HCM2kAvgQ:	3	5	5	0	4	3	0	0	0	4	4	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.470
Loss Time (sec):	0	Average Delay (sec/veh):	24.7
Optimal Cycle:	35	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	810	12	0	672	0	221	95	139	8	0	465
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	810	12	0	672	0	221	95	139	8	0	465
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	810	12	0	672	0	221	95	139	8	0	465
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	810	12	0	672	0	221	95	139	8	0	465
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	810	12	0	672	0	221	95	139	8	0	465
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.89	0.89	0.89	0.85	1.00	0.85
Lanes:	0.00	2.96	0.04	0.00	2.00	0.00	0.97	0.42	0.61	0.03	0.00	1.97
Final Sat.:	0	5100	76	0	3610	0	1633	702	1027	54	0	3183
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.00	0.19	0.00	0.14	0.14	0.14	0.15	0.00	0.15
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.40	0.40	0.00	0.40	0.00	0.29	0.29	0.29	0.32	0.00	0.32
Volume/Cap:	0.00	0.40	0.40	0.00	0.47	0.00	0.47	0.47	0.47	0.47	0.00	0.46
Delay/Veh:	0.0	21.8	21.8	0.0	22.7	0.0	29.7	29.7	29.7	27.8	0.0	27.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.8	21.8	0.0	22.7	0.0	29.7	29.7	29.7	27.8	0.0	27.7
LOS by Move:	A	C	C	A	C	A	C	C	C	C	A	C
HCM2kAvgQ:	0	7	7	0	8	0	6	6	6	6	0	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.308
Loss Time (sec):	0	Average Delay (sec/veh):	10.9
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 2	0 0	0	0 1	0 1	0	0 0	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	167	659	0	0	301	1173	0	0	0	73	0	11	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	167	659	0	0	301	1173	0	0	0	73	0	11	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	167	659	0	0	301	0	0	0	0	73	0	11	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	167	659	0	0	301	0	0	0	0	73	0	11	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	167	659	0	0	301	0	0	0	0	73	0	11	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00	0.78	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.87	0.00	0.13	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1289	0	194	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.18	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.06	0.00	0.06	
Crit Moves:	****				****					****			
Green/Cycle:	0.30	0.82	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.18	0.00	0.18	
Volume/Cap:	0.31	0.22	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.31	0.00	0.31	
Delay/Veh:	27.2	2.1	0.0	0.0	14.1	0.0	0.0	0.0	0.0	36.0	0.0	36.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	27.2	2.1	0.0	0.0	14.1	0.0	0.0	0.0	0.0	36.0	0.0	36.0	
LOS by Move:	C	A	A	A	B	A	A	A	A	D	A	D	
HCM2kAvgQ:	4	2	0	0	5	0	0	0	0	2	0	2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.374
Loss Time (sec):	0	Average Delay (sec/veh):	22.7
Optimal Cycle:	39	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	342	149	28	344	0	483	3	69	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	342	149	28	344	0	483	3	69	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	342	149	28	344	0	483	3	69	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	342	149	28	344	0	483	3	69	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	342	149	28	344	0	483	3	69	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.39	0.61	1.00	1.00	0.00	1.77	0.01	0.22	0.00	0.00	0.00
Final Sat.:	0	2400	1046	1805	1900	0	2870	16	357	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.14	0.02	0.18	0.00	0.17	0.19	0.19	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.28	0.28	0.35	0.63	0.00	0.37	0.37	0.37	0.00	0.00	0.00
Volume/Cap:	0.00	0.52	0.52	0.04	0.29	0.00	0.45	0.52	0.52	0.00	0.00	0.00
Delay/Veh:	0.0	31.1	31.1	21.5	8.7	0.0	23.8	24.7	24.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.1	31.1	21.5	8.7	0.0	23.8	24.7	24.7	0.0	0.0	0.0
LOS by Move:	A	C	C	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	0	7	7	1	5	0	7	8	8	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 5.2 Worst Case Level Of Service: A[8.6]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	30	8	0	0	27	2	1	0	37	0	0	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	30	8	0	0	27	2	1	0	37	0	0	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	30	8	0	0	27	2	1	0	37	0	0	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	30	8	0	0	27	2	1	0	37	0	0	0								
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx								
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	29	xxxx	xxxxx	xxxx	xxxx	xxxxx	96	96	28	xxxx	xxxx	xxxxx								
Potent Cap.:	1597	xxxx	xxxxx	xxxx	xxxx	xxxxx	908	798	1053	xxxx	xxxx	xxxxx								
Move Cap.:	1597	xxxx	xxxxx	xxxx	xxxx	xxxxx	895	783	1053	xxxx	xxxx	xxxxx								
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.04	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1048	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx				8.6			xxxxxx									
ApproachLOS:	*			*				A			*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: B[11.3]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	10	12	17	61	0	11	11	111	96	50	20	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	12	17	61	0	11	11	111	96	50	20	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	12	17	61	0	11	11	111	96	50	20	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	10	12	17	61	0	11	11	111	96	50	20	0
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	307	301	159	316	349	20	20	xxxx	xxxxx	207	xxxx	xxxxx
Potent Cap.:	650	615	892	641	578	1064	1609	xxxx	xxxxx	1376	xxxx	xxxxx
Move Cap.:	622	588	892	598	553	1064	1609	xxxx	xxxxx	1376	xxxx	xxxxx
Volume/Cap:	0.02	0.02	0.02	0.10	0.00	0.01	0.01	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	702	xxxxx	xxxx	641	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.4	xxxxx	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:	10.4			11.3			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 20.7 Worst Case Level Of Service: E[47.4]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	418		0		59	0		0		0	0		102		0	0		151		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
Initial Bse:	418		0		59	0		0		0	0		102		0	0		151		0
User Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		0.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00
PHF Volume:	418		0		0	0		0		0	0		102		0	0		151		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	418		0		0	0		0		0	0		102		0	0		151		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		836	xxxxx	xxxx		836	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		305	xxxxx	xxxx		305	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		227	xxxxx	xxxx		227	xxxxx						
Volume/Cap:	0.26	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.45	xxxx	xxxx		0.66	xxxx						
Level Of Service Module:																				
2Way95thQ:	1.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		2.1	xxxxx	xxxx		4.1	xxxxx						
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		33.1	xxxxx	xxxxx		47.4	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		D	*	*		E	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx				33.1				47.4								
ApproachLOS:	*			*				D				E								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.837
Loss Time (sec):	0	Average Delay (sec/veh):	22.3
Optimal Cycle:	0	Level Of Service:	C

Street Name:	La Riba Wy						Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	90	0	27	0	0	0	0	661	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	0	27	0	0	0	0	661	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	0	27	0	0	0	0	661	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	0	27	0	0	0	0	661	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	90	0	27	0	0	0	0	661	52
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93	0.07
Final Sat.:	0	0	0	530	0	642	0	0	0	0	790	62
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.17	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	0.84	0.84
Crit Moves:				****							****	
Delay/Veh:	0.0	0.0	0.0	10.4	0.0	8.2	0.0	0.0	0.0	0.0	24.4	24.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.4	0.0	8.2	0.0	0.0	0.0	0.0	24.4	24.4
LOS by Move:	*	*	*	B	*	A	*	*	*	*	C	C
ApproachDel:	xxxxxx			9.9			xxxxxx			24.4		
Delay Adj:	xxxxx			1.00			xxxxx			1.00		
ApprAdjDel:	xxxxxx			9.9			xxxxxx			24.4		
LOS by Appr:	*			A			*			C		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	4.1	4.1	4.1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[13.1]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	4	0	59	120	520	0	0	413	156								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	4	0	59	120	520	0	0	413	156								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	4	0	59	120	520	0	0	413	156								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	4	0	59	120	520	0	0	413	156								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1251	1251	491	569	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	192	174	582	1013	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	175	153	582	1013	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.10	0.12	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	507	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				13.1		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	6.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr							ASP SB Exit 29/Shults St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign			
Rights:	Include			Include			Include			Include			
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			
Volume Module:													
Base Vol:	12	1	2	1	1	4	5	235	8	3	61	1	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	12	1	2	1	1	4	5	235	8	3	61	1	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	12	1	2	1	1	4	5	235	8	3	61	1	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	12	1	2	1	1	4	5	235	8	3	61	1	
Saturation Flow Module:													
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.80	0.07	0.13	0.17	0.17	0.67	0.02	0.95	0.03	0.05	0.94	0.02	
Final Sat.:	194	16	32	0	0	1	18	823	28	33	671	11	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.06	0.06	6.00	6.00	6.00	0.29	0.29	0.29	0.09	0.09	0.09	
Crit Moves:		****				****			****			****	
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume/Cap:	0.06	0.06	0.06	6.00	6.00	6.00	0.29	0.29	0.29	0.09	0.09	0.09	
Delay/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.0	3.0	3.0	1.4	1.4	1.4	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1.3	1.3	1.3	xxxxx	xxxx	xxxxx	3.0	3.0	3.0	1.4	1.4	1.4	
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: C[18.1]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	91	0	181	0	0	0	0	371	0	0	524	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	0	181	0	0	0	0	371	0	0	524	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	91	0	181	0	0	0	0	371	0	0	524	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	91	0	181	0	0	0	0	371	0	0	524	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	895	895	186	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	314	282	862	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	314	282	862	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.29	0.00	0.21	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	544	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:	18.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	C			*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.9]

Street Name:	Ave 57									ASP SB Exit 28B/Carlota Bl									
Approach:	North Bound					South Bound				East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	0	0	0		405		8			2	0		0		0		0		60
Growth Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
Initial Bse:	0	0	0	0		405		8			2	0		0		0		0		60
User Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00	1.00		1.00		1.00			1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	0	0	0		405		8			2	0		0		0		0		60
Reduct Vol:	0	0	0	0		0		0			0	0		0		0		0		0
FinalVolume:	0	0	0	0		405		8			2	0		0		0		0		60
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			7.1	xxxx		xxxxx		xxxxx		xxxx		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			3.5	xxxx		xxxxx		xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			409	xxxx		xxxxx		xxxx		xxxx		0
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			556	xxxx		xxxxx		xxxx		xxxx		1091
Move Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			526	xxxx		xxxxx		xxxx		xxxx		1091
Volume/Cap:	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx			0.00	xxxx		xxxx		xxxx		xxxx		0.05
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			0.0	xxxx		xxxxx		xxxx		xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			11.9	xxxx		xxxxx		xxxxx		xxxx		8.5
LOS by Move:	*	*	*	*		*		*			B	*		*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx			xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx			xxxxx	xxxx		xxxxx		xxxxx		xxxx		xxxxx
Shared LOS:	*	*	*	*		*		*			*	*		*		*		*		*
ApproachDel:	xxxxxx			xxxxxx							11.9							8.5		
ApproachLOS:	*			*							B							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.453
Loss Time (sec):	0	Average Delay (sec/veh):	10.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	78	28	54	10	201	350	3	300	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	78	28	54	10	201	350	3	300	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	78	28	54	10	201	350	3	300	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	78	28	54	10	201	350	3	300	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	78	28	54	10	201	350	3	300	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.49	0.17	0.34	0.05	0.95	1.00	0.02	1.91	0.07
Final Sat.:	0	542	0	298	107	206	32	636	772	12	1225	45
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.26	0.26	0.26	0.32	0.32	0.45	0.25	0.24	0.24
Crit Moves:		****		****					****	****		
Delay/Veh:	0.0	0.0	0.0	10.3	10.3	10.3	10.4	10.4	10.9	9.9	9.9	9.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.3	10.3	10.3	10.4	10.4	10.9	9.9	9.9	9.8
LOS by Move:	*	*	*	B	B	B	B	B	B	A	A	A
ApproachDel:	xxxxxx			10.3			10.7			9.9		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			10.3			10.7			9.9		
LOS by Appr:	*			B			B			A		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.3	0.3	0.4	0.4	0.8	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.263
Loss Time (sec):	0	Average Delay (sec/veh):	8.3
Optimal Cycle:	0	Level Of Service:	A

Street Name:	ASP NB Exit 28A									Ave 52							
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Volume Module:																	
Base Vol:	134	0	87	0	0	0	0	75	0	0	98	0					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	134	0	87	0	0	0	0	75	0	0	98	0					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Volume:	134	0	87	0	0	0	0	75	0	0	98	0					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0					
Reduced Vol:	134	0	87	0	0	0	0	75	0	0	98	0					
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
FinalVolume:	134	0	87	0	0	0	0	75	0	0	98	0					
Saturation Flow Module:																	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Lanes:	0.61	0.00	0.39	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00					
Final Sat.:	510	0	331	0	0	0	0	768	0	0	775	0					
Capacity Analysis Module:																	
Vol/Sat:	0.26	xxxx	0.26	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx	0.13	xxxx					
Crit Moves:	****							****			****						
Delay/Veh:	8.6	0.0	8.6	0.0	0.0	0.0	0.0	7.9	0.0	0.0	8.1	0.0					
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
AdjDel/Veh:	8.6	0.0	8.6	0.0	0.0	0.0	0.0	7.9	0.0	0.0	8.1	0.0					
LOS by Move:	A	*	A	*	*	*	*	A	*	*	A	*					
ApproachDel:	8.6			xxxxxx			7.9			8.1							
Delay Adj:	1.00			xxxxx			1.00			1.00							
ApprAdjDel:	8.6			xxxxxx			7.9			8.1							
LOS by Appr:	A			*			A			A							
AllWayAvgQ:	0.3	0.3	0.3	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.731
Loss Time (sec):	0	Average Delay (sec/veh):	18.6
Optimal Cycle:	0	Level Of Service:	C

Street Name:	ASP SB Exit 27/Carlota Bl									Ave 43					
Approach:	North Bound				South Bound				East Bound				West Bound		
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign		
Rights:	Include				Include				Include				Include		
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0
Lanes:	0 0	1! 0	0		0 0	1! 0	0		0 0	1! 0	0		0 0	1! 0	0
Volume Module:															
Base Vol:	9	25	48		79	64	119		174	261	13		48	288	107
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Initial Bse:	9	25	48		79	64	119		174	261	13		48	288	107
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
PHF Volume:	9	25	48		79	64	119		174	261	13		48	288	107
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0
Reduced Vol:	9	25	48		79	64	119		174	261	13		48	288	107
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
FinalVolume:	9	25	48		79	64	119		174	261	13		48	288	107
Saturation Flow Module:															
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Lanes:	0.11	0.30	0.59		0.30	0.24	0.45		0.39	0.58	0.03		0.11	0.65	0.24
Final Sat.:	49	137	263		161	131	243		238	357	18		68	408	151
Capacity Analysis Module:															
Vol/Sat:	0.18	0.18	0.18		0.49	0.49	0.49		0.73	0.73	0.73		0.71	0.71	0.71
Crit Moves:	****				****				****				****		
Delay/Veh:	10.7	10.7	10.7		14.0	14.0	14.0		21.6	21.6	21.6		19.8	19.8	19.8
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
AdjDel/Veh:	10.7	10.7	10.7		14.0	14.0	14.0		21.6	21.6	21.6		19.8	19.8	19.8
LOS by Move:	B	B	B		B	B	B		C	C	C		C	C	C
ApproachDel:	10.7				14.0				21.6				19.8		
Delay Adj:	1.00				1.00				1.00				1.00		
ApprAdjDel:	10.7				14.0				21.6				19.8		
LOS by Appr:	B				B				C				C		
AllWayAvgQ:	0.1	0.1	0.1		0.7	0.7	0.7		2.2	2.2	2.2		1.9	1.9	1.9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.522
Loss Time (sec):	0	Average Delay (sec/veh):	12.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	163	7	67	6	7	24	11	183	181	58	255	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	163	7	67	6	7	24	11	183	181	58	255	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	163	7	67	6	7	24	11	183	181	58	255	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	7	67	6	7	24	11	183	181	58	255	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	163	7	67	6	7	24	11	183	181	58	255	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.43	0.57	0.16	0.19	0.65	0.03	0.49	0.48	0.18	0.80	0.01
Final Sat.:	508	253	329	88	102	350	21	351	347	122	537	8
Capacity Analysis Module:												
Vol/Sat:	0.32	0.03	0.20	0.07	0.07	0.07	0.52	0.52	0.52	0.48	0.48	0.48
Crit Moves:	****				****		****					****
Delay/Veh:	12.2	9.3	9.3	9.1	9.1	9.1	12.7	12.7	12.7	12.6	12.6	12.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.2	9.3	9.3	9.1	9.1	9.1	12.7	12.7	12.7	12.6	12.6	12.6
LOS by Move:	B	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	11.3			9.1			12.7			12.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.3			9.1			12.7			12.6		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.4	0.1	0.1	0.1	0.1	0.1	1.0	1.0	1.0	0.8	0.8	0.8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 63.9 Worst Case Level Of Service: F[497.1]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	236	0	109	0	1480	0	0	858	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	236	0	109	0	1480	0	0	858	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	236	0	109	0	1480	0	0	858	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	236	0	109	0	1480	0	0	858	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1909	2338	740	1598	2338	429	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	42	37	364	99	37	580	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	34	37	364	99	37	580	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	2.38	0.00	0.19	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	0	xxxxx	99	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	21.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	720.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			497.1			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[10.8]

Street Name:	ASP NB on-ramp									Ave 26									
Approach:	North Bound					South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled			
Rights:	Include					Include					Include					Include			
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	88	1041	0	0	0	0	907	81		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0	88	1041	0	0	0	0	907	81		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0	88	1041	0	0	0	0	907	81		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0	88	1041	0	0	0	0	907	81		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					988	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					708	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					708	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.12	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					10.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx				xxxxxx					
ApproachLOS:	*			*							*				*					

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	64	Critical Vol./Cap.(X):	0.945
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Figueroa St							ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Protected			Split Phase			Split Phase			
Rights:	Include			Include			Include			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	1 1	0	2 0	0 1	0	0 0	1! 0	0	0 0	0 0	2	
Volume Module:													
Base Vol:	0	287	163	801	725	208	90	38	18	0	0	535	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	287	163	801	725	208	90	38	18	0	0	535	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	287	163	801	725	208	90	38	18	0	0	535	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	287	163	801	725	208	90	38	18	0	0	535	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	287	163	801	725	208	90	38	18	0	0	535	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.28	0.72	2.00	0.78	0.22	0.62	0.26	0.12	0.00	0.00	2.00	
Final Sat.:	0	1818	1032	2850	1107	318	878	371	176	0	0	2850	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.16	0.16	0.28	0.65	0.65	0.10	0.10	0.10	0.00	0.00	0.19	
Crit Moves:					****				****			****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.4]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	74	922	0	0	0	1033	74			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	74	922	0	0	0	1033	74			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	74	922	0	0	0	1033	74			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	74	922	0	0	0	1033	74			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1107	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					638	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					638	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.12	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: A[9.3]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	1		6	145		0		0	0		0		0	14		0		1
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	0	1		6	145		0		0	0		0		0	14		0		1
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	0	1		6	145		0		0	0		0		0	14		0		1
Reduct Vol:	0	0	0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0	0	1		6	145		0		0	0		0		0	14		0		1
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4		6.5		6.2				
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5		4.0		3.3				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		1	xxxx	xxxxx	xxxx	xxxx	xxxxx		157		157		0				
Potent Cap.:	xxxx	xxxx	xxxxx		1635	xxxx	xxxxx	xxxx	xxxx	xxxxx		839		739		1091				
Move Cap.:	xxxx	xxxx	xxxxx		1635	xxxx	xxxxx	xxxx	xxxx	xxxxx		837		736		1091				
Volume/Cap:	xxxx	xxxx	xxxx		0.00	xxxx	xxxx	xxxx	xxxx	xxxx		0.02		0.00		0.00				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
Control Del:	xxxxx	xxxx	xxxxx		7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							
LOS by Move:	*	*	*		A	*	*	*	*	*	*	*	*							
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT					
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			xxxx		850		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		0.1			xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx		7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		9.3			xxxxx				
Shared LOS:	*	*	*		A	*	*	*	*	*	*		A			*				
ApproachDel:	xxxxxx				xxxxxx			xxxxxx					9.3							
ApproachLOS:	*				*			*					A							

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: B[13.3]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0		19	7		12			21	157		225		76	112		98	
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0		19	7		12			21	157		225		76	112		98	
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0		19	7		12			21	157		225		76	112		98	
Reduct Vol:	0	0	0		0	0		0			0	0		0		0	0		0	
FinalVolume:	0	0	0		19	7		12			21	157		225		76	112		98	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	6.5		6.2			4.1	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	4.0		3.3			2.2	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		625	737		161			210	xxxx		xxxxx		382	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		452	348		889			1373	xxxx		xxxxx		1188	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		424	320		889			1373	xxxx		xxxxx		1188	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	xxxx		0.04	0.02		0.01			0.02	xxxx		xxxx		0.06	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx		xxxxx			0.0	xxxx		xxxxx		0.2	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx		xxxxx			7.7	xxxx		xxxxx		8.2	xxxx		xxxxx	
LOS by Move:	*	*	*		*	*		*			A	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	474		xxxxx			xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	0.3		xxxxx			0.0	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	13.3		xxxxx			7.7	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shared LOS:	*	*	*		*	B		*			A	*		*		*	*		*	
ApproachDel:	xxxxxx					13.3					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.507
Loss Time (sec):	0	Average Delay (sec/veh):	11.7
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	1 0	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	0	216	0	0	332	0	0	0	0	112	1	111	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	216	0	0	332	0	0	0	0	112	1	111	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	216	0	0	332	0	0	0	0	112	1	111	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	216	0	0	332	0	0	0	0	112	1	111	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	216	0	0	332	0	0	0	0	112	1	111	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	586	640	0	0	655	0	0	0	0	538	581	655	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.34	xxxx	xxxx	0.51	xxxx	xxxx	xxxx	xxxx	0.21	0.00	0.17	
Crit Moves:		****			****					****			
Delay/Veh:	0.0	10.8	0.0	0.0	13.6	0.0	0.0	0.0	0.0	10.6	8.6	8.8	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.8	0.0	0.0	13.6	0.0	0.0	0.0	0.0	10.6	8.6	8.8	
LOS by Move:	*	B	*	*	B	*	*	*	*	B	A	A	
ApproachDel:		10.8			13.6			xxxxxx			9.7		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		10.8			13.6			xxxxxx			9.7		
LOS by Appr:		B			B			*			A		
AllWayAvgQ:	0.0	0.5	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.2	0.0	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.499
Loss Time (sec):	0	Average Delay (sec/veh):	12.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	134	263	294	324	0	0	0	1	86	1	84	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	134	263	294	324	0	0	0	1	86	1	84	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	134	263	294	324	0	0	0	1	86	1	84	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	134	263	294	324	0	0	0	1	86	1	84	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	134	263	294	324	0	0	0	1	86	1	84	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.02	0.98	
Final Sat.:	0	608	693	596	649	0	0	466	513	472	10	550	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.22	0.38	0.49	0.50	xxxx	xxxx	0.00	0.00	0.18	0.10	0.15	
Crit Moves:			****		****				****	****			
Delay/Veh:	0.0	10.0	10.7	14.2	13.3	0.0	0.0	0.0	9.0	11.4	9.7	9.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	10.0	10.7	14.2	13.3	0.0	0.0	0.0	9.0	11.4	9.7	9.7	
LOS by Move:	*	B	B	B	B	*	*	*	A	B	A	A	
ApproachDel:	10.5			13.7			9.0			10.5			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.5			13.7			9.0			10.5			
LOS by Appr:	B			B			A			B			
AllWayAvgQ:	0.0	0.3	0.6	0.9	0.9	0.0	0.0	0.0	0.0	0.2	0.2	0.2	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.559
Loss Time (sec):	0	Average Delay (sec/veh):	6.6
Optimal Cycle:	42	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1	1 0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	942	62	170	956	0	0	0	0	154	0	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	942	62	170	956	0	0	0	0	154	0	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	942	62	170	956	0	0	0	0	154	0	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	942	62	170	956	0	0	0	0	154	0	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	942	62	170	956	0	0	0	0	154	0	118
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.63	0.63	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.88	0.12	0.30	1.70	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3357	221	359	2020	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.47	0.47	0.00	0.00	0.00	0.00	0.09	0.00	0.07
Crit Moves:					****					****		
Green/Cycle:	0.00	0.85	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.15	0.00	0.15
Volume/Cap:	0.00	0.33	0.33	0.56	0.56	0.00	0.00	0.00	0.00	0.56	0.00	0.48
Delay/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	41.8	0.0	40.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.7	1.7	2.6	2.6	0.0	0.0	0.0	0.0	41.8	0.0	40.2
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	4	4	6	6	0	0	0	0	5	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.568
Loss Time (sec):	0	Average Delay (sec/veh):	16.5
Optimal Cycle:	33	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	19	853	174	67	449	180	35	217	3	41	170	304
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	853	174	67	449	180	35	217	3	41	170	304
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	853	174	67	449	180	35	217	3	41	170	304
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	853	174	67	449	180	35	217	3	41	170	304
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	19	853	174	67	449	180	35	217	3	41	170	304
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	0.93	0.93	0.17	0.91	0.91	0.30	1.00	1.00	0.52	0.90	0.90
Lanes:	1.00	1.66	0.34	1.00	1.43	0.57	1.00	0.99	0.01	1.00	0.36	0.64
Final Sat.:	610	2923	596	315	2466	989	578	1870	26	994	616	1102
Capacity Analysis Module:												
Vol/Sat:	0.03	0.29	0.29	0.21	0.18	0.18	0.06	0.12	0.12	0.04	0.28	0.28
Crit Moves:		****									****	
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.06	0.57	0.57	0.41	0.35	0.35	0.12	0.24	0.24	0.08	0.57	0.57
Delay/Veh:	12.3	17.1	17.1	16.7	14.6	14.6	14.3	15.1	15.1	13.9	19.2	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.3	17.1	17.1	16.7	14.6	14.6	14.3	15.1	15.1	13.9	19.2	19.2
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	0	12	12	2	6	6	1	4	4	1	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.277
Loss Time (sec):	0	Average Delay (sec/veh):	8.7
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	112	0	134	162	389	0	0	369	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	112	0	134	162	389	0	0	369	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	112	0	134	162	389	0	0	369	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	112	0	134	162	389	0	0	369	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	112	0	134	162	389	0	0	369	147
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.47	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	891	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.08	0.18	0.11	0.00	0.00	0.19	0.09
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.70	0.70	0.00	0.00	0.70	1.00
Volume/Cap:	0.00	0.00	0.00	0.11	0.00	0.28	0.26	0.15	0.00	0.00	0.28	0.09
Delay/Veh:	0.0	0.0	0.0	25.4	0.0	27.1	5.7	5.0	0.0	0.0	5.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.4	0.0	27.1	5.7	5.0	0.0	0.0	5.7	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	3	2	2	0	0	4	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	0	Average Delay (sec/veh):	15.1
Optimal Cycle:	31	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	91	219	3	12	129	238	250	254	108	2	462	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	219	3	12	129	238	250	254	108	2	462	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	91	219	3	12	129	238	250	254	108	2	462	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	219	3	12	129	238	250	254	108	2	462	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	91	219	3	12	129	238	250	254	108	2	462	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.88	0.88	0.97	0.97	0.85	0.38	1.00	0.85	0.54	0.99	0.99
Lanes:	0.29	0.70	0.01	0.09	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	485	1166	16	157	1684	1615	713	1900	1615	1032	1716	160
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.08	0.08	0.15	0.35	0.13	0.07	0.00	0.27	0.27
Crit Moves:		****					****					
Green/Cycle:	0.35	0.35	0.35	0.35	0.35	0.35	0.65	0.65	0.65	0.65	0.65	0.65
Volume/Cap:	0.54	0.54	0.54	0.22	0.22	0.42	0.54	0.21	0.10	0.00	0.41	0.41
Delay/Veh:	27.1	27.1	27.1	23.1	23.1	25.4	10.6	7.1	6.6	6.1	8.5	8.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.1	27.1	27.1	23.1	23.1	25.4	10.6	7.1	6.6	6.1	8.5	8.5
LOS by Move:	C	C	C	C	C	C	B	A	A	A	A	A
HCM2kAvgQ:	8	8	8	3	3	6	5	3	1	0	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.695
Loss Time (sec):	0	Average Delay (sec/veh):	14.5
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 1	0 1	0	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Base Vol:	3	524	269	71	1307	16	13	38	20	310	22	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	524	269	71	1307	16	13	38	20	310	22	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	524	269	71	1307	16	13	38	20	310	22	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	524	269	71	1307	16	13	38	20	310	22	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	524	269	71	1307	16	13	38	20	310	22	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.67	0.67	0.85
Lanes:	0.01	1.99	1.00	0.10	1.88	0.02	0.18	0.54	0.28	0.93	0.07	1.00
Final Sat.:	20	3414	1615	164	3023	37	313	916	482	1182	84	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.17	0.43	0.43	0.43	0.04	0.04	0.04	0.26	0.26	0.02
Crit Moves:					****						****	
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.25	0.25	0.27	0.69	0.69	0.69	0.11	0.11	0.11	0.69	0.69	0.04
Delay/Veh:	8.5	8.5	8.7	13.6	13.6	13.6	20.3	20.3	20.3	30.7	30.7	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.5	8.5	8.7	13.6	13.6	13.6	20.3	20.3	20.3	30.7	30.7	19.7
LOS by Move:	A	A	A	B	B	B	C	C	C	C	C	B
HCM2kAvgQ:	4	4	4	16	16	16	1	1	1	10	10	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.417
Loss Time (sec):	0	Average Delay (sec/veh):	7.5
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Fair Oaks Av							Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0	1! 0	0
Volume Module:													
Base Vol:	130	1129	6	3	652	39	131	7	68	9	15	37	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	130	1129	6	3	652	39	131	7	68	9	15	37	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	130	1129	6	3	652	39	131	7	68	9	15	37	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	130	1129	6	3	652	39	131	7	68	9	15	37	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	130	1129	6	3	652	39	131	7	68	9	15	37	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.35	0.95	0.95	0.21	0.94	0.94	0.71	0.71	0.85	0.89	0.89	0.89	
Lanes:	1.00	1.99	0.01	1.00	1.89	0.11	0.95	0.05	1.00	0.15	0.24	0.61	
Final Sat.:	665	3587	19	399	3379	202	1275	68	1615	248	414	1021	
Capacity Analysis Module:													
Vol/Sat:	0.20	0.31	0.31	0.01	0.19	0.19	0.10	0.10	0.04	0.04	0.04	0.04	
Crit Moves:		****						****					
Green/Cycle:	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.25	0.25	0.25	0.25	0.25	
Volume/Cap:	0.26	0.42	0.42	0.01	0.26	0.26	0.42	0.42	0.17	0.15	0.15	0.15	
Delay/Veh:	4.0	4.5	4.5	3.1	3.8	3.8	32.5	32.5	29.9	29.7	29.7	29.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	4.0	4.5	4.5	3.1	3.8	3.8	32.5	32.5	29.9	29.7	29.7	29.7	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	7	7	0	3	3	4	4	2	1	1	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.451
Loss Time (sec):	0	Average Delay (sec/veh):	11.3
Optimal Cycle:	34	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	140	0	262	359	408	0	0	280	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	140	0	262	359	408	0	0	280	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	140	0	262	359	408	0	0	280	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	140	0	262	359	408	0	0	280	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	140	0	262	359	408	0	0	280	57
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.89	1.00	0.89	0.53	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	1.35	0.00	1.65	1.00	2.00	0.00	0.00	1.66	0.34
Final Sat.:	0	0	0	2272	0	2783	1007	3610	0	0	2923	595
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.09	0.36	0.11	0.00	0.00	0.10	0.10
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.21	0.00	0.21	0.79	0.79	0.00	0.00	0.79	0.79
Volume/Cap:	0.00	0.00	0.00	0.30	0.00	0.45	0.45	0.14	0.00	0.00	0.12	0.12
Delay/Veh:	0.0	0.0	0.0	33.5	0.0	34.9	3.8	2.5	0.0	0.0	2.4	2.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.5	0.0	34.9	3.8	2.5	0.0	0.0	2.4	2.4
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	5	4	2	0	0	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.439
Loss Time (sec):	0	Average Delay (sec/veh):	14.0
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	48	580	16	81	462	42	129	250	99	14	162	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	48	580	16	81	462	42	129	250	99	14	162	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	48	580	16	81	462	42	129	250	99	14	162	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	580	16	81	462	42	129	250	99	14	162	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	48	580	16	81	462	42	129	250	99	14	162	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.42	1.00	0.85	0.35	1.00	0.85	0.51	0.91	0.91	0.40	0.91	0.91
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.43	0.57	1.00	1.45	0.55
Final Sat.:	797	1900	1615	666	1900	1615	965	2476	980	760	2502	958
Capacity Analysis Module:												
Vol/Sat:	0.06	0.31	0.01	0.12	0.24	0.03	0.13	0.10	0.10	0.02	0.06	0.06
Crit Moves:		****					****					
Green/Cycle:	0.70	0.70	0.70	0.70	0.70	0.70	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.09	0.44	0.01	0.18	0.35	0.04	0.44	0.33	0.33	0.06	0.21	0.21
Delay/Veh:	5.0	6.9	4.7	5.5	6.3	4.8	29.0	27.1	27.1	24.7	26.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.0	6.9	4.7	5.5	6.3	4.8	29.0	27.1	27.1	24.7	26.0	26.0
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	8	0	1	6	0	4	4	4	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.497
Loss Time (sec):	0	Average Delay (sec/veh):	21.5
Optimal Cycle:	45	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	29	758	19	91	632	22	53	175	41	42	155	196
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	758	19	91	632	22	53	175	41	42	155	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	758	19	91	632	22	53	175	41	42	155	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	758	19	91	632	22	53	175	41	42	155	196
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	758	19	91	632	22	53	175	41	42	155	196
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.97	0.95	0.92	0.92
Lanes:	1.00	1.95	0.05	1.00	1.93	0.07	1.00	0.81	0.19	1.00	0.44	0.56
Final Sat.:	1805	3509	88	1805	3471	121	1805	1495	350	1805	769	972
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.22	0.05	0.18	0.18	0.03	0.12	0.12	0.02	0.20	0.20
Crit Moves:		****		****			****				****	
Green/Cycle:	0.04	0.43	0.43	0.10	0.49	0.49	0.39	0.39	0.39	0.08	0.41	0.41
Volume/Cap:	0.37	0.50	0.50	0.50	0.37	0.37	0.18	0.30	0.30	0.30	0.50	0.50
Delay/Veh:	49.4	20.7	20.7	44.6	15.9	15.9	20.7	21.5	21.5	44.8	22.7	22.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	20.7	20.7	44.6	15.9	15.9	20.7	21.5	21.5	44.8	22.7	22.7
LOS by Move:	D	C	C	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	1	9	9	3	7	7	1	5	5	2	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.456
Loss Time (sec):	0	Average Delay (sec/veh):	12.9
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	1
	1	0	0	0	0	0	1	1	0	1	0	2
	0	0										
Volume Module:												
Base Vol:	152	0	132	0	0	0	0	830	115	105	714	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	0	132	0	0	0	0	830	115	105	714	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	0	132	0	0	0	0	830	115	105	714	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	0	132	0	0	0	0	830	115	105	714	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	0	132	0	0	0	0	830	115	105	714	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.79	1.00	0.79	1.00	1.00	1.00	1.00	0.93	0.93	0.22	0.95	1.00
Lanes:	0.54	0.00	0.46	0.00	0.00	0.00	0.00	1.76	0.24	1.00	2.00	0.00
Final Sat.:	803	0	697	0	0	0	0	3113	431	421	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.27	0.27	0.25	0.20	0.00
Crit Moves:	****							****				
Green/Cycle:	0.42	0.00	0.42	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.58	0.00
Volume/Cap:	0.46	0.00	0.46	0.00	0.00	0.00	0.00	0.46	0.46	0.43	0.34	0.00
Delay/Veh:	21.6	0.0	21.6	0.0	0.0	0.0	0.0	11.9	11.9	12.7	10.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.6	0.0	21.6	0.0	0.0	0.0	0.0	11.9	11.9	12.7	10.8	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	7	0	7	0	0	0	0	9	9	2	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.501
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	79	0	258	258	614	0	0	566	131
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	79	0	258	258	614	0	0	566	131
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	79	0	258	258	614	0	0	566	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	79	0	258	258	614	0	0	566	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	79	0	258	258	614	0	0	566	131
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.62	0.38
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	2849	659
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.16	0.14	0.17	0.00	0.00	0.20	0.20
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.32	0.00	0.32	0.29	0.68	0.00	0.00	0.40	0.40
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.50	0.50	0.25	0.00	0.00	0.50	0.50
Delay/Veh:	0.0	0.0	0.0	23.8	0.0	28.4	30.6	6.2	0.0	0.0	23.0	23.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.8	0.0	28.4	30.6	6.2	0.0	0.0	23.0	23.0
LOS by Move:	A	A	A	C	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	7	7	4	0	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.597
Loss Time (sec):	0	Average Delay (sec/veh):	27.9
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	142	0	282	0	0	225	0	627	208	202	400	280
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	142	0	282	0	0	225	0	627	208	202	400	280
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	142	0	282	0	0	225	0	627	208	202	400	280
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	0	282	0	0	225	0	627	208	202	400	280
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	142	0	282	0	0	225	0	627	208	202	400	280
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	0.87	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1644	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.17	0.00	0.00	0.14	0.00	0.17	0.13	0.11	0.11	0.17
Crit Moves:			****			****		****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.23	0.00	0.29	0.29	0.19	0.48	0.48
Volume/Cap:	0.14	0.00	0.60	0.00	0.00	0.60	0.00	0.60	0.44	0.60	0.23	0.36
Delay/Veh:	26.2	0.0	32.4	0.0	0.0	37.0	0.0	31.4	29.5	40.1	15.4	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.2	0.0	32.4	0.0	0.0	37.0	0.0	31.4	29.5	40.1	15.4	16.8
LOS by Move:	C	A	C	A	A	D	A	C	C	D	B	B
HCM2kAvgQ:	2	0	8	0	0	7	0	9	5	7	4	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.553
Loss Time (sec):	0	Average Delay (sec/veh):	17.2
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	173	507	31	30	483	36	100	686	241	31	686	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	507	31	30	483	36	100	686	241	31	686	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	507	31	30	483	36	100	686	241	31	686	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	507	31	30	483	36	100	686	241	31	686	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	507	31	30	483	36	100	686	241	31	686	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	1.00	0.85	0.30	1.00	0.85	0.26	0.91	0.91	0.19	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.88	0.12
Final Sat.:	605	1900	1615	570	1900	1615	496	2567	902	353	3362	216
Capacity Analysis Module:												
Vol/Sat:	0.29	0.27	0.02	0.05	0.25	0.02	0.20	0.27	0.27	0.09	0.20	0.20
Crit Moves:	****							****				
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.55	0.52	0.04	0.10	0.49	0.04	0.42	0.55	0.55	0.18	0.42	0.42
Delay/Veh:	18.5	16.4	11.9	12.5	16.0	11.9	17.9	18.7	18.7	15.2	17.0	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.5	16.4	11.9	12.5	16.0	11.9	17.9	18.7	18.7	15.2	17.0	17.0
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	4	10	0	1	10	1	2	11	11	1	8	8

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.639
Loss Time (sec):	0	Average Delay (sec/veh):	21.5
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	299	584	56	48	792	49	65	254	391	84	344	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	299	584	56	48	792	49	65	254	391	84	344	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	299	584	56	48	792	49	65	254	391	84	344	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	299	584	56	48	792	49	65	254	391	84	344	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	299	584	56	48	792	49	65	254	391	84	344	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.41	0.86	0.86	0.24	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.77	0.23
Final Sat.:	1805	3610	1615	1805	3370	209	778	1641	1641	463	3146	402
Capacity Analysis Module:												
Vol/Sat:	0.17	0.16	0.03	0.03	0.24	0.24	0.08	0.15	0.24	0.18	0.11	0.11
Crit Moves:	****				****				****			
Green/Cycle:	0.63	0.54	0.54	0.46	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Volume/Cap:	0.52	0.30	0.06	0.10	0.64	0.64	0.22	0.42	0.64	0.49	0.29	0.29
Delay/Veh:	14.4	12.8	11.1	15.3	27.2	27.2	21.8	23.4	27.2	26.2	22.2	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.4	12.8	11.1	15.3	27.2	27.2	21.8	23.4	27.2	26.2	22.2	22.2
LOS by Move:	B	B	B	B	C	C	C	C	C	C	C	C
HCM2kAvgQ:	6	5	1	1	12	12	2	6	11	3	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.931
Loss Time (sec):	0	Average Delay (sec/veh):	34.2
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	118	679	218	37	1024	166	112	268	37	600	1282	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	118	679	218	37	1024	166	112	268	37	600	1282	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	118	679	218	37	1024	166	112	268	37	600	1282	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	118	679	218	37	1024	166	112	268	37	600	1282	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	118	679	218	37	1024	166	112	268	37	600	1282	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.13	1.00	0.85	0.29	1.00	0.85	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.64	0.36	1.00	3.00	1.00
Final Sat.:	238	1900	1615	560	1900	1615	1805	4475	618	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.50	0.36	0.13	0.07	0.54	0.10	0.06	0.06	0.06	0.33	0.25	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.08	0.06	0.06	0.36	0.34	0.34
Volume/Cap:	0.86	0.62	0.23	0.11	0.93	0.18	0.73	0.93	0.93	0.93	0.73	0.08
Delay/Veh:	55.4	14.9	10.4	9.7	32.9	10.0	61.5	78.9	78.9	51.3	30.9	22.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.4	14.9	10.4	9.7	32.9	10.0	61.5	78.9	78.9	51.3	30.9	22.7
LOS by Move:	E	B	B	A	C	A	E	E	E	D	C	C
HCM2kAvgQ:	6	14	3	1	34	2	5	6	6	22	14	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.837
Loss Time (sec):	0	Average Delay (sec/veh):	18.3
Optimal Cycle:	114	Level Of Service:	B

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	938	0	31	16	395	0	0	1355	911
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	938	0	31	16	395	0	0	1355	911
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	938	0	31	16	395	0	0	1355	911
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	938	0	31	16	395	0	0	1355	911
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	938	0	31	16	395	0	0	1355	911
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.27	0.00	0.02	0.00	0.08	0.00	0.00	0.26	0.56
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.32	0.00	0.32	0.01	0.68	0.00	0.00	0.67	0.67
Volume/Cap:	0.00	0.00	0.00	0.84	0.00	0.06	0.83	0.11	0.00	0.00	0.39	0.84
Delay/Veh:	0.0	0.0	0.0	37.2	0.0	23.6	175.7	5.6	0.0	0.0	7.3	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	37.2	0.0	23.6	175.7	5.6	0.0	0.0	7.3	18.0
LOS by Move:	A	A	A	D	A	C	F	A	A	A	A	B
HCM2kAvgQ:	0	0	0	16	0	1	1	2	0	0	7	23

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.976
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Figueroa St							York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Prot+Permit			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	137	666	4	166	746	57	128	910	188	304	781	154	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	137	666	4	166	746	57	128	910	188	304	781	154	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	137	666	4	166	746	57	128	910	188	304	781	154	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	137	666	4	166	746	57	128	910	188	304	781	154	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	137	666	4	166	746	57	128	910	188	304	781	154	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00	1.00	1.86	0.14	1.00	1.66	0.34	1.00	1.67	0.33	
Final Sat.:	1425	2850	1425	1425	2648	202	1425	2362	488	1425	2381	469	
Capacity Analysis Module:													
Vol/Sat:	0.10	0.23	0.00	0.12	0.28	0.28	0.09	0.39	0.39	0.21	0.33	0.33	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.764
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	79	Level Of Service:	C

Street Name:	Ave 64							York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	164	130	22	193	252	80	107	690	170	42	824	147	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	164	130	22	193	252	80	107	690	170	42	824	147	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	164	130	22	193	252	80	107	690	170	42	824	147	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	164	130	22	193	252	80	107	690	170	42	824	147	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	164	130	22	193	252	80	107	690	170	42	824	147	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.86	0.14	1.00	0.76	0.24	1.00	1.60	0.40	1.00	1.70	0.30	
Final Sat.:	1425	1219	206	1425	1082	343	1425	2287	563	1425	2419	431	
Capacity Analysis Module:													
Vol/Sat:	0.12	0.11	0.11	0.14	0.23	0.23	0.08	0.30	0.30	0.03	0.34	0.34	
Crit Moves:	****				****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.695
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	1 0	0 1	
Volume Module:													
Base Vol:	0	517	149	381	685	3	1	1	1	152	3	276	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	517	149	381	685	3	1	1	1	152	3	276	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	517	149	381	685	3	1	1	1	152	3	276	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	517	149	381	685	3	1	1	1	152	3	276	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	517	149	381	685	3	1	1	1	152	3	276	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.55	0.45	1.00	1.99	0.01	0.33	0.33	0.33	0.98	0.02	1.00	
Final Sat.:	1425	2212	638	1425	2838	12	475	475	475	1397	28	1425	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.23	0.23	0.27	0.24	0.24	0.00	0.00	0.00	0.11	0.11	0.19	
Crit Moves:		****		****			****					****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.810
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	98	Level Of Service:	D

Street Name:	Monterey Rd							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Split Phase			Split Phase			Permitted			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	
Volume Module:													
Base Vol:	344	151	30	71	238	37	9	185	285	62	278	28	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	344	151	30	71	238	37	9	185	285	62	278	28	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	344	151	30	71	238	37	9	185	285	62	278	28	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	344	151	30	71	238	37	9	185	285	62	278	28	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	344	151	30	71	238	37	9	185	285	62	278	28	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.39	0.61	1.00	0.91	0.09	
Final Sat.:	1375	1375	1375	1375	1375	1375	1375	541	834	1375	1249	126	
Capacity Analysis Module:													
Vol/Sat:	0.25	0.11	0.02	0.05	0.17	0.03	0.01	0.34	0.34	0.05	0.22	0.22	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.573
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	0	1! 0 0 0 0 1! 0 0
Volume Module:													
Base Vol:	14	535	150	112	790	14	19	70	8	217	99	70	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	14	535	150	112	790	14	19	70	8	217	99	70	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	14	535	150	112	790	14	19	70	8	217	99	70	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	14	535	150	112	790	14	19	70	8	217	99	70	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	14	535	150	112	790	14	19	70	8	217	99	70	
Saturation Flow Module:													
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.56	0.44	1.00	1.97	0.03	0.20	0.72	0.08	0.56	0.26	0.18	
Final Sat.:	1500	2343	657	1500	2948	52	294	1082	124	843	385	272	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.23	0.23	0.07	0.27	0.27	0.01	0.06	0.06	0.14	0.26	0.26	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.705
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	C

Street Name:	Monterey Rd							Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1	
Volume Module:													
Base Vol:	212	310	19	60	444	78	56	166	373	29	246	157	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	212	310	19	60	444	78	56	166	373	29	246	157	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	212	310	19	60	444	78	56	166	373	29	246	157	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	212	310	19	60	444	78	56	166	373	29	246	157	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	212	310	19	60	444	78	56	166	373	29	246	157	
Saturation Flow Module:													
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Sat.:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Capacity Analysis Module:													
Vol/Sat:	0.14	0.21	0.01	0.04	0.30	0.05	0.04	0.11	0.25	0.02	0.16	0.10	
Crit Moves:	****				****				****	****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.795
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	Level Of Service:	C

Street Name:	Figueroa St							Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	80	397	63	85	903	73	53	283	156	73	186	55	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	80	397	63	85	903	73	53	283	156	73	186	55	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	80	397	63	85	903	73	53	283	156	73	186	55	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	80	397	63	85	903	73	53	283	156	73	186	55	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	80	397	63	85	903	73	53	283	156	73	186	55	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.73	0.27	1.00	1.85	0.15	0.11	0.58	0.32	0.23	0.59	0.18	
Final Sat.:	1425	2460	390	1425	2637	213	154	820	452	331	844	250	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.16	0.16	0.06	0.34	0.34	0.04	0.35	0.35	0.05	0.22	0.22	
Crit Moves:	****				****			****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0
	0	0	1	0	0	1!	0	0					
Volume Module:													
Base Vol:	10	454	164	283	1218	1	7	10	0	157	21	184	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	454	164	283	1218	1	7	10	0	157	21	184	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	454	164	283	1218	1	7	10	0	157	21	184	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	10	454	164	283	1218	1	7	10	0	157	21	184	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	10	454	164	283	1218	1	7	10	0	157	21	184	
Saturation Flow Module:													
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.47	0.53	1.00	2.00	0.00	0.41	0.59	0.00	0.43	0.06	0.51	
Final Sat.:	1500	2204	796	1500	2998	2	618	882	0	651	87	762	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.21	0.21	0.19	0.41	0.41	0.00	0.01	0.00	0.10	0.24	0.24	
Crit Moves:	****				****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	0	Average Delay (sec/veh):	11.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Griffin Av							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	
Volume Module:													
Base Vol:	83	66	42	107	251	88	16	127	46	25	110	29	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	83	66	42	107	251	88	16	127	46	25	110	29	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	83	66	42	107	251	88	16	127	46	25	110	29	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	83	66	42	107	251	88	16	127	46	25	110	29	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	83	66	42	107	251	88	16	127	46	25	110	29	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.61	0.39	1.00	0.74	0.26	0.08	0.67	0.24	0.15	0.67	0.18	
Final Sat.:	520	358	228	561	466	163	50	400	145	89	390	103	
Capacity Analysis Module:													
Vol/Sat:	0.16	0.18	0.18	0.19	0.54	0.54	0.32	0.32	0.32	0.28	0.28	0.28	
Crit Moves:			****		****			****		****			
Delay/Veh:	10.4	9.7	9.7	10.4	14.2	14.2	11.0	11.0	11.0	10.8	10.8	10.8	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	10.4	9.7	9.7	10.4	14.2	14.2	11.0	11.0	11.0	10.8	10.8	10.8	
LOS by Move:	B	A	A	B	B	B	B	B	B	B	B	B	
ApproachDel:	10.0			13.3			11.0			10.8			
Delay Adj:	1.00			1.00			1.00			1.00			
ApprAdjDel:	10.0			13.3			11.0			10.8			
LOS by Appr:	B			B			B			B			
AllWayAvgQ:	0.2	0.2	0.2	0.2	1.0	1.0	0.4	0.4	0.4	0.3	0.3	0.3	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.751
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	C

Street Name:	Figueroa St							Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 0	1	1 0	1 0	1	
Volume Module:													
Base Vol:	134	403	102	379	783	25	57	269	365	74	81	106	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	134	403	102	379	783	25	57	269	365	74	81	106	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	134	403	102	379	783	25	57	269	365	74	81	106	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	134	403	102	379	783	25	57	269	365	74	81	106	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	134	403	102	379	783	25	57	269	365	74	81	106	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.60	0.40	1.00	1.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00	
Final Sat.:	1425	2274	576	1425	2762	88	1425	1425	1425	1425	1425	1425	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.18	0.18	0.27	0.28	0.28	0.04	0.19	0.26	0.05	0.06	0.07	
Crit Moves:		****		****					****	****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.590
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	87	587	34	41	1095	260	60	33	26	61	78	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	87	587	34	41	1095	260	60	33	26	61	78	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	587	34	41	1095	260	60	33	26	61	78	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	587	34	41	1095	260	60	33	26	61	78	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	587	34	41	1095	260	60	33	26	61	78	51
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.89	0.11	1.00	1.62	0.38	1.00	0.56	0.44	1.00	2.00	1.00
Final Sat.:	1500	2836	164	1500	2424	576	1500	839	661	1500	3000	1500
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.21	0.03	0.45	0.45	0.04	0.04	0.04	0.04	0.03	0.03
Crit Moves:	****				****			****		****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.210
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	309	328	220	285	1161	46	12	907	223	209	604	125	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	309	328	220	285	1161	46	12	907	223	209	604	125	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	309	328	220	285	1161	46	12	907	223	209	604	125	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	309	328	220	285	1161	46	12	907	223	209	604	125	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	309	328	220	285	1161	46	12	907	223	209	604	125	
Saturation Flow Module:													
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.61	0.39	1.00	1.66	0.34	
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	2207	543	1375	2278	472	
Capacity Analysis Module:													
Vol/Sat:	0.22	0.12	0.16	0.21	0.42	0.03	0.01	0.41	0.41	0.15	0.27	0.27	
Crit Moves:	****				****			****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #313 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.508
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	310	30	29	24	0	92	78	616	0	0	718	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	310	30	29	24	0	92	78	616	0	0	718	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	310	30	29	24	0	92	78	616	0	0	718	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	30	29	24	0	92	78	616	0	0	718	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	310	30	29	24	0	92	78	616	0	0	718	22
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.68	0.16	0.16	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.94	0.06
Final Sat.:	2394	232	224	1425	0	1425	1425	2850	0	0	2765	85
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.02	0.00	0.06	0.05	0.22	0.00	0.00	0.26	0.26
Crit Moves:	****					****	****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.681
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	91	262	50	83	392	105	85	936	134	78	1679	113
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	262	50	83	392	105	85	936	134	78	1679	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	91	262	50	83	392	105	85	936	134	78	1679	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	262	50	83	392	105	85	936	134	78	1679	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	91	262	50	83	392	105	85	936	134	78	1679	113
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	1.58	0.42	1.00	2.62	0.38	1.00	2.81	0.19
Final Sat.:	1500	2519	481	1500	2366	634	1500	3936	564	1500	4216	284
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.10	0.06	0.17	0.17	0.06	0.24	0.24	0.05	0.40	0.40
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.493
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Street Name:	I-5 NB ramps							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0	
Volume Module:													
Base Vol:	23	347	31	0	0	0	70	188	0	0	747	190	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	23	347	31	0	0	0	70	188	0	0	747	190	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	23	347	31	0	0	0	70	188	0	0	747	190	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	23	347	31	0	0	0	70	188	0	0	747	190	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	23	347	31	0	0	0	70	188	0	0	747	190	
Saturation Flow Module:													
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.11	1.73	0.15	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.59	0.41	
Final Sat.:	172	2596	232	0	0	0	1500	3000	0	0	2392	608	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.13	0.13	0.00	0.00	0.00	0.05	0.06	0.00	0.00	0.31	0.31	
Crit Moves:		****					****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.320
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	21	Level Of Service:	A

Street Name:	I-5 SB ramps							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	0 1	0 1	1	0 0	1 1	0	1 0	2 0	0	
Volume Module:													
Base Vol:	0	0	0	43	142	275	0	195	121	126	652	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	43	142	275	0	195	121	126	652	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	43	142	275	0	195	121	126	652	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	43	142	275	0	195	121	126	652	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	43	142	275	0	195	121	126	652	0	
Saturation Flow Module:													
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	0.28	0.92	1.80	0.00	1.23	0.77	1.00	2.00	0.00	
Final Sat.:	0	0	0	419	1387	2694	0	1851	1149	1500	3000	0	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.03	0.10	0.10	0.00	0.11	0.11	0.08	0.22	0.00	
Crit Moves:					****		****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 190.8 Worst Case Level Of Service: F[3081.1]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			577	1346			0	141		0		0	0		0		250
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0			577	1346			0	141		0		0	0		0		250
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0			577	1346			0	141		0		0	0		0		250
Reduct Vol:	0	0	0			0	0			0	0		0		0	0		0		0
FinalVolume:	0	0	0			577	1346			0	141		0		0	0		0		250
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5	xxxxx		7.1		6.5		6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0	xxxxx		3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			2500		2500	xxxxx		1827		2500		0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			20		29	xxxxx		60		29		1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			11		19	xxxxx		43		19		1091
Volume/Cap:	xxxx	xxxx	xxxx			0.35	xxxx	xxxx			12.72		0.00	xxxx		0.00		0.00		0.23
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			1.6	xxxx	xxxxx			10.1		xxxx	xxxxx		xxxx		xxxx		0.4
Control Del:	xxxxx	xxxx	xxxxx			8.4	xxxx	xxxxx			3081		xxxx	xxxxx		xxxxx		xxxx		8.7
LOS by Move:	*	*	*			A	*	*			F		*	*		*		*		A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			11		xxxx	xxxxx		xxxx		1091		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			5.9		xxxx	xxxxx		xxxxx		0.4		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3081		xxxx	xxxxx		xxxxx		8.7		xxxxx
Shared LOS:	*	*	*			*	*	*			F		*	*		*		A		*
ApproachDel:	xxxxxx					xxxxxx					3081.1							8.7		
ApproachLOS:	*					*					F							A		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.804
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	95	Level Of Service:	D

Street Name:	Figueroa St							San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 1	0	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	48	225	359	410	364	14	107	365	95	146	188	161	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	48	225	359	410	364	14	107	365	95	146	188	161	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	48	225	359	410	364	14	107	365	95	146	188	161	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	48	225	359	410	364	14	107	365	95	146	188	161	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	48	225	359	410	364	14	107	365	95	146	188	161	
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.59	0.41	1.00	1.08	0.92	
Final Sat.:	1425	1425	1425	1425	1425	1425	1425	2261	589	1425	1535	1315	
Capacity Analysis Module:													
Vol/Sat:	0.03	0.16	0.25	0.29	0.26	0.01	0.08	0.16	0.16	0.10	0.12	0.12	
Crit Moves:			****	****				****		****			

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.861
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	103	Level Of Service:	D

Street Name:	San Fernando Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0
Volume Module:													
Base Vol:	5	468	43	167	604	532	152	120	8	71	763	88	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	5	468	43	167	604	532	152	120	8	71	763	88	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	5	468	43	167	604	532	152	120	8	71	763	88	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	5	468	43	167	604	532	152	120	8	71	763	88	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	5	468	43	167	604	532	152	120	8	71	763	88	
Saturation Flow Module:													
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	0.92	0.08	1.00	1.00	1.00	1.00	1.88	0.13	0.15	1.66	0.19	
Final Sat.:	1500	1374	126	1500	1500	1500	1500	2813	188	231	2483	286	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.34	0.34	0.11	0.40	0.35	0.10	0.04	0.04	0.05	0.31	0.31	
Crit Moves:		****		****			****				****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.844
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	92	Level Of Service:	D

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	154	291	29	187	464	390	28	468	212	66	1156	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	291	29	187	464	390	28	468	212	66	1156	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	291	29	187	464	390	28	468	212	66	1156	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	291	29	187	464	390	28	468	212	66	1156	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	291	29	187	464	390	28	468	212	66	1156	91
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.09	0.91	0.08	1.32	0.60	0.10	1.76	0.14
Final Sat.:	1500	2728	272	1500	1630	1370	119	1983	898	151	2641	208
Capacity Analysis Module:												
Vol/Sat:	0.10	0.11	0.11	0.12	0.28	0.28	0.02	0.24	0.24	0.04	0.44	0.44
Crit Moves:	****				****		****				****	

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 72.9 Worst Case Level Of Service: F[731.2]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	2	130		1	123				0	590		0		2	1701		0	
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	2	130		1	123				0	590		0		2	1701		0	
User Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00		1.00	1.00				1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	2	130		1	123				0	590		0		2	1701		0	
Reduct Vol:	0	0	0	0		0	0				0	0		0		0	0		0	
FinalVolume:	0	0	2	130		1	123				0	590		0		2	1701		0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5		6.5	6.9				xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	xxxxx	xxxx	3.3	3.5		4.0	3.3				xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	295	2000		2295	851				xxxx	xxxx		xxxxx		590	xxxx		xxxxx	
Potent Cap.:	xxxx	xxxx	707	36		39	308				xxxx	xxxx		xxxxx		995	xxxx		xxxxx	
Move Cap.:	xxxx	xxxx	707	36		39	308				xxxx	xxxx		xxxxx		995	xxxx		xxxxx	
Volume/Cap:	xxxx	xxxx	0.00	3.61		0.03	0.40				xxxx	xxxx		xxxx		0.00	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0	15.0		xxxx	xxxxx				xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx	10.1	1404		xxxx	xxxxx				xxxxx	xxxx		xxxxx		8.6	xxxx		xxxxx	
LOS by Move:	*	*	B	F		*	*				*	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx		xxxx	292				xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	2.0				xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx		xxxx	26.2				xxxxx	xxxx		xxxxx		8.6	xxxx		xxxxx	
Shared LOS:	*	*	*	*		*	D				*	*		*		A	*		*	
ApproachDel:	10.1			731.2							xxxxxx					xxxxxx				
ApproachLOS:	B			F							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Pasadena Av							Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Split Phase			Split Phase			
Rights:	Include			Ovl			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1	
Volume Module:													
Base Vol:	0	0	0	0	0	1839	306	441	0	0	885	6	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	0	0	1839	306	441	0	0	885	6	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	0	0	1839	306	441	0	0	885	6	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	0	0	1839	306	441	0	0	885	6	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	0	0	1839	306	441	0	0	885	6	
OvlAdjVol:						1341							
Saturation Flow Module:													
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.23	1.77	0.00	0.00	2.00	1.00	
Final Sat.:	0	0	0	0	0	2850	1751	2524	0	0	2850	1425	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.65	0.17	0.17	0.00	0.00	0.31	0.00	
OvlAdjV/S:						0.47							
Crit Moves:						****		****			****		

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.719
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	Level Of Service:	C

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	14	243	6	91	1500	64	58	198	89	110	297	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	243	6	91	1500	64	58	198	89	110	297	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	243	6	91	1500	64	58	198	89	110	297	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	243	6	91	1500	64	58	198	89	110	297	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	243	6	91	1500	64	58	198	89	110	297	41
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.95	0.05	1.00	1.92	0.08	0.34	1.15	0.52	0.49	1.33	0.18
Final Sat.:	1500	2928	72	1500	2877	123	504	1722	774	737	1989	275
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.06	0.52	0.52	0.04	0.12	0.12	0.07	0.15	0.15
Crit Moves:	****				****			****		****		

APPENDIX B

HCM WORKSHEETS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

PM PEAK HOUR

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Arroyo Pkwy (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.904
Loss Time (sec):	0	Average Delay (sec/veh):	34.4
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Arroyo Pkwy						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	1	1 0
Volume Module:												
Base Vol:	92	604	679	56	798	70	44	475	409	568	319	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	604	679	56	798	70	44	475	409	568	319	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	92	604	679	56	798	70	44	475	0	568	319	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	604	679	56	798	70	44	475	0	568	319	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	92	604	679	56	798	70	44	475	0	568	319	29
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.84	0.84	0.95	0.90	0.90	0.95	0.95	1.00	0.95	0.94	0.94
Lanes:	1.00	2.00	1.00	1.00	2.76	0.24	1.00	2.00	1.00	1.00	1.83	0.17
Final Sat.:	1805	3185	1592	1805	4711	413	1805	3610	1900	1805	3269	297
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.43	0.03	0.17	0.17	0.02	0.13	0.00	0.31	0.10	0.10
Crit Moves:			****	****				****		****		
Green/Cycle:	0.12	0.47	0.47	0.03	0.39	0.39	0.10	0.15	0.00	0.35	0.40	0.40
Volume/Cap:	0.44	0.40	0.90	0.90	0.44	0.44	0.25	0.90	0.00	0.90	0.25	0.25
Delay/Veh:	42.5	17.3	32.7	128.7	22.6	22.6	42.4	60.9	0.0	47.5	20.4	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.5	17.3	32.7	128.7	22.6	22.6	42.4	60.9	0.0	47.5	20.4	20.4
LOS by Move:	D	B	C	F	C	C	D	E	A	D	C	C
HCM2kAvgQ:	3	7	25	4	7	7	1	11	0	20	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Average Delay (sec/veh): 7.6 Worst Case Level Of Service: A[9.2]

Street Name:	ASP SB Exit 31B									State St							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0			136	0			8	0		13	0		0		18	0	
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00	1.00		1.00		1.00	1.00	
Initial Bse:	0	0	0			136	0			8	0		13	0		0		18	0	
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00	1.00		1.00		1.00	1.00	
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00		1.00	1.00		1.00		1.00	1.00	
PHF Volume:	0	0	0			136	0			8	0		13	0		0		18	0	
Reduct Vol:	0	0	0			0	0			0	0		0	0		0		0	0	
FinalVolume:	0	0	0			136	0			8	0		13	0		0		18	0	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5			6.2	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0			3.3	xxxxx	xxxx	xxxxx	xxxxx		xxxx		xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			31	31			18	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			988	866			1066	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			988	866			1066	xxxx	xxxx	xxxxx	xxxx		xxxx		xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.14	0.00			0.01	xxxx	xxxx	xxxx	xxxx		xxxx		xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			*	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	992	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.5	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	9.2	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	A	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					9.2		xxxxxx			xxxxxx					xxxxxx				
ApproachLOS:	*					A		*			*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Fair Oaks Av (N/S) & State St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.380
Loss Time (sec):	0	Average Delay (sec/veh):	11.5
Optimal Cycle:	37	Level Of Service:	B

Street Name:	Fair Oaks Av						State St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	2 0	1	0 0	0 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	262	1025	98	10	620	224	0	0	0	162	40	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	262	1025	98	10	620	224	0	0	0	162	40	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1025	98	10	620	224	0	0	0	162	40	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1025	98	10	620	224	0	0	0	162	40	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	262	1025	98	10	620	224	0	0	0	162	40	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.94	0.94	0.95	0.95	0.85	1.00	1.00	1.00	0.90	0.90	0.85
Lanes:	2.00	1.83	0.17	1.00	2.00	1.00	0.00	0.00	0.00	1.60	0.40	1.00
Final Sat.:	3502	3252	311	1805	3610	1615	0	0	0	2731	674	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.32	0.32	0.01	0.17	0.14	0.00	0.00	0.00	0.06	0.06	0.02
Crit Moves:		****		****						****		
Green/Cycle:	0.26	0.83	0.83	0.01	0.59	0.59	0.00	0.00	0.00	0.16	0.16	0.16
Volume/Cap:	0.29	0.38	0.38	0.38	0.29	0.24	0.00	0.00	0.00	0.38	0.38	0.13
Delay/Veh:	30.1	2.2	2.2	57.8	10.3	10.0	0.0	0.0	0.0	38.3	38.3	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.1	2.2	2.2	57.8	10.3	10.0	0.0	0.0	0.0	38.3	38.3	36.6
LOS by Move:	C	A	A	E	B	A	A	A	A	D	D	D
HCM2kAvgQ:	3	5	5	1	5	3	0	0	0	3	3	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Fair Oaks Av (N/S) & Grevelia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.599
Loss Time (sec):	0	Average Delay (sec/veh):	24.9
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Fair Oaks Av						Grevelia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2 1 0	0	0	2 0 0	0	1	0 1 0	0	0	1! 0 1
Volume Module:												
Base Vol:	0	796	16	0	789	0	315	340	320	13	0	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	796	16	0	789	0	315	340	320	13	0	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	796	16	0	789	0	315	340	320	13	0	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	796	16	0	789	0	315	340	320	13	0	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	796	16	0	789	0	315	340	320	13	0	271
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	1.00	0.95	1.00	0.89	0.89	0.89	0.85	1.00	0.85
Lanes:	0.00	2.94	0.06	0.00	2.00	0.00	0.65	0.70	0.66	0.09	0.00	1.91
Final Sat.:	0	5070	102	0	3610	0	1091	1178	1109	142	0	3107
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.00	0.22	0.00	0.29	0.29	0.29	0.09	0.00	0.09
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.37	0.37	0.00	0.37	0.00	0.48	0.48	0.48	0.15	0.00	0.15
Volume/Cap:	0.00	0.43	0.43	0.00	0.60	0.00	0.60	0.60	0.60	0.60	0.00	0.57
Delay/Veh:	0.0	24.1	24.1	0.0	26.6	0.0	19.5	19.5	19.5	41.6	0.0	40.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.1	24.1	0.0	26.6	0.0	19.5	19.5	19.5	41.6	0.0	40.9
LOS by Move:	A	C	C	A	C	A	B	B	B	D	A	D
HCM2kAvgQ:	0	7	7	0	11	0	12	12	12	5	0	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Orange Grove Bl (N/S) & ASP SB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.439
Loss Time (sec):	0	Average Delay (sec/veh):	16.0
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Orange Grove Bl							ASP SB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Permitted			Permitted			Permitted			
Rights:	Include			Ignore			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	2	0	0	0	0	1	0	1	0	0	0
	0	0	0	0	0	1!	0	0					
Volume Module:													
Base Vol:	205	955	0	0	276	620	0	0	0	226	0	19	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	205	955	0	0	276	620	0	0	0	226	0	19	
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	205	955	0	0	276	0	0	0	0	226	0	19	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	205	955	0	0	276	0	0	0	0	226	0	19	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	205	955	0	0	276	0	0	0	0	226	0	19	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	1.00	0.74	
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.92	0.00	0.08	
Final Sat.:	1805	3610	0	0	1900	1900	0	0	0	1293	0	109	
Capacity Analysis Module:													
Vol/Sat:	0.11	0.26	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.17	0.00	0.17	
Crit Moves:		****								****			
Green/Cycle:	0.45	0.70	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.30	0.00	0.30	
Volume/Cap:	0.25	0.38	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.58	0.00	0.58	
Delay/Veh:	17.1	6.2	0.0	0.0	34.9	0.0	0.0	0.0	0.0	31.9	0.0	31.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	17.1	6.2	0.0	0.0	34.9	0.0	0.0	0.0	0.0	31.9	0.0	31.9	
LOS by Move:	B	A	A	A	C	A	A	A	A	C	A	C	
HCM2kAvgQ:	4	6	0	0	8	0	0	0	0	7	0	7	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orange Grove Bl (N/S) & ASP NB Exit 31A (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.644
Loss Time (sec):	0	Average Delay (sec/veh):	24.8
Optimal Cycle:	80	Level Of Service:	C

Street Name:	Orange Grove Bl						ASP NB Exit 31A					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	1 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	324	110	19	481	0	834	5	212	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	324	110	19	481	0	834	5	212	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	324	110	19	481	0	834	5	212	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	324	110	19	481	0	834	5	212	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	324	110	19	481	0	834	5	212	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	1.66	0.01	0.33	0.00	0.00	0.00
Final Sat.:	0	2593	880	1805	1900	0	2691	13	543	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.12	0.12	0.01	0.25	0.00	0.31	0.39	0.39	0.00	0.00	0.00
Crit Moves:					****			****				
Green/Cycle:	0.00	0.16	0.16	0.33	0.49	0.00	0.51	0.51	0.51	0.00	0.00	0.00
Volume/Cap:	0.00	0.77	0.77	0.03	0.51	0.00	0.61	0.77	0.77	0.00	0.00	0.00
Delay/Veh:	0.0	46.4	46.4	22.8	17.8	0.0	18.2	22.6	22.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	46.4	46.4	22.8	17.8	0.0	18.2	22.6	22.6	0.0	0.0	0.0
LOS by Move:	A	D	D	C	B	A	B	C	C	A	A	A
HCM2kAvgQ:	0	9	9	0	10	0	11	17	17	0	0	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: A[8.7]

Street Name:	Bridewell St								Hough St							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	27		0		0	0		34		21	5		0		34	0		0		0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27		0		0	0		34		21	5		0		34	0		0		0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27		0		0	0		34		21	5		0		34	0		0		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	27		0		0	0		34		21	5		0		34	0		0		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					6.4		6.5		6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5		4.0		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	55	xxxx	xxxxx	xxxx	xxxx	xxxxx					99		99		45	xxxx	xxxx	xxxxx		
Potent Cap.:	1563	xxxx	xxxxx	xxxx	xxxx	xxxxx					905		795		1031	xxxx	xxxx	xxxxx		
Move Cap.:	1563	xxxx	xxxxx	xxxx	xxxx	xxxxx					893		782		1031	xxxx	xxxx	xxxxx		
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx					0.01		0.00		0.03	xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*	*	*	*					*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	1011	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	0.1	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx	8.7	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*					*	A	*			*	*	*		
ApproachDel:	xxxxxx			xxxxxx							8.7					xxxxxx				
ApproachLOS:	*			*							A					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: B[11.7]

Street Name:	Bridewell St (N/S) & ASP SB Exit						ASP SB Exit 30					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	8	3	2	43	4	7	5	92	12	12	228	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	2	43	4	7	5	92	12	12	228	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	3	2	43	4	7	5	92	12	12	228	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	3	2	43	4	7	5	92	12	12	228	28
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	380	388	98	377	380	242	256	xxxx	xxxxx	104	xxxx	xxxxx
Potent Cap.:	582	550	963	585	556	802	1321	xxxx	xxxxx	1500	xxxx	xxxxx
Move Cap.:	568	543	963	576	549	802	1321	xxxx	xxxxx	1500	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.00	0.07	0.01	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	600	xxxxx	xxxx	595	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.1	xxxxx	xxxxx	11.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.1			11.7			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Average Delay (sec/veh): 262.9 Worst Case Level Of Service: F[884.8]

Street Name:	ASP NB Exit 30A									Marmion Wy							
Approach:	North Bound					South Bound				East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Ignore					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	668		0		296	0		0		0	0		139		0	0		251		0
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	668		0		296	0		0		0	0		139		0	0		251		0
User Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		0.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	668		0		0	0		0		0	0		139		0	0		251		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	668		0		0	0		0		0	0		139		0	0		251		0
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		6.5	xxxxx	xxxxx		6.5	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		4.0	xxxxx	xxxxx		4.0	xxxxx						
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		1336	xxxxx	xxxx		1336	xxxxx						
Potent Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		155	xxxxx	xxxx		155	xxxxx						
Move Cap.:	1636	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		92	xxxxx	xxxx		92	xxxxx						
Volume/Cap:	0.41	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		1.52	xxxx	xxxx		2.74	xxxx						
Level Of Service Module:																				
2Way95thQ:	2.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx		10.8	xxxxx	xxxx		23.9	xxxxx						
Control Del:	8.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx		362	xxxxx	xxxxx		885	xxxxx						
LOS by Move:	A	*	*	*	*	*	*		F	*	*		F	*						
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shared LOS:	*	*	*	*	*	*	*	*	*		*	*	*							
ApproachDel:	xxxxxx			xxxxxx			361.6				884.8									
ApproachLOS:	*			*			F				F									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.665
Loss Time (sec):	0	Average Delay (sec/veh):	13.8
Optimal Cycle:	0	Level Of Service:	B

Street Name:	La Riba Wy							Ave 66					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0			
Volume Module:													
Base Vol:	0	0	0	138	0	16	0	0	0	0	371	200	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	138	0	16	0	0	0	0	371	200	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	0	0	138	0	16	0	0	0	0	371	200	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	0	0	138	0	16	0	0	0	0	371	200	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	0	0	138	0	16	0	0	0	0	371	200	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65	0.35	
Final Sat.:	0	0	0	549	0	671	0	0	0	0	558	301	
Capacity Analysis Module:													
Vol/Sat:	xxxx	xxxx	xxxx	0.25	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	0.67	0.67	
Crit Moves:				****							****		
Delay/Veh:	0.0	0.0	0.0	10.8	0.0	7.8	0.0	0.0	0.0	0.0	14.7	14.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	10.8	0.0	7.8	0.0	0.0	0.0	0.0	14.7	14.7	
LOS by Move:	*	*	*	B	*	A	*	*	*	*	B	B	
ApproachDel:	xxxxxx			10.5			xxxxxx			14.7			
Delay Adj:	xxxxx			1.00			xxxxx			1.00			
ApprAdjDel:	xxxxxx			10.5			xxxxxx			14.7			
LOS by Appr:	*			B			*			B			
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: B[13.0]

Street Name:	ASP NB Exit 29									Ave 60								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0	4	0	61	164	318	0	0	453	97								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	0	4	0	61	164	318	0	0	453	97								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	0	4	0	61	164	318	0	0	453	97								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	0	4	0	61	164	318	0	0	453	97								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	1148	1148	502	550	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	xxxxx	222	201	574	1030	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	xxxxx	195	169	574	1030	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.11	0.16	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	512	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*								
ApproachDel:	xxxxxx				13.0		xxxxxx				xxxxxx									
ApproachLOS:	*				B		*				*									

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Cycle (sec):	1	Critical Vol./Cap.(X):	8.000
Loss Time (sec):	0	Average Delay (sec/veh):	OVERFLOW
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Arroyo Dr								ASP SB Exit 29/Shults St								
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Yield Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	0	1	0	0	1!	0	0	0	1	0	0	0
Volume Module:																				
Base Vol:	7	0	0	0	0	0	0	0	0	8	8	148	12	0	0	1	113	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	0	0	0	0	0	0	0	0	8	8	148	12	0	0	1	113	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	0	0	0	0	0	0	0	0	8	8	148	12	0	0	1	113	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	0	0	0	0	0	0	0	0	8	8	148	12	0	0	1	113	0	0	0
Saturation Flow Module:																				
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.05	0.88	0.07	0.01	0.99	0.00				
Final Sat.:	346	0	0	0	0	0	0	0	0	1	45	839	68	0	0	8	892	0	0	0
Capacity Analysis Module:																				
Vol/Sat:	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	0.18	0.18	0.18	0.13	0.13	0.13	0.00			
Crit Moves:	****									****	****					****				
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume/Cap:	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	0.18	0.18	0.18	0.13	0.13	0.13	0.00			
Delay/Veh:	1.1	0.0	0.0	0.0	0.0	xxxxx	2.0	2.0	2.0	1.6	1.6	0.0								
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
AdjDel/Veh:	1.1	0.0	0.0	0.0	0.0	xxxxx	2.0	2.0	2.0	1.6	1.6	0.0								
DesignQueue:	0	0	0	0	0	0	0	0	0	0	0	0								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Average Delay (sec/veh): 6.7 Worst Case Level Of Service: C[19.0]

Street Name:	ASP NB Exit 28B						Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	100	0	323	0	0	0	0	295	0	0	482	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	0	323	0	0	0	0	295	0	0	482	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	100	0	323	0	0	0	0	295	0	0	482	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	100	0	323	0	0	0	0	295	0	0	482	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	777	777	148	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	368	330	905	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	368	330	905	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.27	0.00	0.36	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	673	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	19.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:	19.0			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	C			*			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: B[13.3]

Street Name:	Ave 57							ASP SB Exit 28B/Carlota Bl							
Approach:	North Bound				South Bound			East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R	L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled			Stop Sign				Yield Sign			
Rights:	Include				Include			Include				Include			
Lanes:	0 0 0	0	0		0 0 0	1	0	1 0 0	0	0		0 0 0	0	1	
Volume Module:															
Base Vol:	0	0	0	0	285	4		77	0	0	0	0		261	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	
Initial Bse:	0	0	0	0	285	4		77	0	0	0	0		261	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	
PHF Volume:	0	0	0	0	285	4		77	0	0	0	0		261	
Reduct Vol:	0	0	0	0	0	0		0	0	0	0	0		0	
FinalVolume:	0	0	0	0	285	4		77	0	0	0	0		261	
Critical Gap Module:															
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		7.1	xxxx	xxxxx	xxxxx	xxxx		6.2	
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx	xxxxx	xxxxx	xxxx		3.3	
Capacity Module:															
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		287	xxxx	xxxxx	xxxx	xxxx		0	
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		669	xxxx	xxxxx	xxxx	xxxx		1091	
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		509	xxxx	xxxxx	xxxx	xxxx		1091	
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.15	xxxx	xxxx	xxxx	xxxx		0.24	
Level Of Service Module:															
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		0.5	xxxx	xxxxx	xxxx	xxxx		0.9	
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		13.3	xxxx	xxxxx	xxxxx	xxxx		9.3	
LOS by Move:	*	*	*	*	*	*		B	*	*	*	*		A	
Movement:	LT -	LTR -	RT	LT -	LTR -	RT		LT -	LTR -	RT	LT -	LTR -	RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	*	*		*	*	*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx				13.3			9.3				
ApproachLOS:	*			*				B			A				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.566
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Glen Ellen Pl						ASP SB Exit 28A/Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1!	0 0		0 0 1!	0 0		0 1 0	0 1		0 1 0	1 0	
Volume Module:												
Base Vol:	0	0	0	118	11	142	12	144	264	40	626	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	118	11	142	12	144	264	40	626	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	118	11	142	12	144	264	40	626	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	118	11	142	12	144	264	40	626	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	118	11	142	12	144	264	40	626	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	0.00	0.44	0.04	0.52	0.08	0.92	1.00	0.12	1.83	0.05
Final Sat.:	0	470	0	257	24	309	43	521	640	71	1116	31
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	xxxx	0.46	0.46	0.46	0.28	0.28	0.41	0.57	0.56	0.56
Crit Moves:		****		****					****	****		
Delay/Veh:	0.0	0.0	0.0	13.4	13.4	13.4	11.1	11.1	11.7	15.7	15.5	15.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.4	13.4	13.4	11.1	11.1	11.7	15.7	15.5	15.3
LOS by Move:	*	*	*	B	B	B	B	B	B	C	C	C
ApproachDel:	xxxxxx			13.4			11.5			15.5		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			13.4			11.5			15.5		
LOS by Appr:	*			B			B			C		
AllWayAvgQ:	0.0	0.0	0.0	0.7	0.7	0.7	0.4	0.4	0.6	1.2	1.2	1.2

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to IBI GROUP, IRVINE, CA

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.496
Loss Time (sec):	0	Average Delay (sec/veh):	10.9
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP NB Exit 28A									Ave 52							
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:																				
Base Vol:	389	0	0	0	0	0	0	0	0	0	159	0	0	0	10	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	389	0	0	0	0	0	0	0	0	0	159	0	0	0	10	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	389	0	0	0	0	0	0	0	0	0	159	0	0	0	10	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	389	0	0	0	0	0	0	0	0	0	159	0	0	0	10	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	389	0	0	0	0	0	0	0	0	0	159	0	0	0	10	0				
Saturation Flow Module:																				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00							
Final Sat.:	785	0	0	0	0	0	0	0	706	0	0	666	0							
Capacity Analysis Module:																				
Vol/Sat:	0.50	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.23	xxxx	xxxx	0.02	xxxx								
Crit Moves:	****							****			****									
Delay/Veh:	11.7	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	8.1	0.0								
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
AdjDel/Veh:	11.7	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	8.1	0.0								
LOS by Move:	B	*	*	*	*	*	*	A	*	*	A	*								
ApproachDel:	11.7			xxxxxx				9.1			8.1									
Delay Adj:	1.00			xxxxx				1.00			1.00									
ApprAdjDel:	11.7			xxxxxx				9.1			8.1									
LOS by Appr:	B			*				A			A									
AllWayAvgQ:	0.9	0.9	0.9	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	ASP SB Exit 27/Carlota Bl						Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	13	34	19	7	16	92	187	153	37	38	375	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	34	19	7	16	92	187	153	37	38	375	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	34	19	7	16	92	187	153	37	38	375	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	34	19	7	16	92	187	153	37	38	375	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	34	19	7	16	92	187	153	37	38	375	30
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.20	0.52	0.29	0.06	0.14	0.80	0.50	0.41	0.10	0.09	0.85	0.07
Final Sat.:	105	275	154	36	81	468	349	285	69	62	615	49
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.20	0.20	0.20	0.54	0.54	0.54	0.61	0.61	0.61
Crit Moves:		****			****		****				****	
Delay/Veh:	9.5	9.5	9.5	9.5	9.5	9.5	13.3	13.3	13.3	14.7	14.7	14.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.5	9.5	9.5	9.5	9.5	9.5	13.3	13.3	13.3	14.7	14.7	14.7
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
ApproachDel:	9.5			9.5			13.3			14.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.5			9.5			13.3			14.7		
LOS by Appr:	A			A			B			B		
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	1.0	1.0	1.0	1.4	1.4	1.4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.451
Loss Time (sec):	0	Average Delay (sec/veh):	11.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Homer St						ASP NB Exit 27/Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	257	30	68	1	3	1	3	24	152	169	97	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	257	30	68	1	3	1	3	24	152	169	97	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	257	30	68	1	3	1	3	24	152	169	97	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	257	30	68	1	3	1	3	24	152	169	97	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	257	30	68	1	3	1	3	24	152	169	97	10
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.62	0.38	0.20	0.60	0.20	0.02	0.13	0.85	0.61	0.35	0.04
Final Sat.:	570	401	249	116	348	116	12	96	611	409	235	24
Capacity Analysis Module:												
Vol/Sat:	0.45	0.07	0.27	0.01	0.01	0.01	0.25	0.25	0.25	0.41	0.41	0.41
Crit Moves:	****				****			****			****	
Delay/Veh:	13.4	8.9	8.9	8.6	8.6	8.6	9.2	9.2	9.2	11.6	11.6	11.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.4	8.9	8.9	8.6	8.6	8.6	9.2	9.2	9.2	11.6	11.6	11.6
LOS by Move:	B	A	A	A	A	A	A	A	A	B	B	B
ApproachDel:	12.2			8.6			9.2			11.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.2			8.6			9.2			11.6		
LOS by Appr:	B			A			A			B		
AllWayAvgQ:	0.7	0.2	0.2	0.0	0.0	0.0	0.3	0.3	0.3	0.6	0.6	0.6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 33.9 Worst Case Level Of Service: F[272.1]

Street Name:	ASP SB Exit 26						Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1 1	0	0 1	1 0	0
Volume Module:												
Base Vol:	0	0	0	169	0	142	0	1081	0	0	1102	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	169	0	142	0	1081	0	0	1102	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	169	0	142	0	1081	0	0	1102	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	169	0	142	0	1081	0	0	1102	0
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1632	2183	541	1643	2183	551	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	68	47	491	93	47	483	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	48	47	491	93	47	483	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	1.83	0.00	0.29	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	93	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	14.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	487.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			272.1			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[13.7]

Street Name:	ASP NB on-ramp																							
Street Name:	ASP NB on-ramp												Ave 26											
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Yield Sign						Yield Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	0	0	0		0	1	2	0	0		0	0	1	1	0	
Volume Module:																								
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0	111	768	0	0	0	1149	179					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0	111	768	0	0	0	1149	179					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0	111	768	0	0	0	1149	179					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	0	111	768	0	0	0	1149	179					
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1328	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	527	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	527	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.21	xxxx	xxxx	xxxx	xxxx	xxxx						
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	B	*	*	*	*	*						
ApproachDel:	xxxxxx			xxxxxx						xxxxxx						xxxxxx								
ApproachLOS:	*			*						*						*								

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Figueroa St (N/S) & ASP NB Exit 26B (E/W)

Cycle (sec):	64	Critical Vol./Cap.(X):	0.591
Loss Time (sec):	0	Average Delay (sec/veh):	16.0
Optimal Cycle:	45	Level Of Service:	B

Street Name:	Figueroa St						ASP NB Exit 26B					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	2	0 0	1 0	0	0 1!	0 0	0	0 0	0 2
Volume Module:												
Base Vol:	3	641	73	433	402	173	107	27	22	0	0	480
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	641	73	433	402	173	107	27	22	0	0	480
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	641	73	433	402	173	107	27	22	0	0	480
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	641	73	433	402	173	107	27	22	0	0	480
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	641	73	433	402	173	107	27	22	0	0	480
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.89	0.92	0.95	0.95	0.95	0.95	0.95	1.00	1.00	0.75
Lanes:	0.01	1.79	0.20	2.00	0.70	0.30	0.69	0.17	0.14	0.00	0.00	2.00
Final Sat.:	14	3030	345	3502	1268	546	1236	312	254	0	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.12	0.32	0.32	0.09	0.09	0.09	0.00	0.00	0.17
Crit Moves:		****		****				****				****
Green/Cycle:	0.36	0.36	0.36	0.21	0.57	0.57	0.15	0.15	0.15	0.00	0.00	0.50
Volume/Cap:	0.59	0.59	0.59	0.59	0.56	0.56	0.59	0.59	0.59	0.00	0.00	0.34
Delay/Veh:	17.5	17.5	17.5	24.1	9.5	9.5	29.0	29.0	29.0	0.0	0.0	10.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.5	17.5	17.5	24.1	9.5	9.5	29.0	29.0	29.0	0.0	0.0	10.0
LOS by Move:	B	B	B	C	A	A	C	C	C	A	A	A
HCM2kAvgQ:	7	7	7	5	8	8	4	4	4	0	0	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[11.7]

Street Name:	ASP NB on-ramp									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	29	560	0	0	0	1156	82			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	29	560	0	0	0	1156	82			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	29	560	0	0	0	1156	82			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	29	560	0	0	0	1156	82			
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					1238	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					570	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					570	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx					0.05	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					B	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx					xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					11.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*					B	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx							xxxxxx					xxxxxx				
ApproachLOS:	*			*							*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: A[8.4]

Street Name:	ASP SB Exit 25									Casanova St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	1			1	0	0			0	0	0			2	0	2		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	1			1	0	0			0	0	0			2	0	2		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	1			1	0	0			0	0	0			2	0	2		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	1			1	0	0			0	0	0			2	0	2		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			xxxxx	xxxx	xxxxx			6.4	6.5	6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			3.5	4.0	3.3		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			1	xxxx	xxxxx			xxxx	xxxx	xxxxx			2	2	0		
Potent Cap.:	xxxx	xxxx	xxxxx			1635	xxxx	xxxxx			xxxx	xxxx	xxxxx			1026	898	1091		
Move Cap.:	xxxx	xxxx	xxxxx			1635	xxxx	xxxxx			xxxx	xxxx	xxxxx			1025	897	1091		
Volume/Cap:	xxxx	xxxx	xxxx			0.00	xxxx	xxxx			xxxx	xxxx	xxxx			0.00	0.00	0.00		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.0	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx			7.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*			A	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	1057	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	0.0	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	8.4	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx						8.4			
ApproachLOS:	*					*					*						A			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

Street Name:	Amador Pl									Amador St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	0	0		22	3		6			5	117		89		16	219		22	
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	0	0		22	3		6			5	117		89		16	219		22	
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00			1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	0	0	0		22	3		6			5	117		89		16	219		22	
Reduct Vol:	0	0	0		0	0		0			0	0		0		0	0		0	
FinalVolume:	0	0	0		22	3		6			5	117		89		16	219		22	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx		6.4	6.5		6.2			4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	4.0		3.3			2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx		434	478		230			241	xxxx	xxxxx			206	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx		583	489		814			1337	xxxx	xxxxx			1377	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx		576	482		814			1337	xxxx	xxxxx			1377	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx		0.04	0.01		0.01			0.00	xxxx	xxxx			0.01	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx		xxxxx			0.0	xxxx	xxxxx			0.0	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx		xxxxx			7.7	xxxx	xxxxx			7.6	xxxx	xxxxx		
LOS by Move:	*	*	*		*	*		*			A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	599		xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	0.2		xxxxx			0.0	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	11.3		xxxxx			7.7	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*		*	B		*			A	*	*			*	*	*		
ApproachDel:	xxxxxx					11.3					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	0	Average Delay (sec/veh):	19.3
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Stadium Wy							ASP SB Exit 24D					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	1 0	1 0	1	
Volume Module:													
Base Vol:	2	515	0	0	238	2	0	0	0	179	5	32	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	515	0	0	238	2	0	0	0	179	5	32	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	2	515	0	0	238	2	0	0	0	179	5	32	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	2	515	0	0	238	2	0	0	0	179	5	32	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	2	515	0	0	238	2	0	0	0	179	5	32	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	1.00	1.00	1.00	
Final Sat.:	590	650	0	0	588	5	0	0	0	494	528	588	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.79	xxxx	xxxx	0.40	0.40	xxxx	xxxx	xxxx	0.36	0.01	0.05	
Crit Moves:		****				****				****			
Delay/Veh:	8.7	25.3	0.0	0.0	12.7	12.7	0.0	0.0	0.0	13.1	9.1	8.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.7	25.3	0.0	0.0	12.7	12.7	0.0	0.0	0.0	13.1	9.1	8.7	
LOS by Move:	A	D	*	*	B	B	*	*	*	B	A	A	
ApproachDel:		25.3			12.7			xxxxxx			12.4		
Delay Adj:		1.00			1.00			xxxxx			1.00		
ApprAdjDel:		25.3			12.7			xxxxxx			12.4		
LOS by Appr:		D			B			*			B		
AllWayAvgQ:	0.0	3.1	0.0	0.6	0.6	0.6	0.0	0.0	0.0	0.5	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.697
Loss Time (sec):	0	Average Delay (sec/veh):	14.4
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Stadium Wy							ASP NB Exit 24B					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0		
Volume Module:													
Base Vol:	0	495	40	123	316	0	0	4	1	9	0	36	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	495	40	123	316	0	0	4	1	9	0	36	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	495	40	123	316	0	0	4	1	9	0	36	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	495	40	123	316	0	0	4	1	9	0	36	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	0	495	40	123	316	0	0	4	1	9	0	36	
Saturation Flow Module:													
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.60	0.40	0.40	0.60	1.00	
Final Sat.:	0	710	808	635	702	0	0	789	202	193	290	549	
Capacity Analysis Module:													
Vol/Sat:	xxxx	0.70	0.05	0.19	0.45	xxxx	xxxx	0.01	0.00	0.05	0.00	0.07	
Crit Moves:		****			****			****				****	
Delay/Veh:	0.0	18.4	7.3	9.6	11.8	0.0	0.0	9.3	9.1	9.6	9.6	9.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	18.4	7.3	9.6	11.8	0.0	0.0	9.3	9.1	9.6	9.6	9.0	
LOS by Move:	*	C	A	A	B	*	*	A	A	A	A	A	
ApproachDel:		17.6			11.2			9.3			9.1		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		17.6			11.2			9.3			9.1		
LOS by Appr:		C			B			A			A		
AllWayAvgQ:	0.0	2.1	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #101 Pasadena Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.506
Loss Time (sec):	0	Average Delay (sec/veh):	5.8
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Pasadena Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	0 1	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	831	83	189	829	0	0	0	0	110	0	115
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	831	83	189	829	0	0	0	0	110	0	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	831	83	189	829	0	0	0	0	110	0	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	831	83	189	829	0	0	0	0	110	0	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	831	83	189	829	0	0	0	0	110	0	115
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.62	0.62	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.82	0.18	0.37	1.63	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3236	323	435	1908	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.26	0.43	0.43	0.00	0.00	0.00	0.00	0.06	0.00	0.07
Crit Moves:					****							****
Green/Cycle:	0.00	0.86	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.14	0.00	0.14
Volume/Cap:	0.00	0.30	0.30	0.51	0.51	0.00	0.00	0.00	0.00	0.43	0.00	0.51
Delay/Veh:	0.0	1.4	1.4	2.0	2.0	0.0	0.0	0.0	0.0	40.5	0.0	41.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.4	1.4	2.0	2.0	0.0	0.0	0.0	0.0	40.5	0.0	41.6
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
HCM2kAvgQ:	0	3	3	5	5	0	0	0	0	4	0	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Fair Oaks Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.838
Loss Time (sec):	0	Average Delay (sec/veh):	17.3
Optimal Cycle:	89	Level Of Service:	B

Street Name:	Fair Oaks Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	12	701	104	350	718	26	27	214	9	113	213	193
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	701	104	350	718	26	27	214	9	113	213	193
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	701	104	350	718	26	27	214	9	113	213	193
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	701	104	350	718	26	27	214	9	113	213	193
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	701	104	350	718	26	27	214	9	113	213	193
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	0.93	0.93	0.30	0.95	0.95	0.15	0.99	0.99	0.38	0.93	0.93
Lanes:	1.00	1.74	0.26	1.00	1.93	0.07	1.00	0.96	0.04	1.00	0.52	0.48
Final Sat.:	618	3084	458	576	3466	126	277	1812	76	728	926	839
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.23	0.61	0.21	0.21	0.10	0.12	0.12	0.16	0.23	0.23
Crit Moves:				****							****	
Green/Cycle:	0.73	0.73	0.73	0.73	0.73	0.73	0.27	0.27	0.27	0.27	0.27	0.27
Volume/Cap:	0.03	0.31	0.31	0.84	0.29	0.29	0.35	0.43	0.43	0.57	0.84	0.84
Delay/Veh:	3.9	4.9	4.9	23.5	4.8	4.8	32.0	30.4	30.4	34.9	46.4	46.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.9	4.9	4.9	23.5	4.8	4.8	32.0	30.4	30.4	34.9	46.4	46.4
LOS by Move:	A	A	A	C	A	A	C	C	C	C	D	D
HCM2kAvgQ:	0	5	5	10	4	4	1	6	6	4	14	14

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Raymond Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.310
Loss Time (sec):	0	Average Delay (sec/veh):	10.9
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Raymond Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	1	1 0	2 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	186	0	179	154	549	0	0	379	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	186	0	179	154	549	0	0	379	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	186	0	179	154	549	0	0	379	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	186	0	179	154	549	0	0	379	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	186	0	179	154	549	0	0	379	96
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.44	0.95	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3502	0	1615	842	3610	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.11	0.18	0.15	0.00	0.00	0.20	0.06
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.64	0.64	0.00	0.00	0.64	1.00
Volume/Cap:	0.00	0.00	0.00	0.15	0.00	0.31	0.28	0.24	0.00	0.00	0.31	0.06
Delay/Veh:	0.0	0.0	0.0	21.9	0.0	23.5	8.1	7.6	0.0	0.0	8.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.9	0.0	23.5	8.1	7.6	0.0	0.0	8.1	0.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	4	2	4	0	0	5	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #104 Marengo Av (N/S) & Glenarm St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.789
Loss Time (sec):	0	Average Delay (sec/veh):	19.4
Optimal Cycle:	68	Level Of Service:	B

Street Name:	Marengo Av						Glenarm St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1	0	0	1	1	0	1
Volume Module:												
Base Vol:	159	232	13	30	240	366	382	604	231	7	366	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	159	232	13	30	240	366	382	604	231	7	366	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	159	232	13	30	240	366	382	604	231	7	366	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	232	13	30	240	366	382	604	231	7	366	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	159	232	13	30	240	366	382	604	231	7	366	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.66	0.66	0.66	0.94	0.94	0.85	0.43	1.00	0.85	0.28	0.99	0.99
Lanes:	0.39	0.58	0.03	0.11	0.89	1.00	1.00	1.00	1.00	1.00	0.95	0.05
Final Sat.:	493	719	40	198	1586	1615	819	1900	1615	536	1783	102
Capacity Analysis Module:												
Vol/Sat:	0.32	0.32	0.32	0.15	0.15	0.23	0.47	0.32	0.14	0.01	0.21	0.21
Crit Moves:		****					****					
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	0.79	0.79	0.79	0.37	0.37	0.55	0.79	0.54	0.24	0.02	0.35	0.35
Delay/Veh:	33.8	33.8	33.8	20.9	20.9	23.6	24.1	12.8	9.9	8.5	10.7	10.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.8	33.8	33.8	20.9	20.9	23.6	24.1	12.8	9.9	8.5	10.7	10.7
LOS by Move:	C	C	C	C	C	C	C	B	A	A	B	B
HCM2kAvgQ:	13	13	13	6	6	9	11	11	3	0	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Orange Grove Bl (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.472
Loss Time (sec):	0	Average Delay (sec/veh):	13.9
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Orange Grove Bl						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	1	0	1	0	1	0	1	0	0	1!
Volume Module:												
Base Vol:	8	736	336	44	770	26	16	31	17	244	35	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	736	336	44	770	26	16	31	17	244	35	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	736	336	44	770	26	16	31	17	244	35	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	736	336	44	770	26	16	31	17	244	35	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	736	336	44	770	26	16	31	17	244	35	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.85	0.84	0.84	0.84	0.89	0.89	0.89	0.71	0.71	0.85
Lanes:	0.02	1.98	1.00	0.10	1.84	0.06	0.25	0.48	0.27	0.87	0.13	1.00
Final Sat.:	37	3385	1615	167	2914	98	421	815	447	1176	169	1615
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.21	0.26	0.26	0.26	0.04	0.04	0.04	0.21	0.21	0.01
Crit Moves:					****						****	
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.44	0.44	0.44	0.44	0.44	0.44
Volume/Cap:	0.39	0.39	0.37	0.47	0.47	0.47	0.09	0.09	0.09	0.47	0.47	0.03
Delay/Veh:	12.5	12.5	12.5	13.3	13.3	13.3	16.4	16.4	16.4	20.4	20.4	15.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	12.5	12.5	13.3	13.3	13.3	16.4	16.4	16.4	20.4	20.4	15.9
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	B
HCM2kAvgQ:	7	7	6	8	8	8	1	1	1	6	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 Fair Oaks Av (N/S) & Columbia St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.344
Loss Time (sec):	0	Average Delay (sec/veh):	6.3
Optimal Cycle:	22	Level Of Service:	A

Street Name:	Fair Oaks Av						Columbia St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	80	902	15	24	813	129	97	15	71	2	10	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	902	15	24	813	129	97	15	71	2	10	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	902	15	24	813	129	97	15	71	2	10	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	902	15	24	813	129	97	15	71	2	10	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	902	15	24	813	129	97	15	71	2	10	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.95	0.95	0.28	0.93	0.93	0.76	0.76	0.85	0.91	0.91	0.91
Lanes:	1.00	1.97	0.03	1.00	1.73	0.27	0.87	0.13	1.00	0.07	0.33	0.60
Final Sat.:	515	3544	59	528	3050	484	1254	194	1615	115	576	1036
Capacity Analysis Module:												
Vol/Sat:	0.16	0.25	0.25	0.05	0.27	0.27	0.08	0.08	0.04	0.02	0.02	0.02
Crit Moves:					****			****				
Green/Cycle:	0.78	0.78	0.78	0.78	0.78	0.78	0.22	0.22	0.22	0.22	0.22	0.22
Volume/Cap:	0.20	0.33	0.33	0.06	0.34	0.34	0.34	0.34	0.20	0.08	0.08	0.08
Delay/Veh:	3.2	3.5	3.5	2.7	3.5	3.5	33.2	33.2	31.7	30.7	30.7	30.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.2	3.5	3.5	2.7	3.5	3.5	33.2	33.2	31.7	30.7	30.7	30.7
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	5	5	0	5	5	3	3	2	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #201 Orange Grove Bl (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.533
Loss Time (sec):	0	Average Delay (sec/veh):	13.1
Optimal Cycle:	40	Level Of Service:	B

Street Name:	Orange Grove Bl						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	150	0	450	297	468	0	0	482	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	150	0	450	297	468	0	0	482	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	150	0	450	297	468	0	0	482	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	150	0	450	297	468	0	0	482	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	150	0	450	297	468	0	0	482	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.41	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	1.25	0.00	1.75	1.00	2.00	0.00	0.00	1.79	0.21
Final Sat.:	0	0	0	2082	0	2915	785	3610	0	0	3170	381
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.15	0.38	0.13	0.00	0.00	0.15	0.15
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.29	0.00	0.29	0.71	0.71	0.00	0.00	0.71	0.71
Volume/Cap:	0.00	0.00	0.00	0.25	0.00	0.53	0.53	0.18	0.00	0.00	0.21	0.21
Delay/Veh:	0.0	0.0	0.0	27.2	0.0	30.3	7.8	4.9	0.0	0.0	5.0	5.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.2	0.0	30.3	7.8	4.9	0.0	0.0	5.0	5.0
LOS by Move:	A	A	A	C	A	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	3	0	7	5	3	0	0	3	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #202 Fremont Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.459
Loss Time (sec):	0	Average Delay (sec/veh):	15.5
Optimal Cycle:	27	Level Of Service:	B

Street Name:	Fremont Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	107	516	14	75	556	54	137	357	153	26	299	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	107	516	14	75	556	54	137	357	153	26	299	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	516	14	75	556	54	137	357	153	26	299	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	516	14	75	556	54	137	357	153	26	299	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	516	14	75	556	54	137	357	153	26	299	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.36	1.00	0.85	0.43	0.91	0.91	0.32	0.93	0.93
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.40	0.60	1.00	1.72	0.28
Final Sat.:	640	1900	1615	687	1900	1615	823	2413	1034	605	3036	498
Capacity Analysis Module:												
Vol/Sat:	0.17	0.27	0.01	0.11	0.29	0.03	0.17	0.15	0.15	0.04	0.10	0.10
Crit Moves:					****		****					
Green/Cycle:	0.64	0.64	0.64	0.64	0.64	0.64	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.26	0.43	0.01	0.17	0.46	0.05	0.46	0.41	0.41	0.12	0.27	0.27
Delay/Veh:	8.2	9.3	6.6	7.6	9.6	6.8	25.5	24.1	24.1	21.5	22.6	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	9.3	6.6	7.6	9.6	6.8	25.5	24.1	24.1	21.5	22.6	22.6
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	2	8	0	1	9	1	4	6	6	1	4	4

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #203 Fair Oaks Av (N/S) & Mission St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.569
Loss Time (sec):	0	Average Delay (sec/veh):	24.3
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Fair Oaks Av						Mission St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	47	767	37	163	897	37	74	280	54	80	212	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	767	37	163	897	37	74	280	54	80	212	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	767	37	163	897	37	74	280	54	80	212	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	767	37	163	897	37	74	280	54	80	212	167
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	767	37	163	897	37	74	280	54	80	212	167
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.98	0.98	0.95	0.93	0.93
Lanes:	1.00	1.91	0.09	1.00	1.92	0.08	1.00	0.84	0.16	1.00	0.56	0.44
Final Sat.:	1805	3420	165	1805	3447	142	1805	1554	300	1805	993	782
Capacity Analysis Module:												
Vol/Sat:	0.03	0.22	0.22	0.09	0.26	0.26	0.04	0.18	0.18	0.04	0.21	0.21
Crit Moves:		****		****			****				****	
Green/Cycle:	0.05	0.39	0.39	0.16	0.50	0.50	0.36	0.36	0.36	0.09	0.38	0.38
Volume/Cap:	0.52	0.57	0.57	0.57	0.52	0.52	0.29	0.50	0.50	0.50	0.57	0.57
Delay/Veh:	51.5	24.2	24.2	41.6	17.0	17.0	23.6	25.7	25.7	46.0	26.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.5	24.2	24.2	41.6	17.0	17.0	23.6	25.7	25.7	46.0	26.0	26.0
LOS by Move:	D	C	C	D	B	B	C	C	C	D	C	C
HCM2kAvgQ:	2	10	10	5	10	10	2	8	8	3	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #204 Arroyo Verde Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	0	Average Delay (sec/veh):	14.8
Optimal Cycle:	36	Level Of Service:	B

Street Name:	Arroyo Verde Rd						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	1	1	0	1
Volume Module:												
Base Vol:	73	0	338	0	0	0	0	798	154	142	1043	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	0	338	0	0	0	0	798	154	142	1043	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	0	338	0	0	0	0	798	154	142	1043	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	0	338	0	0	0	0	798	154	142	1043	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	73	0	338	0	0	0	0	798	154	142	1043	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.93	0.93	0.22	0.95	1.00
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	1.68	0.32	1.00	2.00	0.00
Final Sat.:	285	0	1319	0	0	0	0	2952	570	410	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.27	0.27	0.35	0.29	0.00
Crit Moves:	****									****		
Green/Cycle:	0.43	0.00	0.43	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.57	0.00
Volume/Cap:	0.60	0.00	0.60	0.00	0.00	0.00	0.00	0.47	0.47	0.60	0.50	0.00
Delay/Veh:	23.7	0.0	23.7	0.0	0.0	0.0	0.0	12.6	12.6	18.2	12.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.7	0.0	23.7	0.0	0.0	0.0	0.0	12.6	12.6	18.2	12.9	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	B	B	A
HCM2kAvgQ:	10	0	10	0	0	0	0	9	9	4	10	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #205 Pasadena Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.689
Loss Time (sec):	0	Average Delay (sec/veh):	25.8
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Pasadena Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	2	0 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	0	0	128	0	439	402	533	0	0	590	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	128	0	439	402	533	0	0	590	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	128	0	439	402	533	0	0	590	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	128	0	439	402	533	0	0	590	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	128	0	439	402	533	0	0	590	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.72	0.28
Final Sat.:	0	0	0	3502	0	1615	1805	3610	0	0	3035	499
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.27	0.22	0.15	0.00	0.00	0.19	0.19
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.39	0.00	0.39	0.32	0.61	0.00	0.00	0.28	0.28
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.69	0.69	0.24	0.00	0.00	0.69	0.69
Delay/Veh:	0.0	0.0	0.0	19.1	0.0	28.4	32.9	9.2	0.0	0.0	34.0	34.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.1	0.0	28.4	32.9	9.2	0.0	0.0	34.0	34.0
LOS by Move:	A	A	A	B	A	C	C	A	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	12	12	4	0	0	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #206 Monterey Rd (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.274
Loss Time (sec):	0	Average Delay (sec/veh):	11.0
Optimal Cycle:	26	Level Of Service:	B

Street Name:	Monterey Rd						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0 0	1	0 0	0 0	1	0 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	274	0	60	0	0	0	0	620	276	44	474	298
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	274	0	60	0	0	0	0	620	276	44	474	298
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	274	0	60	0	0	0	0	620	276	44	474	298
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	274	0	60	0	0	0	0	620	276	44	474	298
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	274	0	60	0	0	0	0	620	276	44	474	298
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.95	0.85	0.95	0.95	0.85
Lanes:	2.00	0.00	1.00	0.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	0	1615	0	0	1900	0	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.00	0.04	0.00	0.00	0.00	0.00	0.17	0.17	0.02	0.13	0.18
Crit Moves:	****							****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.63	0.63	0.09	0.71	0.71
Volume/Cap:	0.27	0.00	0.13	0.00	0.00	0.00	0.00	0.27	0.27	0.27	0.18	0.26
Delay/Veh:	27.9	0.0	26.7	0.0	0.0	0.0	0.0	8.5	8.6	43.5	4.7	5.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.9	0.0	26.7	0.0	0.0	0.0	0.0	8.5	8.6	43.5	4.7	5.1
LOS by Move:	C	A	C	A	A	A	A	A	A	D	A	A
HCM2kAvgQ:	3	0	1	0	0	0	0	4	4	2	2	3

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #207 Fremont Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.690
Loss Time (sec):	0	Average Delay (sec/veh):	17.8
Optimal Cycle:	46	Level Of Service:	B

Street Name:	Fremont Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	218	476	36	125	508	79	98	778	168	24	857	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	476	36	125	508	79	98	778	168	24	857	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	476	36	125	508	79	98	778	168	24	857	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	476	36	125	508	79	98	778	168	24	857	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	476	36	125	508	79	98	778	168	24	857	54
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.35	1.00	0.85	0.37	1.00	0.85	0.14	0.92	0.92	0.13	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.64	0.36	1.00	1.88	0.12
Final Sat.:	661	1900	1615	703	1900	1615	272	2890	624	248	3366	212
Capacity Analysis Module:												
Vol/Sat:	0.33	0.25	0.02	0.18	0.27	0.05	0.36	0.27	0.27	0.10	0.25	0.25
Crit Moves:	****						****					
Green/Cycle:	0.48	0.48	0.48	0.48	0.48	0.48	0.52	0.52	0.52	0.52	0.52	0.52
Volume/Cap:	0.69	0.52	0.05	0.37	0.56	0.10	0.69	0.52	0.52	0.19	0.49	0.49
Delay/Veh:	26.7	18.8	14.0	17.3	19.4	14.4	31.3	15.9	15.9	13.3	15.5	15.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	18.8	14.0	17.3	19.4	14.4	31.3	15.9	15.9	13.3	15.5	15.5
LOS by Move:	C	B	B	B	B	B	C	B	B	B	B	B
HCM2kAvgQ:	7	10	1	3	11	1	4	10	10	1	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #208 Fair Oaks Av (N/S) & Monterey Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.708
Loss Time (sec):	0	Average Delay (sec/veh):	24.6
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Fair Oaks Av						Monterey Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	368	651	52	74	996	56	88	364	340	75	340	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	368	651	52	74	996	56	88	364	340	75	340	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	368	651	52	74	996	56	88	364	340	75	340	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	368	651	52	74	996	56	88	364	340	75	340	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	368	651	52	74	996	56	88	364	340	75	340	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.39	0.88	0.88	0.20	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.03	0.97	1.00	1.72	0.28
Final Sat.:	1805	3610	1615	1805	3390	191	748	1731	1617	375	3042	492
Capacity Analysis Module:												
Vol/Sat:	0.20	0.18	0.03	0.04	0.29	0.29	0.12	0.21	0.21	0.20	0.11	0.11
Crit Moves:	****				****			****				
Green/Cycle:	0.70	0.57	0.57	0.55	0.41	0.41	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.61	0.31	0.06	0.13	0.71	0.71	0.40	0.71	0.71	0.67	0.38	0.38
Delay/Veh:	22.5	11.2	9.5	12.5	25.8	25.8	29.2	33.7	33.7	45.9	28.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.5	11.2	9.5	12.5	25.8	25.8	29.2	33.7	33.7	45.9	28.0	28.0
LOS by Move:	C	B	A	B	C	C	C	C	C	D	C	C
HCM2kAvgQ:	7	5	1	1	15	15	3	11	11	3	5	5

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #209 Fremont Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.939
Loss Time (sec):	0	Average Delay (sec/veh):	34.6
Optimal Cycle:	180	Level Of Service:	C

Street Name:	Fremont Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	54	1179	413	112	674	66	160	694	23	325	353	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1179	413	112	674	66	160	694	23	325	353	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	1179	413	112	674	66	160	694	23	325	353	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1179	413	112	674	66	160	694	23	325	353	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	1179	413	112	674	66	160	694	23	325	353	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.32	1.00	0.85	0.10	1.00	0.85	0.95	0.91	0.91	0.95	0.91	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.90	0.10	1.00	3.00	1.00
Final Sat.:	615	1900	1615	183	1900	1615	1805	4997	166	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.62	0.26	0.61	0.35	0.04	0.09	0.14	0.14	0.18	0.07	0.04
Crit Moves:		****						****		****		
Green/Cycle:	0.66	0.66	0.66	0.66	0.66	0.66	0.19	0.15	0.15	0.19	0.15	0.15
Volume/Cap:	0.13	0.94	0.39	0.93	0.54	0.06	0.46	0.94	0.94	0.94	0.46	0.27
Delay/Veh:	6.5	28.6	8.0	74.6	9.4	6.0	36.8	61.5	61.5	72.8	39.4	38.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.5	28.6	8.0	74.6	9.4	6.0	36.8	61.5	61.5	72.8	39.4	38.5
LOS by Move:	A	C	A	E	A	A	D	E	E	E	D	D
HCM2kAvgQ:	1	38	6	6	11	1	5	12	12	14	4	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #210 Fair Oaks Av (N/S) & Huntington Dr (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.570
Loss Time (sec):	0	Average Delay (sec/veh):	272.3
Optimal Cycle:	62	Level Of Service:	F

Street Name:	Fair Oaks Av						Huntington Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	1314	0	30	29	1009	0	0	683	979
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1314	0	30	29	1009	0	0	683	979
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1314	0	30	29	1009	0	0	683	979
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1314	0	30	29	1009	0	0	683	979
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	1314	0	30	29	1009	0	0	683	979
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.91	0.85
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.38	0.00	0.02	0.01	0.19	0.00	0.00	0.13	0.61
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.54	0.00	0.54	0.28	0.47	0.00	0.00	0.19	0.19
Volume/Cap:	0.00	0.00	0.00	0.70	0.00	0.03	0.03	0.42	0.00	0.00	0.70	3.23
Delay/Veh:	0.0	0.0	0.0	18.5	0.0	11.0	26.3	17.9	0.0	0.0	40.3	1052
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	18.5	0.0	11.0	26.3	17.9	0.0	0.0	40.3	1052
LOS by Move:	A	A	A	B	A	B	C	B	A	A	D	F
HCM2kAvgQ:	0	0	0	16	0	0	0	8	0	0	9	113

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #301 Figueroa St (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.849
Loss Time (sec):	0	Average Delay (sec/veh):	27.5
Optimal Cycle:	123	Level Of Service:	C

Street Name:	Figueroa St						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	237	576	3	106	513	63	130	947	145	284	960	218
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	237	576	3	106	513	63	130	947	145	284	960	218
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	237	576	3	106	513	63	130	947	145	284	960	218
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	576	3	106	513	63	130	947	145	284	960	218
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	237	576	3	106	513	63	130	947	145	284	960	218
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	0.95	0.85	0.33	0.93	0.93	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	2.00	1.00	1.00	1.78	0.22	1.00	1.73	0.27	1.00	1.63	0.37
Final Sat.:	618	3610	1615	618	3162	388	1805	3068	470	1805	2860	649
Capacity Analysis Module:												
Vol/Sat:	0.38	0.16	0.00	0.17	0.16	0.16	0.07	0.31	0.31	0.16	0.34	0.34
Crit Moves:	****							****		****		
Green/Cycle:	0.45	0.45	0.45	0.45	0.45	0.45	0.10	0.36	0.36	0.45	0.45	0.45
Volume/Cap:	0.85	0.35	0.00	0.38	0.36	0.36	0.74	0.85	0.85	0.69	0.74	0.74
Delay/Veh:	45.4	18.0	15.1	19.0	18.1	18.1	59.6	34.8	34.8	22.8	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.4	18.0	15.1	19.0	18.1	18.1	59.6	34.8	34.8	22.8	24.6	24.6
LOS by Move:	D	B	B	B	B	B	E	C	C	C	C	C
HCM2kAvgQ:	9	6	0	3	6	6	6	19	19	8	17	17

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #302 Ave 64 (N/S) & York Bl (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.869
Loss Time (sec):	0	Average Delay (sec/veh):	24.9
Optimal Cycle:	142	Level Of Service:	C

Street Name:	Ave 64						York Bl					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	340	330	77	307	184	66	100	902	164	40	1185	193
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	330	77	307	184	66	100	902	164	40	1185	193
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	330	77	307	184	66	100	902	164	40	1185	193
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	330	77	307	184	66	100	902	164	40	1185	193
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	330	77	307	184	66	100	902	164	40	1185	193
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.96	0.96	0.11	0.93	0.93	0.19	0.93	0.93
Lanes:	1.00	0.81	0.19	1.00	0.74	0.26	1.00	1.69	0.31	1.00	1.72	0.28
Final Sat.:	1805	1497	349	1805	1343	482	209	2984	543	360	3039	495
Capacity Analysis Module:												
Vol/Sat:	0.19	0.22	0.22	0.17	0.14	0.14	0.48	0.30	0.30	0.11	0.39	0.39
Crit Moves:		****		****			****					
Green/Cycle:	0.45	0.25	0.25	0.39	0.19	0.19	0.55	0.55	0.55	0.55	0.55	0.55
Volume/Cap:	0.61	0.87	0.87	0.70	0.72	0.72	0.87	0.55	0.55	0.20	0.71	0.71
Delay/Veh:	23.3	51.5	51.5	29.4	45.5	45.5	65.3	14.8	14.8	11.9	17.8	17.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.3	51.5	51.5	29.4	45.5	45.5	65.3	14.8	14.8	11.9	17.8	17.8
LOS by Move:	C	D	D	C	D	D	E	B	B	B	B	B
HCM2kAvgQ:	9	15	15	9	9	9	5	11	11	1	17	17

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #303 Figueroa St (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	0	Average Delay (sec/veh):	17.0
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Figueroa St							Ave 60					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Protected			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	1 0	0 1	
Volume Module:													
Base Vol:	8	736	207	252	693	5	3	4	9	229	3	232	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	8	736	207	252	693	5	3	4	9	229	3	232	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	8	736	207	252	693	5	3	4	9	229	3	232	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	8	736	207	252	693	5	3	4	9	229	3	232	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	8	736	207	252	693	5	3	4	9	229	3	232	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.89	0.89	0.89	0.72	0.72	0.85	
Lanes:	1.00	1.56	0.44	1.00	1.99	0.01	0.19	0.25	0.56	0.99	0.01	1.00	
Final Sat.:	1805	2725	766	1805	3580	26	318	424	953	1357	18	1615	
Capacity Analysis Module:													
Vol/Sat:	0.00	0.27	0.27	0.14	0.19	0.19	0.01	0.01	0.01	0.17	0.17	0.14	
Crit Moves:		****		****							****		
Green/Cycle:	0.02	0.47	0.47	0.71	0.69	0.69	0.29	0.29	0.29	0.29	0.29	0.29	
Volume/Cap:	0.28	0.58	0.58	0.43	0.28	0.28	0.03	0.03	0.03	0.58	0.58	0.49	
Delay/Veh:	53.9	20.0	20.0	9.1	5.9	5.9	25.3	25.3	25.3	32.3	32.3	30.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	53.9	20.0	20.0	9.1	5.9	5.9	25.3	25.3	25.3	32.3	32.3	30.1	
LOS by Move:	D	B	B	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	1	11	11	4	4	4	0	0	0	7	7	6	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #304 Monterey Rd (N/S) & Ave 60 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.517
Loss Time (sec):	0	Average Delay (sec/veh):	26.5
Optimal Cycle:	38	Level Of Service:	C

Street Name:	Monterey Rd									Ave 60								
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Permitted						Protected					
Rights:			Include						Include						Include						Include			
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Lanes:	1	0	1	0	1		1	0	1	0	1		1	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	288		170		77		114		229		44		34		153		196		32		240		37	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	288		170		77		114		229		44		34		153		196		32		240		37	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	288		170		77		114		229		44		34		153		196		32		240		37	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	288		170		77		114		229		44		34		153		196		32		240		37	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	288		170		77		114		229		44		34		153		196		32		240		37	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.96		0.82		0.92		0.96		0.82		0.42		0.88		0.88		0.92		0.95		0.95	
Lanes:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		0.44		0.56		1.00		0.87		0.13	
Final Sat.:	1742		1833		1558		1742		1833		1558		797		736		943		1742		1557		240	
Capacity Analysis Module:																								
Vol/Sat:	0.17		0.09		0.05		0.07		0.12		0.03		0.04		0.21		0.21		0.02		0.15		0.15	
Crit Moves:	****								****						****				****					
Green/Cycle:	0.32		0.32		0.32		0.24		0.24		0.24		0.40		0.40		0.40		0.04		0.44		0.44	
Volume/Cap:	0.52		0.29		0.15		0.27		0.52		0.12		0.11		0.52		0.52		0.52		0.35		0.35	
Delay/Veh:	28.5		25.8		24.5		31.1		33.9		29.7		18.8		23.2		23.2		54.7		18.9		18.9	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	28.5		25.8		24.5		31.1		33.9		29.7		18.8		23.2		23.2		54.7		18.9		18.9	
LOS by Move:	C		C		C		C		C		C		B		C		C		D		B		B	
HCM2kAvgQ:	8		4		2		3		7		1		1		8		8		2		6		6	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #305 Figueroa St (N/S) & Ave 57 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.767
Loss Time (sec):	0	Average Delay (sec/veh):	17.8
Optimal Cycle:	62	Level Of Service:	B

Street Name:	Figueroa St							Ave 57					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0	
Volume Module:													
Base Vol:	47	835	202	144	754	32	35	68	17	240	76	171	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	47	835	202	144	754	32	35	68	17	240	76	171	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	47	835	202	144	754	32	35	68	17	240	76	171	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	47	835	202	144	754	32	35	68	17	240	76	171	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	47	835	202	144	754	32	35	68	17	240	76	171	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.26	0.92	0.92	0.18	0.94	0.94	0.83	0.83	0.83	0.75	0.75	0.75	
Lanes:	1.00	1.61	0.39	1.00	1.92	0.08	0.29	0.57	0.14	0.49	0.16	0.35	
Final Sat.:	503	2822	683	340	3442	146	459	893	223	700	222	499	
Capacity Analysis Module:													
Vol/Sat:	0.09	0.30	0.30	0.42	0.22	0.22	0.08	0.08	0.08	0.34	0.34	0.34	
Crit Moves:				****							****		
Green/Cycle:	0.55	0.55	0.55	0.55	0.55	0.55	0.45	0.45	0.45	0.45	0.45	0.45	
Volume/Cap:	0.17	0.54	0.54	0.77	0.40	0.40	0.17	0.17	0.17	0.77	0.77	0.77	
Delay/Veh:	11.3	14.5	14.5	34.5	12.9	12.9	16.6	16.6	16.6	28.8	28.8	28.8	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	11.3	14.5	14.5	34.5	12.9	12.9	16.6	16.6	16.6	28.8	28.8	28.8	
LOS by Move:	B	B	B	C	B	B	B	B	B	C	C	C	
HCM2kAvgQ:	1	11	11	5	7	7	2	2	2	14	14	14	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #306 Monterey Rd (N/S) & Via Marisol (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.419
Loss Time (sec):	0	Average Delay (sec/veh):	14.9
Optimal Cycle:	25	Level Of Service:	B

Street Name:	Monterey Rd							Via Marisol					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1	
Volume Module:													
Base Vol:	280	346	34	84	262	111	137	276	214	18	153	58	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	280	346	34	84	262	111	137	276	214	18	153	58	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	280	346	34	84	262	111	137	276	214	18	153	58	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	280	346	34	84	262	111	137	276	214	18	153	58	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	280	346	34	84	262	111	137	276	214	18	153	58	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.54	1.00	0.85	0.48	1.00	0.85	0.53	0.89	0.89	0.34	1.00	0.85	
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.13	0.87	1.00	1.00	1.00	
Final Sat.:	1021	1900	1615	913	1900	1615	1004	1900	1473	642	1900	1615	
Capacity Analysis Module:													
Vol/Sat:	0.27	0.18	0.02	0.09	0.14	0.07	0.14	0.15	0.15	0.03	0.08	0.04	
Crit Moves:	****							****					
Green/Cycle:	0.65	0.65	0.65	0.65	0.65	0.65	0.35	0.35	0.35	0.35	0.35	0.35	
Volume/Cap:	0.42	0.28	0.03	0.14	0.21	0.11	0.39	0.42	0.42	0.08	0.23	0.10	
Delay/Veh:	8.7	7.5	6.1	6.7	7.0	6.5	25.5	25.2	25.2	22.1	23.4	22.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	8.7	7.5	6.1	6.7	7.0	6.5	25.5	25.2	25.2	22.1	23.4	22.2	
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C	
HCM2kAvgQ:	4	4	0	1	3	1	4	6	6	0	3	1	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #307 Figueroa St (N/S) & Ave 52 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	0	Average Delay (sec/veh):	23.9
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Figueroa St						Ave 52					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	105	635	57	100	574	63	75	198	78	88	343	134
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	635	57	100	574	63	75	198	78	88	343	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	105	635	57	100	574	63	75	198	78	88	343	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	635	57	100	574	63	75	198	78	88	343	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	635	57	100	574	63	75	198	78	88	343	134
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.80	0.80	0.80	0.86	0.86	0.86
Lanes:	1.00	1.84	0.16	1.00	1.80	0.20	0.21	0.56	0.22	0.16	0.61	0.24
Final Sat.:	1805	3272	294	1805	3205	352	327	863	340	256	997	389
Capacity Analysis Module:												
Vol/Sat:	0.06	0.19	0.19	0.06	0.18	0.18	0.23	0.23	0.23	0.34	0.34	0.34
Crit Moves:		****		****							****	
Green/Cycle:	0.10	0.33	0.33	0.32	0.32	0.32	0.58	0.58	0.58	0.58	0.58	0.58
Volume/Cap:	0.56	0.59	0.59	0.41	0.56	0.56	0.40	0.40	0.40	0.59	0.59	0.59
Delay/Veh:	46.7	28.9	28.9	27.4	29.1	29.1	11.8	11.8	11.8	14.5	14.5	14.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.7	28.9	28.9	27.4	29.1	29.1	11.8	11.8	11.8	14.5	14.5	14.5
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B
HCM2kAvgQ:	4	10	10	3	9	9	6	6	6	11	11	11

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #308 Figueroa St (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.670
Loss Time (sec):	0	Average Delay (sec/veh):	15.6
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Figueroa St							Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 0	0	0	1! 0	0
Volume Module:													
Base Vol:	10	672	155	187	526	1	7	7	0	147	40	260	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10	672	155	187	526	1	7	7	0	147	40	260	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	10	672	155	187	526	1	7	7	0	147	40	260	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	10	672	155	187	526	1	7	7	0	147	40	260	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	10	672	155	187	526	1	7	7	0	147	40	260	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.39	0.92	0.92	0.26	0.95	0.95	0.88	0.88	1.00	0.82	0.82	0.82	
Lanes:	1.00	1.63	0.37	1.00	2.00	0.00	0.50	0.50	0.00	0.33	0.09	0.58	
Final Sat.:	743	2851	658	487	3602	7	832	832	0	514	140	909	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.24	0.24	0.38	0.15	0.15	0.01	0.01	0.00	0.29	0.29	0.29	
Crit Moves:				****							****		
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.43	0.43	0.00	0.43	0.43	0.43	
Volume/Cap:	0.02	0.41	0.41	0.67	0.25	0.25	0.02	0.02	0.00	0.67	0.67	0.67	
Delay/Veh:	9.3	12.1	12.1	21.0	10.7	10.7	16.6	16.6	0.0	25.7	25.7	25.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	9.3	12.1	12.1	21.0	10.7	10.7	16.6	16.6	0.0	25.7	25.7	25.7	
LOS by Move:	A	B	B	C	B	B	B	B	A	C	C	C	
HCM2kAvgQ:	0	7	7	5	4	4	0	0	0	12	12	12	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.314
Loss Time (sec):	0	Average Delay (sec/veh):	9.7
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Griffin Av						Ave 43					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 0	1 0		1 0 0	1 0		0 0 1!	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	155	93	42	30	124	90	19	59	40	12	82	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	93	42	30	124	90	19	59	40	12	82	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	155	93	42	30	124	90	19	59	40	12	82	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	155	93	42	30	124	90	19	59	40	12	82	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	155	93	42	30	124	90	19	59	40	12	82	11
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.69	0.31	1.00	0.58	0.42	0.16	0.50	0.34	0.11	0.78	0.10
Final Sat.:	600	469	212	590	395	286	104	323	219	72	491	66
Capacity Analysis Module:												
Vol/Sat:	0.26	0.20	0.20	0.05	0.31	0.31	0.18	0.18	0.18	0.17	0.17	0.17
Crit Moves:	****					****	****				****	
Delay/Veh:	10.5	9.0	9.0	8.9	10.0	10.0	9.2	9.2	9.2	9.3	9.3	9.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.5	9.0	9.0	8.9	10.0	10.0	9.2	9.2	9.2	9.3	9.3	9.3
LOS by Move:	B	A	A	A	B	B	A	A	A	A	A	A
ApproachDel:	9.8			9.9			9.2			9.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.8			9.9			9.2			9.3		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.3	0.2	0.2	0.0	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #310 Figueroa St (N/S) & Marmion Wy/Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.441
Loss Time (sec):	0	Average Delay (sec/veh):	23.0
Optimal Cycle:	33	Level Of Service:	C

Street Name:	Figueroa St						Marmion Wy/Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	187	588	85	187	551	42	46	101	198	89	149	238
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	588	85	187	551	42	46	101	198	89	149	238
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	588	85	187	551	42	46	101	198	89	149	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	588	85	187	551	42	46	101	198	89	149	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	588	85	187	551	42	46	101	198	89	149	238
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.54	1.00	0.85	0.61	1.00	0.85
Lanes:	1.00	1.75	0.25	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3094	447	1805	3319	253	1023	1900	1615	1154	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.19	0.19	0.10	0.17	0.17	0.04	0.05	0.12	0.08	0.08	0.15
Crit Moves:		****		****								****
Green/Cycle:	0.26	0.43	0.43	0.41	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.40	0.44	0.44	0.37	0.40	0.40	0.13	0.16	0.37	0.23	0.23	0.44
Delay/Veh:	31.5	20.2	20.2	21.0	21.1	21.1	23.4	23.5	25.7	24.3	24.2	26.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.5	20.2	20.2	21.0	21.1	21.1	23.4	23.5	25.7	24.3	24.2	26.6
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	8	8	4	7	7	1	2	5	2	3	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #311 Figueroa St (N/S) & Cypress Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.319
Loss Time (sec):	0	Average Delay (sec/veh):	3.5
Optimal Cycle:	21	Level Of Service:	A

Street Name:	Figueroa St						Cypress Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	1	0 2	1 0
Volume Module:												
Base Vol:	136	873	28	43	568	413	33	7	10	29	36	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	873	28	43	568	413	33	7	10	29	36	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	873	28	43	568	413	33	7	10	29	36	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	873	28	43	568	413	33	7	10	29	36	37
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	873	28	43	568	413	33	7	10	29	36	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.28	0.95	0.95	0.30	0.89	0.89	0.61	0.91	0.91	0.67	0.84	0.84
Lanes:	1.00	1.94	0.06	1.00	1.16	0.84	1.00	0.41	0.59	1.00	2.00	1.00
Final Sat.:	534	3481	112	578	1958	1424	1160	713	1019	1277	3195	1598
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.25	0.07	0.29	0.29	0.03	0.01	0.01	0.02	0.01	0.02
Crit Moves:					****		****					
Green/Cycle:	0.91	0.91	0.91	0.91	0.91	0.91	0.09	0.09	0.09	0.09	0.09	0.09
Volume/Cap:	0.28	0.28	0.28	0.08	0.32	0.32	0.32	0.11	0.11	0.25	0.13	0.26
Delay/Veh:	0.9	0.6	0.6	0.5	0.6	0.6	44.5	42.2	42.2	43.6	42.0	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.9	0.6	0.6	0.5	0.6	0.6	44.5	42.2	42.2	43.6	42.0	42.9
LOS by Move:	A	A	A	A	A	A	D	D	D	D	D	D
HCM2kAvgQ:	1	2	2	0	2	2	1	1	1	1	1	1

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #312 Figueroa St (N/S) & Ave 26 (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.709
Loss Time (sec):	0	Average Delay (sec/veh):	30.8
Optimal Cycle:	98	Level Of Service:	C

Street Name:	Figueroa St							Ave 26					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	
Volume Module:													
Base Vol:	391	521	214	187	555	78	79	651	190	283	909	134	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	391	521	214	187	555	78	79	651	190	283	909	134	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	391	521	214	187	555	78	79	651	190	283	909	134	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	391	521	214	187	555	78	79	651	190	283	909	134	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	391	521	214	187	555	78	79	651	190	283	909	134	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.92	0.92	0.95	0.93	0.93	
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.55	0.45	1.00	1.74	0.26	
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	2700	788	1805	3085	455	
Capacity Analysis Module:													
Vol/Sat:	0.22	0.14	0.13	0.10	0.15	0.05	0.04	0.24	0.24	0.16	0.29	0.29	
Crit Moves:	****				****		****				****		
Green/Cycle:	0.48	0.28	0.28	0.40	0.20	0.20	0.31	0.31	0.31	0.20	0.45	0.45	
Volume/Cap:	0.67	0.51	0.47	0.38	0.77	0.24	0.40	0.77	0.77	0.77	0.65	0.65	
Delay/Veh:	22.0	30.7	30.6	20.6	42.8	34.0	26.0	34.4	34.4	47.0	22.4	22.4	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	22.0	30.7	30.6	20.6	42.8	34.0	26.0	34.4	34.4	47.0	22.4	22.4	
LOS by Move:	C	C	C	C	D	C	C	C	C	D	C	C	
HCM2kAvgQ:	10	7	6	4	10	2	2	14	14	10	14	14	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #313 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.464
Loss Time (sec): 0 Average Delay (sec/veh): 16.1
Optimal Cycle: 35 Level Of Service: B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	0	1	0	0 0 1	1	0	2 0 0	0	0 1 1 0
Volume Module:												
Base Vol:	297	15	15	20	0	141	57	665	0	0	978	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	297	15	15	20	0	141	57	665	0	0	978	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	297	15	15	20	0	141	57	665	0	0	978	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	15	15	20	0	141	57	665	0	0	978	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	15	15	20	0	141	57	665	0	0	978	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	1.00	0.85	0.21	0.95	1.00	1.00	0.95	0.95
Lanes:	1.83	0.08	0.08	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	3307	152	152	1805	0	1615	395	3610	0	0	3523	76
Capacity Analysis Module:												
Vol/Sat:	0.09	0.10	0.10	0.01	0.00	0.09	0.14	0.18	0.00	0.00	0.28	0.28
Crit Moves:		****				****					****	
Green/Cycle:	0.21	0.21	0.21	0.19	0.00	0.19	0.60	0.60	0.00	0.00	0.60	0.60
Volume/Cap:	0.42	0.46	0.46	0.06	0.00	0.46	0.24	0.31	0.00	0.00	0.46	0.46
Delay/Veh:	34.4	34.8	34.8	33.4	0.0	37.2	10.0	10.0	0.0	0.0	11.3	11.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	34.8	34.8	33.4	0.0	37.2	10.0	10.0	0.0	0.0	11.3	11.3
LOS by Move:	C	C	C	C	A	D	A	A	A	A	B	B
HCM2kAvgQ:	5	5	5	1	0	4	1	5	0	0	9	9

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #314 Griffin Av (N/S) & Broadway (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.526
Loss Time (sec): 0 Average Delay (sec/veh): 15.0
Optimal Cycle: 30 Level Of Service: B

Street Name:	Griffin Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	211	439	95	109	216	103	113	1366	145	41	852	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	211	439	95	109	216	103	113	1366	145	41	852	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	439	95	109	216	103	113	1366	145	41	852	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	439	95	109	216	103	113	1366	145	41	852	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	211	439	95	109	216	103	113	1366	145	41	852	96
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.48	0.92	0.92	0.34	0.90	0.90	0.24	0.90	0.90	0.10	0.90	0.90
Lanes:	1.00	1.64	0.36	1.00	1.35	0.65	1.00	2.71	0.29	1.00	2.70	0.30
Final Sat.:	914	2889	625	652	2326	1109	448	4622	491	199	4591	517
Capacity Analysis Module:												
Vol/Sat:	0.23	0.15	0.15	0.17	0.09	0.09	0.25	0.30	0.30	0.21	0.19	0.19
Crit Moves:	****							****				
Green/Cycle:	0.44	0.44	0.44	0.44	0.44	0.44	0.56	0.56	0.56	0.56	0.56	0.56
Volume/Cap:	0.53	0.35	0.35	0.38	0.21	0.21	0.45	0.53	0.53	0.37	0.33	0.33
Delay/Veh:	21.8	18.7	18.7	19.8	17.5	17.5	14.1	13.8	13.8	14.1	11.9	11.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.8	18.7	18.7	19.8	17.5	17.5	14.1	13.8	13.8	14.1	11.9	11.9
LOS by Move:	C	B	B	B	B	B	B	B	B	B	B	B
HCM2kAvgQ:	5	6	6	3	3	3	3	11	11	1	6	6

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #315 I-5 NB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	25	Level Of Service:	B

Street Name:	I-5 NB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0 1	0	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	18	449	85	0	0	0	289	730	0	0	199	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	449	85	0	0	0	289	730	0	0	199	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	449	85	0	0	0	289	730	0	0	199	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	449	85	0	0	0	289	730	0	0	199	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	18	449	85	0	0	0	289	730	0	0	199	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	1.00	1.00	1.00	0.55	0.95	1.00	1.00	0.91	0.91
Lanes:	0.07	1.63	0.31	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.49	0.51
Final Sat.:	114	2855	540	0	0	0	1049	3610	0	0	2577	894
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.00	0.00	0.00	0.28	0.20	0.00	0.00	0.08	0.08
Crit Moves:		****					****					
Green/Cycle:	0.36	0.36	0.36	0.00	0.00	0.00	0.64	0.64	0.00	0.00	0.64	0.64
Volume/Cap:	0.43	0.43	0.43	0.00	0.00	0.00	0.43	0.32	0.00	0.00	0.12	0.12
Delay/Veh:	24.3	24.3	24.3	0.0	0.0	0.0	9.6	8.4	0.0	0.0	7.2	7.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.3	24.3	24.3	0.0	0.0	0.0	9.6	8.4	0.0	0.0	7.2	7.2
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	7	7	7	0	0	0	5	5	0	0	2	2

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #316 I-5 SB ramps (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.387
Loss Time (sec):	0	Average Delay (sec/veh):	14.4
Optimal Cycle:	23	Level Of Service:	B

Street Name:	I-5 SB ramps						Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	1 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	277	195	157	0	732	42	23	202	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	277	195	157	0	732	42	23	202	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	277	195	157	0	732	42	23	202	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	277	195	157	0	732	42	23	202	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	277	195	157	0	732	42	23	202	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.94	0.94	0.27	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.89	0.11	1.00	2.00	0.00
Final Sat.:	0	0	0	1623	1623	1623	0	3386	194	515	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.12	0.10	0.00	0.22	0.22	0.04	0.06	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.44	0.44	0.44	0.00	0.56	0.56	0.56	0.56	0.00
Volume/Cap:	0.00	0.00	0.00	0.39	0.27	0.22	0.00	0.39	0.39	0.08	0.10	0.00
Delay/Veh:	0.0	0.0	0.0	19.0	17.8	17.3	0.0	12.5	12.5	10.3	10.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.0	17.8	17.3	0.0	12.5	12.5	10.3	10.3	0.0
LOS by Move:	A	A	A	B	B	B	A	B	B	B	B	A
HCM2kAvgQ:	0	0	0	6	4	3	0	7	7	0	1	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Average Delay (sec/veh): 639.6 Worst Case Level Of Service: F[1371.5]

Street Name:	Ave 19									San Fernando Rd								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	1	0	2	0	0	1	1	0	0	0	0	0	1!	0	1
Volume Module:																				
Base Vol:	0	0	0			315	170			0	915	16			0	0	0			593
Growth Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
Initial Bse:	0	0	0			315	170			0	915	16			0	0	0			593
User Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Adj:	1.00	1.00	1.00			1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00
PHF Volume:	0	0	0			315	170			0	915	16			0	0	0			593
Reduct Vol:	0	0	0			0	0			0	0	0			0	0	0			0
FinalVolume:	0	0	0			315	170			0	915	16			0	0	0			593
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1	6.5	xxxxx			7.1	6.5			6.2
FollowUpTim:	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5	4.0	xxxxx			3.5	4.0			3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			0	xxxx	xxxxx			800	800	xxxxx			723	800			0
Potent Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			306	320	xxxxx			344	320			1091
Move Cap.:	xxxx	xxxx	xxxxx			1636	xxxx	xxxxx			119	259	xxxxx			280	259			1091
Volume/Cap:	xxxx	xxxx	xxxx			0.19	xxxx	xxxx			7.70	0.06	xxxx			0.00	0.00			0.54
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx			0.7	xxxx	xxxxx			46.1	xxxx	xxxxx			xxxx	xxxx			1.1
Control Del:	xxxxx	xxxx	xxxxx			7.7	xxxx	xxxxx			1358	xxxx	xxxxx			xxxxx	xxxx			9.5
LOS by Move:	*	*	*			A	*	*			F	*	*			*	*			A
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			121	xxxx	xxxxx			xxxx	1091	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			25.5	xxxx	xxxxx			xxxxx	1.1	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			1384	xxxx	xxxxx			xxxxx	9.5	xxxxx		
Shared LOS:	*	*	*			*	*	*			F	*	*			*	A	*		
ApproachDel:	xxxxxx					xxxxxx					1371.5						9.5			
ApproachLOS:	*					*					F						A			

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #318 Figueroa St (N/S) & San Fernando Rd (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	0	Average Delay (sec/veh):	21.6
Optimal Cycle:	64	Level Of Service:	C

Street Name:	Figueroa St						San Fernando Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	58	417	267	172	356	23	28	231	66	414	485	293
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	417	267	172	356	23	28	231	66	414	485	293
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	58	417	267	172	356	23	28	231	66	414	485	293
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	417	267	172	356	23	28	231	66	414	485	293
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	58	417	267	172	356	23	28	231	66	414	485	293
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	1.00	0.85	0.28	0.92	0.92	0.53	0.90	0.90
Lanes:	1.00	1.22	0.78	1.00	1.00	1.00	1.00	1.56	0.44	1.00	1.25	0.75
Final Sat.:	1805	2072	1327	1805	1900	1615	526	2714	776	1001	2123	1283
Capacity Analysis Module:												
Vol/Sat:	0.03	0.20	0.20	0.10	0.19	0.01	0.05	0.09	0.09	0.41	0.23	0.23
Crit Moves:		****		****						****		
Green/Cycle:	0.06	0.28	0.28	0.36	0.36	0.36	0.58	0.58	0.58	0.58	0.58	0.58
Volume/Cap:	0.53	0.71	0.71	0.54	0.53	0.04	0.09	0.15	0.15	0.71	0.39	0.39
Delay/Veh:	50.2	34.6	34.6	26.4	26.3	21.0	9.3	9.6	9.6	18.9	11.4	11.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	34.6	34.6	26.4	26.3	21.0	9.3	9.6	9.6	18.9	11.4	11.4
LOS by Move:	D	C	C	C	C	C	A	A	A	B	B	B
HCM2kAvgQ:	3	11	11	5	9	0	0	2	2	10	7	7

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #319 San Fernando Rd (N/S) & Pasadena Av (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.671
Loss Time (sec):	0	Average Delay (sec/veh):	80.4
Optimal Cycle:	180	Level Of Service:	F

Street Name:	San Fernando Rd							Pasadena Av					
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0
Volume Module:													
Base Vol:	11	1019	124	141	456	79	410	521	17	66	133	164	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	11	1019	124	141	456	79	410	521	17	66	133	164	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	11	1019	124	141	456	79	410	521	17	66	133	164	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	11	1019	124	141	456	79	410	521	17	66	133	164	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	11	1019	124	141	456	79	410	521	17	66	133	164	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.42	0.98	0.98	0.07	1.00	0.85	0.39	0.95	0.95	0.65	0.65	0.65	
Lanes:	1.00	0.89	0.11	1.00	1.00	1.00	1.00	1.94	0.06	0.36	0.73	0.90	
Final Sat.:	807	1666	203	127	1900	1615	734	3479	114	448	903	1113	
Capacity Analysis Module:													
Vol/Sat:	0.01	0.61	0.61	1.11	0.24	0.05	0.56	0.15	0.15	0.15	0.15	0.15	
Crit Moves:				****			****						
Green/Cycle:	0.67	0.67	0.67	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33	0.33	
Volume/Cap:	0.02	0.92	0.92	1.67	0.36	0.07	1.67	0.45	0.45	0.44	0.44	0.44	
Delay/Veh:	5.7	25.4	25.4	364.7	7.5	5.9	352.5	26.3	26.3	26.3	26.3	26.3	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	5.7	25.4	25.4	364.7	7.5	5.9	352.5	26.3	26.3	26.3	26.3	26.3	
LOS by Move:	A	C	C	F	A	A	F	C	C	C	C	C	
HCM2kAvgQ:	0	35	35	13	6	1	34	7	7	5	5	5	

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #320 Daly St (N/S) & Main St (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.705
Loss Time (sec):	0	Average Delay (sec/veh):	18.9
Optimal Cycle:	49	Level Of Service:	B

Street Name:	Daly St						Main St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	234	580	61	171	321	187	34	1035	140	74	584	133
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	234	580	61	171	321	187	34	1035	140	74	584	133
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	234	580	61	171	321	187	34	1035	140	74	584	133
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	234	580	61	171	321	187	34	1035	140	74	584	133
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	234	580	61	171	321	187	34	1035	140	74	584	133
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.37	0.94	0.94	0.30	0.90	0.90	0.85	0.85	0.85	0.62	0.62	0.62
Lanes:	1.00	1.81	0.19	1.00	1.26	0.74	0.06	1.71	0.23	0.19	1.48	0.34
Final Sat.:	704	3220	339	566	2155	1256	91	2777	376	222	1750	399
Capacity Analysis Module:												
Vol/Sat:	0.33	0.18	0.18	0.30	0.15	0.15	0.37	0.37	0.37	0.33	0.33	0.33
Crit Moves:	****							****				
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.70	0.38	0.38	0.64	0.32	0.32	0.70	0.70	0.70	0.63	0.63	0.63
Delay/Veh:	27.7	17.2	17.2	25.2	16.5	16.5	19.1	19.1	19.1	17.7	17.7	17.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	17.2	17.2	25.2	16.5	16.5	19.1	19.1	19.1	17.7	17.7	17.7
LOS by Move:	C	B	B	C	B	B	B	B	B	B	B	B
HCM2kAvgQ:	7	7	7	5	5	5	16	16	16	10	10	10

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Average Delay (sec/veh): 10.7 Worst Case Level Of Service: F[127.4]

Street Name:	Ave 21									Main St								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	0	0	8	82	4	114	0	1157	8	11	1021	0								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	0	0	8	82	4	114	0	1157	8	11	1021	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	0	0	8	82	4	114	0	1157	8	11	1021	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	0	0	8	82	4	114	0	1157	8	11	1021	0								
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx								
FollowUpTim:	xxxxx	xxxx	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	583	1622	2208	511	xxxx	xxxx	xxxxx	1165	xxxx	xxxxx								
Potent Cap.:	xxxx	xxxx	461	70	45	513	xxxx	xxxx	xxxxx	607	xxxx	xxxxx								
Move Cap.:	xxxx	xxxx	461	68	44	513	xxxx	xxxx	xxxxx	607	xxxx	xxxxx								
Volume/Cap:	xxxx	xxxx	0.02	1.21	0.09	0.22	xxxx	xxxx	xxxx	0.02	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.1	6.5	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Control Del:	xxxxx	xxxx	12.9	283.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.0	xxxx	xxxxx								
LOS by Move:	*	*	B	F	*	*	*	*	*	B	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	377	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	1.3	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	18.8	xxxxx	xxxx	xxxxx	11.0	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	C	*	*	*	B	*	*								
ApproachDel:	12.9			127.4			xxxxxx			xxxxxx										
ApproachLOS:	B			F			*			*										

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #322 Pasadena Av (N/S) & Broadway (E/W)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.448
Loss Time (sec):	0	Average Delay (sec/veh):	8.3
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Pasadena Av						Broadway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 0	0 0	2	1 1	1 0	0	0 0	2 0	1
Volume Module:												
Base Vol:	0	0	0	0	0	503	1106	689	0	0	384	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	503	1106	689	0	0	384	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	503	1106	689	0	0	384	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	503	1106	689	0	0	384	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	503	1106	689	0	0	384	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.75	0.92	0.92	1.00	1.00	0.95	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	2.00	1.85	1.15	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	2842	3237	2016	0	0	3610	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.34	0.34	0.00	0.00	0.11	0.00
Crit Moves:					****			****			****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.24	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.23	0.45	0.45	0.00	0.00	0.45	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	3.5	4.4	4.4	0.0	0.0	32.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	3.5	4.4	4.4	0.0	0.0	32.9	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	C	A
HCM2kAvgQ:	0	0	0	0	0	3	7	7	0	0	6	0

Note: Queue reported is the number of cars per lane.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #323 Hill St (N/S) & College St (E/W)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 0 Average Delay (sec/veh): 13.0
Optimal Cycle: 54 Level Of Service: B

Street Name:	Hill St						College St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	39	1486	91	116	1260	68	119	292	38	35	195	188
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	1486	91	116	1260	68	119	292	38	35	195	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	39	1486	91	116	1260	68	119	292	38	35	195	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	1486	91	116	1260	68	119	292	38	35	195	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	1486	91	116	1260	68	119	292	38	35	195	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.16	0.94	0.94	0.11	0.94	0.94	0.63	0.63	0.63	0.76	0.76	0.76
Lanes:	1.00	1.88	0.12	1.00	1.90	0.10	0.53	1.30	0.17	0.17	0.93	0.90
Final Sat.:	305	3372	207	214	3399	183	630	1546	201	243	1353	1304
Capacity Analysis Module:												
Vol/Sat:	0.13	0.44	0.44	0.54	0.37	0.37	0.19	0.19	0.19	0.14	0.14	0.14
Crit Moves:				****				****				
Green/Cycle:	0.74	0.74	0.74	0.74	0.74	0.74	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.17	0.59	0.59	0.73	0.50	0.50	0.73	0.73	0.73	0.56	0.56	0.56
Delay/Veh:	4.2	6.3	6.3	23.2	5.5	5.5	38.4	38.4	38.4	33.1	33.1	33.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.2	6.3	6.3	23.2	5.5	5.5	38.4	38.4	38.4	33.1	33.1	33.1
LOS by Move:	A	A	A	C	A	A	D	D	D	C	C	C
HCM2kAvgQ:	1	12	12	4	9	9	8	8	8	6	6	6

Note: Queue reported is the number of cars per lane.

APPENDIX C

SIGNAL WARRANT ANALYSIS

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 7 Bridewell St (N/S) & Hough St (E/W)	No / No	??? / ???
# 8 Bridewell St (N/S) & ASP SB Exit 30	No / No	??? / ???
# 9 ASP NB Exit 30A (N/S) & Marmion Wy	No / No	??? / ???
# 11 La Riba Wy (N/S) & Ave 66 (E/W)	No	???
# 12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)	No / No	??? / ???
# 13 Arroyo Dr (N/S) & ASP SB Exit 29/Sh	No / No	??? / ???
# 14 ASP NB Exit 28B (N/S) & Via Marisol	No / No	??? / ???
# 15 Ave 57 (N/S) & ASP SB Exit 28B/Carl	No / No	??? / ???
# 16 Glen Ellen Pl (N/S) & ASP SB Exit 2	No	???
# 17 ASP NB Exit 28A (N/S) & Ave 52 (E/W	No	???
# 18 Carlota Bl/ASP SB Exit 27 (N/S) & A	No	???
# 19 Homer St (N/S) & ASP NB Exit 27/Ave	No	???
# 20 ASP SB Exit 26A (N/S) & Ave 26 (E/W	Yes / Yes	??? / ???
# 21 ASP NB on-ramp (N/S) & Ave 26 (E/W)	No / No	??? / ???
# 24 ASP NB on-ramp (N/S) & San Fernando	No / No	??? / ???
# 26 ASP SB Exit 25 (N/S) & Casanova St	No / No	??? / ???
# 27 Amador Pl (N/S) & Amador St (E/W)	No / No	??? / ???
# 28 Stadium Wy (N/S) & ASP SB Exit 24D	No	???
# 29 Stadium Wy (N/S) & ASP NB Exit 24B	No	???
#309 Griffin Av (N/S) & Ave 43 (E/W)	No	???
#317 Ave 19 (N/S) & San Fernando Rd (E/W	No / No	??? / ???
#321 Ave 21 (N/S) & Main St (E/W)	Yes / Yes	??? / ???

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0 1	0 0	0		0 0	0 1	0		0 0	1! 0	0		0 0	0 0	0	
Initial Vol:	4	3	0		0	32	33		6	0	6		0	0	0	
ApproachDel:	xxxxxx				xxxxxx				8.7				xxxxxx			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=12]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=84]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	4	3	0	0	32	33	6	0	6	0	0	0

Major Street Volume: 72
Minor Approach Volume: 12
Minor Approach Volume Threshold: 921

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	1 0 0	1	0	0 1 0	0	0
Initial Vol:	15	1	17	36	0	10	2	243	6	2	43	0
ApproachDel:	10.3			10.6			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=375]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=375]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	15	1	17	36	0	10	2	243	6	2	43	0

Major Street Volume: 296
Minor Approach Volume: 46
Minor Approach Volume Threshold: 704

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	446		0	87	0		0	0	0		34	0	0		124	0
ApproachDel:	xxxxxx				xxxxxx				25.9				45.8			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=34]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=691]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=124]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=691]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	446		0		87	0		0		0	0		34		0	0		124		0

Major Street Volume: 533
Minor Approach Volume: 124
Minor Approach Volume Threshold: 502

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	22	0	37	0	0	0	0	681	14

Major Street Volume: 695
Minor Approach Volume: 59
Minor Approach Volume Threshold: 407

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	12	0	55	51	550	0	0	418	184
ApproachDel:	xxxxxx			14.8			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=67]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1270]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	12	0	55	51	550	0	0	418	184

Major Street Volume: 1203
Minor Approach Volume: 67
Minor Approach Volume Threshold: 221

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	12	1	2	1	1	4	5	237	8	3	64	1
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=339]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=339]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	12	1	2	1	1	4	5	237	8	3	64	1

Major Street Volume: 318
Minor Approach Volume: 15
Minor Approach Volume Threshold: 525

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	65	0	185	0	0	0	53	240	0	0	447	62
ApproachDel:	14.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=250]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1052]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	65	0	185	0	0	0	53	240	0	0	447	62

Major Street Volume: 802
Minor Approach Volume: 250
Minor Approach Volume Threshold: 361

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0	0 0	0	0 0	0 1	0	1 0	0 0	0	0 0	0 0	1
Initial Vol:	0	0	0	0	357	8	1	0	0	0	0	60
ApproachDel:	xxxxxx			xxxxxx			11.4			8.5		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=1]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=426]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=426]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	357	8	1	0	0	0	0	60

Major Street Volume: 365
Minor Approach Volume: 60
Minor Approach Volume Threshold: 488

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0 1			0 1 0 1 0		
Initial Vol:	78	1	49	104	28	83	10	305	312	3	337	11

Major Street Volume: 978
Minor Approach Volume: 215
Minor Approach Volume Threshold: 293

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	271	2	4	0	0	0	203	205	0	0	81	44

Major Street Volume: 533
Minor Approach Volume: 277
Minor Approach Volume Threshold: 387

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	8	25	44	82	63	114	179	241	11	41	240	108

Major Street Volume: 820
Minor Approach Volume: 259
Minor Approach Volume Threshold: 272

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	133	3	73	9	7	24	7	208	148	60	263	3

Major Street Volume: 689
Minor Approach Volume: 209
Minor Approach Volume Threshold: 410

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	236	0	105	0	1423	0	0	819	0
ApproachDel:	xxxxxx			426.4			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=40.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=341]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2583]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	236	0	105	0	1423	0	0	819	0

Major Street Volume: 2242
Minor Approach Volume: 341
Minor Approach Volume Threshold: 27 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0		0 0 0	0 0		0 1 2	0 0		0 0 1	1 0	
Initial Vol:	0	0	0	0	0	0	81	1078	0	0	865	80
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	81	1078	0	0	865	80

Major Street Volume: 2104
Minor Approach Volume: 0
Minor Approach Volume Threshold: 29 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	77	664	0	0	903	74
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	77	664	0	0	903	74

Major Street Volume: 1718
Minor Approach Volume: 0
Minor Approach Volume Threshold: 98 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0	25		8		4	109		0		0	0		0		21		0		6
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					9.2				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=27]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=173]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	25	8	4	109	0	0	0	0	21	0	6

Major Street Volume: 146
Minor Approach Volume: 27
Minor Approach Volume Threshold: 733

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	0	1	0	0	1!	0	0
Initial Vol:	0	0	0		8	0	10		20	145	229		77	86	95	
ApproachDel:	xxxxxx				10.9				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=670]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	8	0	10	20	145	229	77	86	95

Major Street Volume: 652
Minor Approach Volume: 18
Minor Approach Volume Threshold: 432

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1
Initial Vol:	0	201		0		0	299		0		0		0		0	207		1		25

Major Street Volume: 500
Minor Approach Volume: 233
Minor Approach Volume Threshold: 672

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 110	162		369 310	0		0 0	1		54 1	93	

Major Street Volume: 951
Minor Approach Volume: 148
Minor Approach Volume Threshold: 396

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	105	62	17	43	281	111	29	96	96	25	126	25

Major Street Volume: 619
Minor Approach Volume: 221
Minor Approach Volume Threshold: 450

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 0 0	1 0 2 0 0	1 1 0 0 0	0 0 1! 0 1
Initial Vol:	0 0 0	414 1115 0	80 2 0	1 0 150
ApproachDel:	xxxxxx	xxxxxx	388.6	8.8

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=8.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=82]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1762]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=151]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1762]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	414	1115	0	80	2	0	1	0	150

Major Street Volume: 1529
Minor Approach Volume: 151
Minor Approach Volume Threshold: 191

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			1 0 0 1 0			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	2	127	1	135	0	508	0	2	1585	0
ApproachDel:	9.8			468.3			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2360]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=34.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=263]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2360]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			2	127		1		135	0		508		0	2		1585		0

Major Street Volume: 2095
Minor Approach Volume: 263
Minor Approach Volume Threshold: 56 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 7 Bridewell St (N/S) & Hough St (E/W)	No / No	??? / ???
# 8 Bridewell St (N/S) & ASP SB Exit 30	No / No	??? / ???
# 9 ASP NB Exit 30A (N/S) & Marmion Wy	No / No	??? / ???
# 11 La Riba Wy (N/S) & Ave 66 (E/W)	No	???
# 12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)	No / No	??? / ???
# 13 Arroyo Dr (N/S) & ASP SB Exit 29/Sh	No / No	??? / ???
# 14 ASP NB Exit 28B (N/S) & Via Marisol	No / No	??? / ???
# 15 Ave 57 (N/S) & ASP SB Exit 28B/Carl	No / No	??? / ???
# 16 Glen Ellen Pl (N/S) & ASP SB Exit 2	No	???
# 17 ASP NB Exit 28A (N/S) & Ave 52 (E/W	No	???
# 18 Carlota Bl/ASP SB Exit 27 (N/S) & A	No	???
# 19 Homer St (N/S) & ASP NB Exit 27/Ave	No	???
# 20 ASP SB Exit 26A (N/S) & Ave 26 (E/W	Yes / Yes	??? / ???
# 21 ASP NB on-ramp (N/S) & Ave 26 (E/W)	No / No	??? / ???
# 24 ASP NB on-ramp (N/S) & San Fernando	No / No	??? / ???
# 26 ASP SB Exit 25 (N/S) & Casanova St	No / No	??? / ???
# 27 Amador Pl (N/S) & Amador St (E/W)	No / No	??? / ???
# 28 Stadium Wy (N/S) & ASP SB Exit 24D	No	???
# 29 Stadium Wy (N/S) & ASP NB Exit 24B	No	???
#309 Griffin Av (N/S) & Ave 43 (E/W)	No	???
#317 Ave 19 (N/S) & San Fernando Rd (E/W	Yes / No	??? / ???
#321 Ave 21 (N/S) & Main St (E/W)	Yes / Yes	??? / ???

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0
Initial Vol:	1	0	0		0	34	40		5	0	9		0	0	0	
ApproachDel:	xxxxxx				xxxxxx				8.7				xxxxxx			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=89]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Initial Vol:	1		0		0	0		34		40	5		0		9	0		0		0

Major Street Volume: 75
Minor Approach Volume: 14
Minor Approach Volume Threshold: 910

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	1	1	21	2	6	3	116	16	6	171	6
ApproachDel:	10.7			10.6			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=11]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=358]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=358]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	1	1	21	2	6	3	116	16	6	171	6

Major Street Volume: 318
Minor Approach Volume: 29
Minor Approach Volume Threshold: 680

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	673	0	301	0	0	0	0	24	0	0	96	0
ApproachDel:	xxxxxx			xxxxxx			59.0			199.9		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=24]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1094]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.3]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=96]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1094]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	673		0		301	0		0		0	0		24		0	0		96		0

Major Street Volume: 974
Minor Approach Volume: 96
Minor Approach Volume Threshold: 294

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Initial Vol:	0		0		0	23		0		16	0		0		0	0		453		52

Major Street Volume: 505
Minor Approach Volume: 39
Minor Approach Volume Threshold: 507

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	37	0	87	51	438	0	0	388	129
ApproachDel:	xxxxxx			16.4			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=124]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1130]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	37	0	87	51	438	0	0	388	129

Major Street Volume: 1006
Minor Approach Volume: 124
Minor Approach Volume Threshold: 283

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	10	1	2	4	2	11	13	144	15	6	136	2
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=346]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=346]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	10	1	2	4	2	11	13	144	15	6	136	2

Major Street Volume: 316
Minor Approach Volume: 17
Minor Approach Volume Threshold: 527

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	128	0	317	0	0	0	40	235	0	0	279	49
ApproachDel:	18.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=445]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1048]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	128	0	317	0	0	0	40	235	0	0	279	49

Major Street Volume: 603
Minor Approach Volume: 445
Minor Approach Volume Threshold: 459

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Initial Vol:	0		0		0	0		123		4	4		0		0	0		0		244
ApproachDel:	xxxxxx					xxxxxx					10.5					9.2				

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=4]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=375]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=244]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=375]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	123	4	4	0	0	0	0	244

Major Street Volume: 127
Minor Approach Volume: 244
Minor Approach Volume Threshold: 770

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 1 0 0	1		0 1 0 1	0	
Initial Vol:	139	10	38	46	11	148	12	206	306	9	531	17

Major Street Volume: 1081
Minor Approach Volume: 205
Minor Approach Volume Threshold: 258

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 0 0	0		0 1 0 0	0		0 0 0 1	0	
Initial Vol:	449	2	7	0	0	0	98	148	0	0	113	52

Major Street Volume: 458
Minor Approach Volume: 246
Minor Approach Volume Threshold: 428

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T	- R		L - T	- R		L - T	- R		L - T	- R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	4 31	31		45 29	104		111 168	12		49 298	69	

Major Street Volume: 707
Minor Approach Volume: 178
Minor Approach Volume Threshold: 312

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	228	4	83	6	3	9	9	131	111	39	120	9

Major Street Volume: 419
Minor Approach Volume: 315
Minor Approach Volume Threshold: 566

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0	0		0 1 0	0 1		0 0 1	1 0		0 1 1	0 0	
Initial Vol:	0	0	0	167	0	133	0	987	0	0	966	0
ApproachDel:	xxxxxx			159.0			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=13.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=300]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2253]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	167	0	133	0	987	0	0	966	0

Major Street Volume: 1953
Minor Approach Volume: 300
Minor Approach Volume Threshold: 86 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	112	742	0	0	1008	148
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	112	742	0	0	1008	148

Major Street Volume: 2010
Minor Approach Volume: 0
Minor Approach Volume Threshold: 44 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	28	315	0	0	793	83
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	28	315	0	0	793	83

Major Street Volume: 1219
Minor Approach Volume: 0
Minor Approach Volume Threshold: 217

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		72		7	5		86		0	0		0		0	5		0		5
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					9.1				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=180]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	72	7	5	86	0	0	0	0	5	0	5

Major Street Volume: 170
Minor Approach Volume: 10
Minor Approach Volume Threshold: 692

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	2	0	2	3	96	55	14	91	20
ApproachDel:	xxxxxx			9.4			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=4]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=283]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	2	0	2	3	96	55	14	91	20

Major Street Volume: 279
Minor Approach Volume: 4
Minor Approach Volume Threshold: 725

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	1
Initial Vol:	2	463			0	0	88			1	0		0		0	110		5		25

Major Street Volume: 554
Minor Approach Volume: 140
Minor Approach Volume Threshold: 628

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	1	0	1	1	0	1	0	0	0	1	0	1	0	0	1	0	1	0
Initial Vol:	0	424		68		79	141		0		0		4		1	20		0		55

Major Street Volume: 712
Minor Approach Volume: 75
Minor Approach Volume Threshold: 520

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0		1 0 0	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	118 142	23		11 89	45		69 75	101		11 53	14	

Major Street Volume: 428
Minor Approach Volume: 245
Minor Approach Volume Threshold: 577

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	119	140	0	404	0	0	684	0	20
ApproachDel:	xxxxxx			xxxxxx			15.6			99.3		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.7]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=404]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1367]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=19.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=704]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1367]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	119	140	0	404	0	0	684	0	20

Major Street Volume: 259
Minor Approach Volume: 704
Minor Approach Volume Threshold: 955

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	1	0	0	1 0	0	0	1	1 0	0	1	1	0 0
Initial Vol:	0	0		7	161		5	113	0	1011		5	9	619		0
ApproachDel:	12.1				88.8				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1930]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=6.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=279]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1930]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Existing Condition (Year 2011) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			7	161		5		113	0	1011			5	9	619			0

Major Street Volume: 1644
Minor Approach Volume: 279
Minor Approach Volume Threshold: 160

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	0		0		0	101		0		8	0		13		0	0		8		0
ApproachDel:	xxxxxx					9.0					xxxxxx					xxxxxx				

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=109]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=130]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	101	0	8	0	13	0	0	8	0

Major Street Volume: 21
Minor Approach Volume: 109
Minor Approach Volume Threshold: 1250

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1 0	0	0	0	0 0	0	1	0	0 0	1!	0	0	0 0	0	0	0
Initial Vol:	33	0	0	0	34	34		5	0	36			0	0	0	
ApproachDel:	xxxxxx				xxxxxx				8.7				xxxxxx			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=142]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Initial Vol:	33		0		0	0		34		34	5		0		36	0		0		0

Major Street Volume: 101
Minor Approach Volume: 41
Minor Approach Volume Threshold: 831

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	8	4	2	46	4	7	6	104	12	13	225	33
ApproachDel:	11.3			11.9			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=464]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=57]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=464]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	8	4	2	46	4	7	6	104	12	13	225	33

Major Street Volume: 393
Minor Approach Volume: 57
Minor Approach Volume Threshold: 607

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	674	0	302		0	0	0		0	113	0		0	249	0	
ApproachDel:	xxxxxx				xxxxxx				266.3				905.0			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=8.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=113]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1338]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=62.6]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=249]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1338]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	674		0		302	0		0		0	0		113		0	0		249		0

Major Street Volume: 976
Minor Approach Volume: 249
Minor Approach Volume Threshold: 293

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	112	0	22	0	0	0	0	419	194

Major Street Volume: 613
Minor Approach Volume: 134
Minor Approach Volume Threshold: 446

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0 0	0	0	0	0 0	1!	0	0	1 0	1	0	0	0 0	0	1	0
Initial Vol:	0	0	0		18	0		86	77	399		0	0	422		112
ApproachDel:	xxxxxx				14.7				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=104]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1114]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Initial Vol:	0		0		0	18		0		86	77		399		0	0		422		112

Major Street Volume: 1010
Minor Approach Volume: 104
Minor Approach Volume Threshold: 281

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	13	2	3	6	4	14	16	142	17	11	174	4
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=406]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=24]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=406]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	13	2	3	6	4	14	16	142	17	11	174	4

Major Street Volume: 364
Minor Approach Volume: 24
Minor Approach Volume Threshold: 489

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	159	0	292	0	0	0	42	273	0	0	452	54
ApproachDel:	32.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=4.0]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=451]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1272]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	159	0	292	0	0	0	42	273	0	0	452	54

Major Street Volume: 821
Minor Approach Volume: 451
Minor Approach Volume Threshold: 353

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 229 4	11 0 0	0 0 251
ApproachDel:	xxxxxx	xxxxxx	11.5	9.3

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=11]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=495]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=251]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=495]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	229	4	11	0	0	0	0	251

Major Street Volume: 233
Minor Approach Volume: 251
Minor Approach Volume Threshold: 608

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0 1			0 1 0 1 0		
Initial Vol:	0	0	0	105	11	171	12	252	296	17	586	17

Major Street Volume: 1180
Minor Approach Volume: 287
Minor Approach Volume Threshold: 228

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Initial Vol:	466		0		0	0		0		0	136		214		0	0		157		2

Major Street Volume: 509
Minor Approach Volume: 466
Minor Approach Volume Threshold: 400

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	9	37	26	19	26	128	184	195	29	44	372	43

Major Street Volume: 867
Minor Approach Volume: 173
Minor Approach Volume Threshold: 257

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	247	26	59	4	4	9	11	78	139	52	114	11

Major Street Volume: 405
Minor Approach Volume: 332
Minor Approach Volume Threshold: 577

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	171	0	145	0	1103	0	0	1102	0
ApproachDel:	xxxxxx			284.0			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=24.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=316]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2521]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	171	0	145	0	1103	0	0	1102	0

Major Street Volume: 2205
Minor Approach Volume: 316
Minor Approach Volume Threshold: 34 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	110	785	0	0	1150	141
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	110	785	0	0	1150	141

Major Street Volume: 2186
Minor Approach Volume: 0
Minor Approach Volume Threshold: 15 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	561	0	0	1147	87
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	561	0	0	1147	87

Major Street Volume: 1824
Minor Approach Volume: 0
Minor Approach Volume Threshold: 78 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 0		0 1	0 0	0	0 0	0 0	0	0 0	0 0	1
Initial Vol:	0	123	0	19	66	0	0	0	0	0	0	10
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.9		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=218]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0 0	0	0 0	0 0	0	0 0	0 0	1
Initial Vol:	0 123	0		19 66	0		0	0	0	0	0	10

Major Street Volume: 208
Minor Approach Volume: 10
Minor Approach Volume Threshold: 638

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Initial Vol:	0	0	0	26	1	3	3	173	47	12	176	22
ApproachDel:	xxxxxx			11.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=30]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=463]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	26	1	3	3	173	47	12	176	22

Major Street Volume: 433
Minor Approach Volume: 30
Minor Approach Volume Threshold: 573

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0 1	0	0	0	0 0	1	0	0	0 0	0	0	1	0 1	0	1
Initial Vol:	2	527		0	0	260		2	0	0		0	193		5	30

Major Street Volume: 791
Minor Approach Volume: 228
Minor Approach Volume Threshold: 475

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 490	52		118 356	0		0 4	2		21 0	53	

Major Street Volume: 1016
Minor Approach Volume: 74
Minor Approach Volume Threshold: 367

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0		1 0 0	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	103 152	27		22 115	66		51 61	54		11 62	20	

Major Street Volume: 485
Minor Approach Volume: 166
Minor Approach Volume Threshold: 534

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	280	175	0	886	36	0	0	0	615
ApproachDel:	xxxxxx			xxxxxx			1206.3			9.6		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=308.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=922]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1992]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=615]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1992]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	280	175	0	886	36	0	0	0	615

Major Street Volume: 455
Minor Approach Volume: 922
Minor Approach Volume Threshold: 713

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 8	112 4 115	0 1152 7	12 1032 0
ApproachDel:	12.9	237.8	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=8]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2442]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=15.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=231]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2442]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			8	112		4		115	0	1152			7	12	1032			0

Major Street Volume: 2203
Minor Approach Volume: 231
Minor Approach Volume Threshold: 34 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	0		0		0	16		0		2	0		17		0	0		1		0
ApproachDel:	xxxxxx					8.6					xxxxxx					xxxxxx				

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=36]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	16	0	2	0	17	0	0	1	0

Major Street Volume: 18
Minor Approach Volume: 18
Minor Approach Volume Threshold: 1291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	9	1	0	0	34	63	8	0	38	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=153]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	9	1	0	0	34	63	8	0	38	0	0	0

Major Street Volume: 107
Minor Approach Volume: 46
Minor Approach Volume Threshold: 815

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	1 0 0	1	0	0 1 0	0	0
Initial Vol:	15	2	22	66	0	14	3	198	15	11	57	0
ApproachDel:	10.1			11.0			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=39]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=403]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=403]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	15	2	22	66	0	14	3	198	15	11	57	0

Major Street Volume: 284
Minor Approach Volume: 80
Minor Approach Volume Threshold: 719

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	409		0		50	0		0		0	0		43		0	0		137		0
ApproachDel:	xxxxxx					xxxxxx					23.8					39.8				

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=43]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=639]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=137]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=639]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	409		0		50	0		0		0	0		43		0	0		137		0

Major Street Volume: 459
Minor Approach Volume: 137
Minor Approach Volume Threshold: 553

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	31	0	71	0	0	0	0	640	51

Major Street Volume: 691
Minor Approach Volume: 102
Minor Approach Volume Threshold: 409

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	8	0	60	66	531	0	0	409	141
ApproachDel:	xxxxxx			13.6			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=68]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1215]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	8	0	60	66	531	0	0	409	141

Major Street Volume: 1147
Minor Approach Volume: 68
Minor Approach Volume Threshold: 238

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	15	2	4	2	2	5	6	272	9	5	76	2
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=21]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=400]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=400]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	15	2	4	2	2	5	6	272	9	5	76	2

Major Street Volume: 370
Minor Approach Volume: 21
Minor Approach Volume Threshold: 485

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	95	0	183	0	0	0	96	334	0	0	471	58
ApproachDel:	23.6			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=278]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1237]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	95	0	183	0	0	0	96	334	0	0	471	58

Major Street Volume: 959
Minor Approach Volume: 278
Minor Approach Volume Threshold: 299

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Initial Vol:	0		0		0	0		340		8	0		0		0	0		0		66
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					8.5				

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=66]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=2][total volume=414]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	340	8	0	0	0	0	0	66

Major Street Volume: 348
Minor Approach Volume: 66
Minor Approach Volume Threshold: 501

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0 1			0 1 0 1 0		
Initial Vol:	0	0	0	90	28	69	10	339	342	2	325	11

Major Street Volume: 1029
Minor Approach Volume: 187
Minor Approach Volume Threshold: 275

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 0 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	257	2	3	0	0	0	244	184	0	0	83	45

Major Street Volume: 556
Minor Approach Volume: 262
Minor Approach Volume Threshold: 376

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	11	26	51	83	71	141	185	279	14	47	300	99

Major Street Volume: 924
Minor Approach Volume: 295
Minor Approach Volume Threshold: 240

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	175	9	87	9	9	27	13	196	190	68	258	5

Major Street Volume: 730
Minor Approach Volume: 271
Minor Approach Volume Threshold: 391

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	238	0	109	0	1462	0	0	848	0
ApproachDel:	xxxxxx			482.1			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=46.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=347]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2657]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	238	0	109	0	1462	0	0	848	0

Major Street Volume: 2310
Minor Approach Volume: 347
Minor Approach Volume Threshold: 14 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	90	1047	0	0	899	85
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	90	1047	0	0	899	85

Major Street Volume: 2121
Minor Approach Volume: 0
Minor Approach Volume Threshold: 26 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0 0	0 0	0	0 1 1	0 0		0 0 2	1 0	
Initial Vol:	0	0	0	0	0	0	73	933	0	0	1035	76
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	73	933	0	0	1035	76

Major Street Volume: 2117
Minor Approach Volume: 0
Minor Approach Volume Threshold: 26 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	51	10	4	146	0	0	0	0	23	0	8
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.5		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=31]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=242]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		51		10	4		146		0	0		0		0	23		0		8

Major Street Volume: 211
Minor Approach Volume: 31
Minor Approach Volume Threshold: 634

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	23	6	10	19	200	201	74	106	97
ApproachDel:	xxxxxx			13.6			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=39]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=736]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	23	6	10	19	200	201	74	106	97

Major Street Volume: 697
Minor Approach Volume: 39
Minor Approach Volume Threshold: 409

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0 1	0	0	0	0 1	0	0	0	0 0	0	0	1	0 1	0	1
Initial Vol:	0	263	0		0	300	0		0	0	0		184	1	35	

Major Street Volume: 563
Minor Approach Volume: 220
Minor Approach Volume Threshold: 621

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 175	265		314 343	0		0 0	1		71 1	91	

Major Street Volume: 1097
Minor Approach Volume: 163
Minor Approach Volume Threshold: 334

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	107	64	22	51	256	106	26	107	82	23	123	25

Major Street Volume: 606
Minor Approach Volume: 215
Minor Approach Volume Threshold: 457

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	577	1359	0	139	0	0	0	0	243
ApproachDel:	xxxxxx			xxxxxx			3086.9			8.7		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=119.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=139]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2318]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=243]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2318]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	577	1359	0	139	0	0	0	0	243

Major Street Volume: 1936
Minor Approach Volume: 243
Minor Approach Volume Threshold: 90 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 2	122 1 128	0 610 0	2 1687 0
ApproachDel:	10.2	642.4	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2552]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=44.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=251]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2552]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			2	122			1	128	0		610		0	2		1687		0

Major Street Volume: 2299
Minor Approach Volume: 251
Minor Approach Volume Threshold: 16 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	196	0	8	0	13	0	0	49	0
ApproachDel:	xxxxxx			9.8			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=204]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=266]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	196	0	8	0	13	0	0	49	0

Major Street Volume: 62
Minor Approach Volume: 204
Minor Approach Volume Threshold: 961

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	32	0	0	0	34	75	5	0	70	0	0	0
ApproachDel:	xxxxxx			xxxxxx			9.0			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=75]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=216]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Initial Vol:	32		0		0	0		34		75	5		0		70	0		0		0

Major Street Volume: 141
Minor Approach Volume: 75
Minor Approach Volume Threshold: 742

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	4	2	76	5	9	4	105	11	15	239	32
ApproachDel:	11.5			12.6			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=511]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=511]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	4	2	76	5	9	4	105	11	15	239	32

Major Street Volume: 406
Minor Approach Volume: 90
Minor Approach Volume Threshold: 595

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	1 0 0 0 1	0 0 0 0 0	0 0 1 0 0	0 0 1 0 0
Initial Vol:	696 0 324	0 0 0	0 105 0	0 232 0
ApproachDel:	xxxxxx	xxxxxx	280.8	929.8

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=8.2]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=105]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1357]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=59.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=232]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1357]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	696		0		324	0		0		0	0		105		0	0		232		0

Major Street Volume: 1020
Minor Approach Volume: 232
Minor Approach Volume Threshold: 278

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Initial Vol:	0		0		0	104		0		20	0		0		0	0		469		184

Major Street Volume: 653
Minor Approach Volume: 124
Minor Approach Volume Threshold: 427

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	42	0	83	64	507	0	0	449	193
ApproachDel:	xxxxxx			21.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=125]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1338]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	42	0	83	64	507	0	0	449	193

Major Street Volume: 1213
Minor Approach Volume: 125
Minor Approach Volume Threshold: 218

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	11	1	2	4	2	12	13	143	15	8	220	3
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=434]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=434]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	11	1	2	4	2	12	13	143	15	8	220	3

Major Street Volume: 402
Minor Approach Volume: 18
Minor Approach Volume Threshold: 462

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	179 0 288	0 0 0	48 330 0	0 481 47
ApproachDel:	57.3	xxxxxx	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=7.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=467]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1373]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	179	0	288	0	0	0	48	330	0	0	481	47

Major Street Volume: 906
Minor Approach Volume: 467
Minor Approach Volume Threshold: 319

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 206 4	28 0 0	0 0 233
ApproachDel:	xxxxxx	xxxxxx	11.4	9.2

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=28]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=471]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=233]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=471]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	206	4	28	0	0	0	0	233

Major Street Volume: 210
Minor Approach Volume: 233
Minor Approach Volume Threshold: 636

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 1 0 0	1		0 1 0 1	0	
Initial Vol:	0	0	0	98	11	168	12	233	305	18	592	17

Major Street Volume: 1177
Minor Approach Volume: 277
Minor Approach Volume Threshold: 229

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0	0	0	0 1	0	0	0 0	0	1 0
Initial Vol:	488	2	8	0	0	0	111	214	0	0	144	55

Major Street Volume: 524
Minor Approach Volume: 498
Minor Approach Volume Threshold: 392

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	7	36	31	32	30	137	162	213	22	49	382	54

Major Street Volume: 882
Minor Approach Volume: 199
Minor Approach Volume Threshold: 253

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	1	0	1 0	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0
Initial Vol:	255		25	65	6		4	14	12		107	138	47		130	11

Major Street Volume: 445
Minor Approach Volume: 345
Minor Approach Volume Threshold: 547

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	173	0	146	0	1218	0	0	1196	0
ApproachDel:	xxxxxx			420.0			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=37.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=319]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2733]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	173	0	146	0	1218	0	0	1196	0

Major Street Volume: 2414
Minor Approach Volume: 319
Minor Approach Volume Threshold: -5 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	938	0	0	1243	161
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	938	0	0	1243	161

Major Street Volume: 2453
Minor Approach Volume: 0
Minor Approach Volume Threshold: -24 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	27	700	0	0	1360	15
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	27	700	0	0	1360	15

Major Street Volume: 2102
Minor Approach Volume: 0
Minor Approach Volume Threshold: 29 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	1 0		0 1 0	0 0		0 0 0	0 0		0 0 1!	0 0	
Initial Vol:	0 191	9		4 105	0		0 0	0		4 0	7	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.7		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=11]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=320]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	1	0	0 1 0	0	0	0 0 0	0	0	0 0 1!	0	0
Initial Vol:	0 191		9	4 105		0	0	0	0	4	0	7

Major Street Volume: 309
Minor Approach Volume: 11
Minor Approach Volume Threshold: 533

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	25	1	3	4	182	65	13	184	22
ApproachDel:	xxxxxx			11.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=499]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	25	1	3	4	182	65	13	184	22

Major Street Volume: 470
Minor Approach Volume: 29
Minor Approach Volume Threshold: 545

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0 1	0	0	0	0 0	1	0	0	0 0	0	0	1	0 1	0	1
Initial Vol:	2	547		0	0	283		2	0	0		0	179		5	34

Major Street Volume: 834
Minor Approach Volume: 218
Minor Approach Volume Threshold: 452

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0	516	71	113	371	0	0	4	2	27	0	47

Major Street Volume: 1071
Minor Approach Volume: 74
Minor Approach Volume Threshold: 345

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	119 186	36		20 137	55		55 70	79		17 66	23	

Major Street Volume: 553
Minor Approach Volume: 204
Minor Approach Volume Threshold: 489

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	312	203	0	909	70	0	0	0	680
ApproachDel:	xxxxxx			xxxxxx			1875.3			9.8		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=510.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=979]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2174]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=680]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2174]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	312	203	0	909	70	0	0	0	680

Major Street Volume: 515
Minor Approach Volume: 979
Minor Approach Volume Threshold: 659

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 9	160 4 115	0 1316 6	15 1220 0
ApproachDel:	14.0	885.8	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2845]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=68.6]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=279]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2845]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			9	160		4		115	0	1316			6	15	1220			0

Major Street Volume: 2557
Minor Approach Volume: 279
Minor Approach Volume Threshold: -30 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	74	0	6	0	17	0	0	1	0
ApproachDel:	xxxxxx			8.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=98]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	74	0	6	0	17	0	0	1	0

Major Street Volume: 18
Minor Approach Volume: 80
Minor Approach Volume Threshold: 1291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	9	0	0	0	35	72	9	0	71	0	0	0
ApproachDel:	xxxxxx			xxxxxx			9.0			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=196]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	9	0	0	0	35	72	9	0	71	0	0	0

Major Street Volume: 116
Minor Approach Volume: 80
Minor Approach Volume Threshold: 794

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	1 0 0	1	0	0 1 0	0	0
Initial Vol:	14	3	25	97	0	16	3	214	15	12	53	0
ApproachDel:	10.2			11.7			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=42]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=452]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=113]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=452]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	14	3	25	97	0	16	3	214	15	12	53	0

Major Street Volume: 297
Minor Approach Volume: 113
Minor Approach Volume Threshold: 703

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	423	0	64		0	0	0		0	44	0		0	127	0	
ApproachDel:	xxxxxx				xxxxxx				25.0				40.4			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=658]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=127]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=658]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	423	0	64		0	0	0		0	44	0		0	127	0	

Major Street Volume: 487
Minor Approach Volume: 127
Minor Approach Volume Threshold: 533

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	32	0	84	0	0	0	0	670	48

Major Street Volume: 718
Minor Approach Volume: 116
Minor Approach Volume Threshold: 397

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	0 1	0
Initial Vol:	0	0	0	10	0	54	73	611	0	0	418	203
ApproachDel:	xxxxxx			15.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1369]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	10	0	54	73	611	0	0	418	203

Major Street Volume: 1305
Minor Approach Volume: 64
Minor Approach Volume Threshold: 193

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	16	2	3	2	2	5	6	250	9	6	110	2
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=21]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=413]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=413]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	16	2	3	2	2	5	6	250	9	6	110	2

Major Street Volume: 383
Minor Approach Volume: 21
Minor Approach Volume Threshold: 475

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	83 0 190	0 0 0	82 400 0	0 515 53
ApproachDel:	24.2	xxxxxx	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=273]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1323]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	83 0 190	0 0 0	82 400 0	0 515 53

Major Street Volume: 1050
Minor Approach Volume: 273
Minor Approach Volume Threshold: 268

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 351 7	1 0 0	0 0 62
ApproachDel:	xxxxxx	xxxxxx	11.3	8.5

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=1]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=421]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=62]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=421]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	351	7	1	0	0	0	0	62

Major Street Volume: 358
Minor Approach Volume: 62
Minor Approach Volume Threshold: 493

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 1 0 0	1		0 1 0 1	0	
Initial Vol:	0	0	0	151	28	63	10	309	354	8	315	11

Major Street Volume: 1007
Minor Approach Volume: 242
Minor Approach Volume Threshold: 282

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0 0		0 0	0 0	0	0 1	0 0	0	0 0	0 1	0
Initial Vol:	249	2	4	0	0	0	223	237	0	0	86	45

Major Street Volume: 591
Minor Approach Volume: 255
Minor Approach Volume Threshold: 360

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	10	25	53	91	71	131	182	297	14	47	278	100

Major Street Volume: 918
Minor Approach Volume: 293
Minor Approach Volume Threshold: 242

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	162	6	101	13	11	32	10	221	184	74	265	4

Major Street Volume: 758
Minor Approach Volume: 269
Minor Approach Volume Threshold: 380

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0	0		0 1 0	0 1		0 0 1	1 0		0 1 1	0 0	
Initial Vol:	0	0	0	254	0	107	0	1604	0	0	970	0
ApproachDel:	xxxxxx			828.7			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=83.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=361]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2935]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	254	0	107	0	1604	0	0	970	0

Major Street Volume: 2574
Minor Approach Volume: 361
Minor Approach Volume Threshold: -32 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	90	1187	0	0	1018	85
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	90	1187	0	0	1018	85

Major Street Volume: 2380
Minor Approach Volume: 0
Minor Approach Volume Threshold: -14 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0		0 0 0	0 0		0 1 1	0 0		0 0 2	1 0	
Initial Vol:	0	0	0	0	0	0	75	1105	0	0	1175	74
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	75	1105	0	0	1175	74

Major Street Volume: 2429
Minor Approach Volume: 0
Minor Approach Volume Threshold: -21 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	49	10	5	188	0	0	0	0	25	0	8
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.7		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=285]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	49	10	5	188	0	0	0	0	25	0	8

Major Street Volume: 252
Minor Approach Volume: 33
Minor Approach Volume Threshold: 587

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Initial Vol:	0	0	0	25	6	12	25	252	246	71	117	104
ApproachDel:	xxxxxx			14.8			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=43]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=858]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	25	6	12	25	252	246	71	117	104

Major Street Volume: 815
Minor Approach Volume: 43
Minor Approach Volume Threshold: 355

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0 1	0	0	0	0 1	0	0	0	0 0	0	0	1	0 1	0	1
Initial Vol:	0	278	0		0	322	0		0	0	0		181	1	74	

Major Street Volume: 600
Minor Approach Volume: 256
Minor Approach Volume Threshold: 594

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 188	260		314 362	0		0	0	1	69	1	92

Major Street Volume: 1124
Minor Approach Volume: 162
Minor Approach Volume Threshold: 324

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	109	66	32	65	309	92	22	130	95	38	145	29

Major Street Volume: 673
Minor Approach Volume: 247
Minor Approach Volume Threshold: 421

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	717	1324	0	116	10	0	6	0	393
ApproachDel:	xxxxxx			xxxxxx			5857.8			85.3		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=205.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=126]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2566]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=9.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=399]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2566]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	717	1324	0	116	10	0	6	0	393

Major Street Volume: 2041
Minor Approach Volume: 399
Minor Approach Volume Threshold: 67 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 2	164 1 123	0 738 0	2 1745 0
ApproachDel:	10.7	1343.2	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2775]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=107.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=288]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2775]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: No Build (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			2	164		1		123		0	738		0		2	1745		0

Major Street Volume: 2485
Minor Approach Volume: 288
Minor Approach Volume Threshold: -17 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	19	0	0	0	34	9	5	0	27	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.6			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=32]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=94]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	19	0	0	0	34	9	5	0	27	0	0	0

Major Street Volume: 62
Minor Approach Volume: 32
Minor Approach Volume Threshold: 961

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	1 0 0 1 0	0 0 1! 0 0
Initial Vol:	9 3 1	36 3 8	4 91 13	12 252 21
ApproachDel:	11.5	11.7	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=453]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=47]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=453]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	3	1	36	3	8	4	91	13	12	252	21

Major Street Volume: 393
Minor Approach Volume: 47
Minor Approach Volume Threshold: 607

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	647	0	275		0	0	0		0	151	0		0	254	0	
ApproachDel:	xxxxxx				xxxxxx				355.5				798.8			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=14.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=151]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1327]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=56.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=254]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1327]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	647		0		275	0		0		0	0		151		0	0		254		0

Major Street Volume: 922
Minor Approach Volume: 254
Minor Approach Volume Threshold: 313

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Initial Vol:	0		0		0	150		0		16	0		0		0	0		330		208

Major Street Volume: 538
Minor Approach Volume: 166
Minor Approach Volume Threshold: 487

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	8	0	68	84	342	0	0	452	83
ApproachDel:	xxxxxx			13.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=76]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1037]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Initial Vol:	0		0		0	8		0		68	84		342		0	0		452		83

Major Street Volume: 961
Minor Approach Volume: 76
Minor Approach Volume Threshold: 299

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Stop Sign				Yield Sign			
Lanes:	1	0	0	0	0	0	0	0	1	0	0	1!	0	0	0	0	1	0	0
Initial Vol:	6	0	0	0	0	8	8	150	11	0	88	0							
ApproachDel:	0.0				0.0				0.0				0.0			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=271]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=8]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=271]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	1 0 0 0 0			0 0 0 0 1			0 0 1! 0 0			0 0 1 0 0		
Initial Vol:	6	0	0	0	0	8	8	150	11	0	88	0

Major Street Volume: 257
Minor Approach Volume: 8
Minor Approach Volume Threshold: 582

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	66	0	380	0	0	0	15	267	0	0	524	71
ApproachDel:	17.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=446]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1323]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	66 0 380	0 0 0	15 267 0	0 524 71

Major Street Volume: 877
Minor Approach Volume: 446
Minor Approach Volume Threshold: 330

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 332 4	34 0 0	0 0 252
ApproachDel:	xxxxxx	xxxxxx	13.1	9.3

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=34]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=622]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=252]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=622]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	332	4	34	0	0	0	0	252

Major Street Volume: 336
Minor Approach Volume: 252
Minor Approach Volume Threshold: 510

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0			0 1 0 1 0		
Initial Vol:	0	0	0	153	11	142	12	266	228	22	558	17

Major Street Volume: 1103
Minor Approach Volume: 306
Minor Approach Volume Threshold: 251

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 0 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	409	0	1	0	0	0	159	255	0	0	194	15

Major Street Volume: 623
Minor Approach Volume: 410
Minor Approach Volume Threshold: 346

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	15	31	14	4	11	66	163	112	37	37	386	25

Major Street Volume: 760
Minor Approach Volume: 81
Minor Approach Volume Threshold: 293

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	229	26	55	1	2	3	8	50	71	37	122	13

Major Street Volume: 316
Minor Approach Volume: 172
Minor Approach Volume Threshold: 682

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 1 0 0 1	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 0	164 0 135	0 1133 0	0 1113 0
ApproachDel:	xxxxxx	289.0	xxxxxx	xxxxxx

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=24.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=299]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2545]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	164	0	135	0	1133	0	0	1113	0

Major Street Volume: 2246
Minor Approach Volume: 299
Minor Approach Volume Threshold: 26 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	110	779	0	0	1160	107
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	110	779	0	0	1160	107

Major Street Volume: 2156
Minor Approach Volume: 0
Minor Approach Volume Threshold: 20 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0
Initial Vol:	0		0		0	0		0		0	29		567		0	0		1123		79
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					xxxxxx				

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	567	0	0	1123	79

Major Street Volume: 1798
Minor Approach Volume: 0
Minor Approach Volume Threshold: 83 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Initial Vol:	0		6		0	14		113		0	0		0		0	0		0		10
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					8.4				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=143]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 0		0 1	0 0	0	0 0	0 0	0	0 0	0 0	1
Initial Vol:	0	6	0	14	113	0	0	0	0	0	0	10

Major Street Volume: 133
Minor Approach Volume: 10
Minor Approach Volume Threshold: 757

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	24	2	4	4	141	64	14	190	22
ApproachDel:	xxxxxx			11.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=30]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=465]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	24	2	4	4	141	64	14	190	22

Major Street Volume: 435
Minor Approach Volume: 30
Minor Approach Volume Threshold: 572

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 1 0 0			0 0 0 1 0			0 0 0 0 0			1 0 1 0 1		
Initial Vol:	2 517		0	0 280		2	0	0	0	157	4	25

Major Street Volume: 801
Minor Approach Volume: 186
Minor Approach Volume Threshold: 470

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1	0 1	0	0 1	0 1	0
Initial Vol:	0 486	51		120 339	0		0	4	2	18	0	47

Major Street Volume: 996
Minor Approach Volume: 65
Minor Approach Volume Threshold: 376

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	90 200	33		33 140	73		46 51	36		13 65	32	

Major Street Volume: 569
Minor Approach Volume: 133
Minor Approach Volume Threshold: 479

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	298	173	0	893	27	0	0	0	614
ApproachDel:	xxxxxx			xxxxxx			1313.5			9.6		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=335.7]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=920]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2005]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=614]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2005]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	298	173	0	893	27	0	0	0	614

Major Street Volume: 471
Minor Approach Volume: 920
Minor Approach Volume Threshold: 698

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 8	103 4 114	0 1171 7	11 1012 0
ApproachDel:	13.0	195.8	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=8]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2430]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=12.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=221]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2430]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			8	103		4		114	0	1171			7	11	1012			0

Major Street Volume: 2201
Minor Approach Volume: 221
Minor Approach Volume Threshold: 35 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	0		0		0	38		0		2	0		17		0	0		1		0
ApproachDel:	xxxxxx					8.7					xxxxxx					xxxxxx				

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=40]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=58]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	38	0	2	0	17	0	0	1	0

Major Street Volume: 18
Minor Approach Volume: 40
Minor Approach Volume Threshold: 1291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 0 0 1			0 0 0 0 0		
Initial Vol:	33	9	0	0	26	1	0	0	18	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=87]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 0 0 1			0 0 0 0 0		
Initial Vol:	33	9	0	0	26	1	0	0	18	0	0	0

Major Street Volume: 69
Minor Approach Volume: 18
Minor Approach Volume Threshold: 932

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	1 0 0	1	0	0 1 0	0	0
Initial Vol:	11	12	17	43	0	9	11	109	98	59	26	0
ApproachDel:	10.6			11.3			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=40]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=395]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=52]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=395]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	11	12	17	43	0	9	11	109	98	59	26	0

Major Street Volume: 303
Minor Approach Volume: 52
Minor Approach Volume Threshold: 696

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	409		0	50	0		0	0	0	108		0	0	148		0
ApproachDel:	xxxxxx				xxxxxx				32.8				43.4			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=108]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=715]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=148]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=715]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	409	0	50	0	0	0	0	108	0	0	148	0

Major Street Volume: 459
Minor Approach Volume: 148
Minor Approach Volume Threshold: 553

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	70	0	0	0	0	0	0	635	54

Major Street Volume: 689
Minor Approach Volume: 70
Minor Approach Volume Threshold: 410

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	7	0	58	65	543	0	0	417	135
ApproachDel:	xxxxxx			13.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=65]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1225]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	7	0	58	65	543	0	0	417	135

Major Street Volume: 1160
Minor Approach Volume: 65
Minor Approach Volume Threshold: 234

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	13	1	2	1	1	4	5	242	8	4	73	1
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=355]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=355]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	13	1	2	1	1	4	5	242	8	4	73	1

Major Street Volume: 333
Minor Approach Volume: 16
Minor Approach Volume Threshold: 513

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	102	0	206	0	0	0	77	343	0	0	522	52
ApproachDel:	26.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=308]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1302]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	102	0	206	0	0	0	77	343	0	0	522	52

Major Street Volume: 994
Minor Approach Volume: 308
Minor Approach Volume Threshold: 287

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 369 8	0 0 0	0 0 60
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	8.5

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=2][total volume=437]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	369	8	0	0	0	0	0	60

Major Street Volume: 377
Minor Approach Volume: 60
Minor Approach Volume Threshold: 480

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 1 0 0	1		0 1 0 1	0	
Initial Vol:	0	0	0	96	28	46	10	336	225	3	297	11

Major Street Volume: 882
Minor Approach Volume: 170
Minor Approach Volume Threshold: 328

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 0 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	210	2	6	0	0	0	200	232	0	0	102	88

Major Street Volume: 622
Minor Approach Volume: 218
Minor Approach Volume Threshold: 346

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	9	23	45	74	60	109	171	253	12	47	277	106

Major Street Volume: 866
Minor Approach Volume: 243
Minor Approach Volume Threshold: 258

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	162	4	45	5	4	27	11	209	140	27	241	2

Major Street Volume: 630
Minor Approach Volume: 211
Minor Approach Volume Threshold: 438

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	232	0	107	0	1524	0	0	869	0
ApproachDel:	xxxxxx			524.6			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=49.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=339]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2732]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	232	0	107	0	1524	0	0	869	0

Major Street Volume: 2393
Minor Approach Volume: 339
Minor Approach Volume Threshold: -1 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	87	1034	0	0	918	78
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	87	1034	0	0	918	78

Major Street Volume: 2117
Minor Approach Volume: 0
Minor Approach Volume Threshold: 26 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	73	909	0	0	1015	73
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	73	909	0	0	1015	73

Major Street Volume: 2070
Minor Approach Volume: 0
Minor Approach Volume Threshold: 34 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		52		10	5		180		0	0		0		0	24		0		9
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					9.7				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=280]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	52	10	5	180	0	0	0	0	24	0	9

Major Street Volume: 247
Minor Approach Volume: 33
Minor Approach Volume Threshold: 592

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	19	8	13	22	160	234	76	113	99
ApproachDel:	xxxxxx			13.4			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=40]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=744]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Initial Vol:	0		0		0	19		8		13	22		160		234	76		113		99

Major Street Volume: 704
Minor Approach Volume: 40
Minor Approach Volume Threshold: 406

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1
Initial Vol:	0	200		0		0	337		0		0		0		0	102		1		104

Major Street Volume: 537
Minor Approach Volume: 207
Minor Approach Volume Threshold: 641

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 120	262		298 314	0		0 0	1		89 1	82	

Major Street Volume: 994
Minor Approach Volume: 172
Minor Approach Volume Threshold: 377

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	40	57	96	232	191	40	8	167	21	35	94	45

Major Street Volume: 656
Minor Approach Volume: 196
Minor Approach Volume Threshold: 430

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	569	1356	0	138	0	0	0	0	238
ApproachDel:	xxxxxx			xxxxxx			2921.1			8.7		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=112.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=138]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2301]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=238]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2301]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	569	1356	0	138	0	0	0	0	238

Major Street Volume: 1925
Minor Approach Volume: 238
Minor Approach Volume Threshold: 92 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	1	0	0	1 0	0	0	1	1 0	0	1	1	0 0
Initial Vol:	0	0		2	99		1	123	0	610		0	2	1703		0
ApproachDel:	10.2				483.3				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2540]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=29.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=223]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2540]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 2	99 1 123	0 610 0	2 1703 0

Major Street Volume: 2315
Minor Approach Volume: 223
Minor Approach Volume Threshold: 13 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0	0	0	1	0	0
Initial Vol:	0	0	0		233	0	8		0	13	0		0	26	0	
ApproachDel:	xxxxxx				9.9				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=241]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=280]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	233	0	8	0	13	0	0	26	0

Major Street Volume: 39
Minor Approach Volume: 241
Minor Approach Volume Threshold: 1085

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	28	0	0	0	34	33	5	0	56	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=156]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	28	0	0	0	34	33	5	0	56	0	0	0

Major Street Volume: 95
Minor Approach Volume: 61
Minor Approach Volume Threshold: 847

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	3	2	62	5	9	4	96	11	14	243	29
ApproachDel:	11.4			12.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=487]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=76]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=487]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	3	2	62	5	9	4	96	11	14	243	29

Major Street Volume: 397
Minor Approach Volume: 76
Minor Approach Volume Threshold: 603

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	684	0	312		0	0	0		0	161	0		0	246	0	
ApproachDel:	xxxxxx				xxxxxx				512.6				941.0			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=22.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=161]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1403]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=64.3]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=246]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1403]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	684		0		312	0		0		0	0		161		0	0		246		0

Major Street Volume: 996
Minor Approach Volume: 246
Minor Approach Volume Threshold: 286

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	160	0	16	0	0	0	0	385	200

Major Street Volume: 585
Minor Approach Volume: 176
Minor Approach Volume Threshold: 461

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	23	0	71	76	441	0	0	469	177
ApproachDel:	xxxxxx			17.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=94]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1257]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	23	0	71	76	441	0	0	469	177

Major Street Volume: 1163
Minor Approach Volume: 94
Minor Approach Volume Threshold: 233

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	11	1	2	5	2	11	14	143	16	7	134	2
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=348]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=348]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	11	1	2	5	2	11	14	143	16	7	134	2

Major Street Volume: 316
Minor Approach Volume: 18
Minor Approach Volume Threshold: 527

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	76 0 383	0 0 0	20 346 0	0 545 65
ApproachDel:	22.8	xxxxxx	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=459]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1435]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 1 0 0			0 0 0 1 0		
Initial Vol:	76	0	383	0	0	0	20	346	0	0	545	65

Major Street Volume: 976
Minor Approach Volume: 459
Minor Approach Volume Threshold: 293

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0	0 0	0	0 0	0 1	0	1 0	0 0	0	0 0	0 0	1
Initial Vol:	0	0	0	0	299	3	61	0	0	0	0	235
ApproachDel:	xxxxxx			xxxxxx			12.9			9.2		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=598]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=235]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=598]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 299 3	61 0 0	0 0 235

Major Street Volume: 302
Minor Approach Volume: 235
Minor Approach Volume Threshold: 539

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0			0 1 0 1 0		
Initial Vol:	0	0	0	173	11	142	12	224	219	28	556	17

Major Street Volume: 1056
Minor Approach Volume: 326
Minor Approach Volume Threshold: 266

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	423	2	9	0	0	0	117	274	0	0	183	77

Major Street Volume: 651
Minor Approach Volume: 434
Minor Approach Volume Threshold: 334

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	14	31	16	4	11	67	157	119	35	38	393	26

Major Street Volume: 768
Minor Approach Volume: 82
Minor Approach Volume Threshold: 290

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	219	22	68	1	1	2	8	77	51	23	140	13

Major Street Volume: 313
Minor Approach Volume: 176
Minor Approach Volume Threshold: 685

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	163	0	138	0	1236	0	0	1239	0
ApproachDel:	xxxxxx			436.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=36.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=301]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2776]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	163	0	138	0	1236	0	0	1239	0

Major Street Volume: 2475
Minor Approach Volume: 301
Minor Approach Volume Threshold: -16 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	931	0	0	1287	114
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	931	0	0	1287	114

Major Street Volume: 2443
Minor Approach Volume: 0
Minor Approach Volume Threshold: -23 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	712	0	0	1371	73
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	712	0	0	1371	73

Major Street Volume: 2185
Minor Approach Volume: 0
Minor Approach Volume Threshold: 16 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0	0	0	1 0	0	1	0	0 0	0	0	0	0 0	0	0	1!	0 0
Initial Vol:	0	106		7	6	167		0	0	0		0	6	0		5
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				9.6			

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=11]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=297]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0	106		7		6	167		0		0		0		0	6		0		5

Major Street Volume: 286
Minor Approach Volume: 11
Minor Approach Volume Threshold: 553

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	0	1	0	0	1!	0	0
Initial Vol:	0	0	0		22	3	5		6	140	110		16	196	21	
ApproachDel:	xxxxxx				11.5				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=30]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=519]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Initial Vol:	0		0		0	22		3		5	6		140		110	16		196		21

Major Street Volume: 489
Minor Approach Volume: 30
Minor Approach Volume Threshold: 531

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0	1	0 0	0	0	0	1 0	0	0	0	0 0	1	0	1	0 1
Initial Vol:	2	543		0	0	309		2	0		0	0	138		4	29

Major Street Volume: 856
Minor Approach Volume: 171
Minor Approach Volume Threshold: 441

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 1	0	1 0	0 1	0	1 0
Initial Vol:	0 505		73	113 357		0	0	4	2	32	0	55

Major Street Volume: 1048
Minor Approach Volume: 87
Minor Approach Volume Threshold: 354

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0		1 0 0	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	101 241	42		32 182	60		52 61	59		23 71	38	

Major Street Volume: 658
Minor Approach Volume: 172
Minor Approach Volume Threshold: 429

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	348	191	0	921	35	0	0	0	717
ApproachDel:	xxxxxx			xxxxxx			2399.5			9.9		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=637.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=956]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2212]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.0]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=717]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2212]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	348	191	0	921	35	0	0	0	717

Major Street Volume: 539
Minor Approach Volume: 956
Minor Approach Volume Threshold: 640

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 9	165 4 117	0 1325 6	15 1210 0
ApproachDel:	14.0	911.8	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2851]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=72.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=286]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2851]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0		0		9	165		4		117	0		1325		6	15		1210		0

Major Street Volume: 2556
Minor Approach Volume: 286
Minor Approach Volume Threshold: -29 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	118	0	2	0	17	0	0	1	0
ApproachDel:	xxxxxx			9.1			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=138]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	118	0	2	0	17	0	0	1	0

Major Street Volume: 18
Minor Approach Volume: 120
Minor Approach Volume Threshold: 1291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	37	6	0	0	29	6	3	0	83	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=86]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=164]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	37	6	0	0	29	6	3	0	83	0	0	0

Major Street Volume: 78
Minor Approach Volume: 86
Minor Approach Volume Threshold: 900

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	10	15	20	103	0	17	11	108	108	64	20	0
ApproachDel:	10.7			12.5			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=45]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=476]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=476]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	10	15	20	103	0	17	11	108	108	64	20	0

Major Street Volume: 311
Minor Approach Volume: 120
Minor Approach Volume Threshold: 687

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	438	0	79		0	0	0		0	93	0		0	141	0	
ApproachDel:	xxxxxx				xxxxxx				34.6				50.3			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=93]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=751]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=141]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=751]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	438	0	79		0	0	0		0	93	0		0	141	0	

Major Street Volume: 517
Minor Approach Volume: 141
Minor Approach Volume Threshold: 512

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	81	0	12	0	0	0	0	657	54

Major Street Volume: 711
Minor Approach Volume: 93
Minor Approach Volume Threshold: 400

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	10	0	52	69	610	0	0	432	196
ApproachDel:	xxxxxx			15.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=62]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1369]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	10	0	52	69	610	0	0	432	196

Major Street Volume: 1307
Minor Approach Volume: 62
Minor Approach Volume Threshold: 193

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	13	1	2	1	1	4	5	224	8	4	96	1
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=360]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=360]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	13	1	2	1	1	4	5	224	8	4	96	1

Major Street Volume: 338
Minor Approach Volume: 16
Minor Approach Volume Threshold: 509

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	95 0 214	0 0 0	68 409 0	0 558 46
ApproachDel:	29.5	xxxxxx	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=309]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1390]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 1 1 0 0	0 0 0 1 0
Initial Vol:	95 0 214	0 0 0	68 409 0	0 558 46

Major Street Volume: 1081
Minor Approach Volume: 309
Minor Approach Volume Threshold: 258

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Yield Sign				
Lanes:	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Initial Vol:	0		0		0	0		395		6	1		0		0	0		0		59
ApproachDel:	xxxxxx					xxxxxx					11.7					8.5				

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=1]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=461]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=59]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=461]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	395	6	1	0	0	0	0	59

Major Street Volume: 401
Minor Approach Volume: 59
Minor Approach Volume Threshold: 463

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 1	0 0 1		0 1	0 1	0
Initial Vol:	0	0	0	157	28	44	10	311	217	7	294	11

Major Street Volume: 850
Minor Approach Volume: 229
Minor Approach Volume Threshold: 341

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 0 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	205	2	7	0	0	0	186	281	0	0	109	92

Major Street Volume: 668
Minor Approach Volume: 214
Minor Approach Volume Threshold: 327

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	8	23	46	77	60	103	177	273	13	48	263	108

Major Street Volume: 882
Minor Approach Volume: 240
Minor Approach Volume Threshold: 253

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	147	4	48	5	4	26	13	245	130	27	249	2

Major Street Volume: 666
Minor Approach Volume: 199
Minor Approach Volume Threshold: 420

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	235	0	106	0	1672	0	0	999	0
ApproachDel:	xxxxxx			839.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=79.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=341]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3012]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	235	0	106	0	1672	0	0	999	0

Major Street Volume: 2671
Minor Approach Volume: 341
Minor Approach Volume Threshold: -48 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	87	1201	0	0	1048	81
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	87	1201	0	0	1048	81

Major Street Volume: 2417
Minor Approach Volume: 0
Minor Approach Volume Threshold: -19 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	75	1121	0	0	1147	72
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	75	1121	0	0	1147	72

Major Street Volume: 2415
Minor Approach Volume: 0
Minor Approach Volume Threshold: -19 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		29		8	7		232		0	0		0		0	26		0		7
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					9.9				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=309]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	29	8	7	232	0	0	0	0	26	0	7

Major Street Volume: 276
Minor Approach Volume: 33
Minor Approach Volume Threshold: 563

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	19	8	14	27	174	278	75	118	104
ApproachDel:	xxxxxx			14.0			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=817]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	19	8	14	27	174	278	75	118	104

Major Street Volume: 776
Minor Approach Volume: 41
Minor Approach Volume Threshold: 372

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0	1	0 0	0	0	1	0 0	0	0	0	0 0	1	0	1	0 1
Initial Vol:	0	278		0	0	316		0	0		0	0	172		1	56

Major Street Volume: 594
Minor Approach Volume: 229
Minor Approach Volume Threshold: 598

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 184	263		314 346	0		0 0	0	1	71	1	96

Major Street Volume: 1107
Minor Approach Volume: 168
Minor Approach Volume Threshold: 330

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	37	55	119	259	222	34	8	202	27	57	111	55

Major Street Volume: 726
Minor Approach Volume: 237
Minor Approach Volume Threshold: 395

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	744	1304	0	126	0	0	0	0	365
ApproachDel:	xxxxxx			xxxxxx			6364.3			9.0		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=222.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=126]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2539]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=365]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2539]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	744	1304	0	126	0	0	0	0	365

Major Street Volume: 2048
Minor Approach Volume: 365
Minor Approach Volume Threshold: 66 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	1	0	0	1 0	0	0	1	1 0	0	1	1	0 0
Initial Vol:	0	0		2	148	1		124	0	731		0	2	1770		0
ApproachDel:	10.7				1200.6				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2778]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=91.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=273]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2778]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 1 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0		2		148		1		124		0	731		0		2	1770		0

Major Street Volume: 2503
Minor Approach Volume: 273
Minor Approach Volume Threshold: -20 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	120	0	2	0	17	0	0	1	0
ApproachDel:	xxxxxx			9.1			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=122]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=140]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	120	0	2	0	17	0	0	1	0

Major Street Volume: 18
Minor Approach Volume: 122
Minor Approach Volume Threshold: 1291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	35	4	0	0	31	10	5	0	90	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=95]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=175]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	35	4	0	0	31	10	5	0	90	0	0	0

Major Street Volume: 80
Minor Approach Volume: 95
Minor Approach Volume Threshold: 893

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	0 1	0 0	0
Initial Vol:	9	13	20	113	0	16	11	117	107	51	15	0
ApproachDel:	10.5			12.3			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=42]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=472]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=129]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=472]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		1 0 0 1	0		0 1 0 0	0	
Initial Vol:	9	13	20	113	0	16	11	117	107	51	15	0

Major Street Volume: 301
Minor Approach Volume: 129
Minor Approach Volume Threshold: 698

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	436		0	77	0		0	0	0	100		0	0	146		0
ApproachDel:	xxxxxx				xxxxxx				35.9				52.0			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=100]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=759]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=146]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=759]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	436	0	77		0	0	0		0	100	0		0	146	0	

Major Street Volume: 513
Minor Approach Volume: 146
Minor Approach Volume Threshold: 515

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	88	0	50	0	0	0	0	691	52

Major Street Volume: 743
Minor Approach Volume: 138
Minor Approach Volume Threshold: 386

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	1	0
Initial Vol:	0	0	0		6	0		55	114	584		0	0	429		214
ApproachDel:	xxxxxx				14.6				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1402]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	6	0	55	114	584	0	0	429	214

Major Street Volume: 1341
Minor Approach Volume: 61
Minor Approach Volume Threshold: 184

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	14	1	3	1	1	5	5	247	8	5	84	2
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=376]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=376]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	14	1	3	1	1	5	5	247	8	5	84	2

Major Street Volume: 351
Minor Approach Volume: 18
Minor Approach Volume Threshold: 499

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 0 2 0 0	0 0 1 0 0
Initial Vol:	92 0 176	0 0 0	0 440 0	0 543 0
ApproachDel:	20.7	xxxxxx	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=268]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1251]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0 0		0 0	0 0	0	0 0	2 0	0	0 0	1 0	0
Initial Vol:	92	0	176	0	0	0	0	440	0	0	543	0

Major Street Volume: 983
Minor Approach Volume: 268
Minor Approach Volume Threshold: 291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0	0 0	0	0 0	1 0		1 0	0 0	0	0 0	0 0	1
Initial Vol:	0	0	0	0	402	7	14	0	0	0	0	60
ApproachDel:	xxxxxx			xxxxxx			12.0			8.5		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=483]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=483]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	402	7	14	0	0	0	0	60

Major Street Volume: 409
Minor Approach Volume: 60
Minor Approach Volume Threshold: 458

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0			0 1 0 1 0		
Initial Vol:	0	0	0	118	28	65	10	202	339	7	295	11

Major Street Volume: 864
Minor Approach Volume: 211
Minor Approach Volume Threshold: 335

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	137	0	81	0	0	0	0	116	0	0	100	0

Major Street Volume: 218
Minor Approach Volume: 116
Minor Approach Volume Threshold: 626

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	9	23	48	78	62	111	175	274	13	48	275	104

Major Street Volume: 889
Minor Approach Volume: 251
Minor Approach Volume Threshold: 251

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	142	6	70	8	6	22	11	212	166	60	266	4

Major Street Volume: 719
Minor Approach Volume: 218
Minor Approach Volume Threshold: 396

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	236	0	107	0	1640	0	0	990	0
ApproachDel:	xxxxxx			799.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=76.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=343]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2973]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	236	0	107	0	1640	0	0	990	0

Major Street Volume: 2630
Minor Approach Volume: 343
Minor Approach Volume Threshold: -42 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Yield Sign					Yield Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0
Initial Vol:	0		0		0	0		0		0	87		1200		0	0		1039		82
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					xxxxxx				

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Yield Sign	Yield Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	0 0 0 0 0	0 1 2 0 0	0 0 1 1 0
Initial Vol:	0 0 0	0 0 0	87 1200 0	0 1039 82

Major Street Volume: 2408
Minor Approach Volume: 0
Minor Approach Volume Threshold: -18 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	76	1102	0	0	1181	73
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	76	1102	0	0	1181	73

Major Street Volume: 2432
Minor Approach Volume: 0
Minor Approach Volume Threshold: -21 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0	0			1	7	195			0	0	0			0	17		0		1
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					9.6				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=221]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		0		1	7	195		0		0		0		0	17		0		1

Major Street Volume: 203
Minor Approach Volume: 18
Minor Approach Volume Threshold: 645

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	0	1	0	0	1! 0 0
Initial Vol:	0	0	0		18	8		15	27	164		277	75	119		103
ApproachDel:	xxxxxx				13.8				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=806]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	18	8	15	27	164	277	75	119	103

Major Street Volume: 765
Minor Approach Volume: 41
Minor Approach Volume Threshold: 377

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 1 0 0			0 0 1 0 0			0 0 0 0 0			1 0 1 0 1		
Initial Vol:	0	261	0	0	323	0	0	0	0	136	1	107

Major Street Volume: 584
Minor Approach Volume: 244
Minor Approach Volume Threshold: 605

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 178	289		280 352	0		0	0	1	82	1	85

Major Street Volume: 1099
Minor Approach Volume: 168
Minor Approach Volume Threshold: 333

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	87	67	52	113	295	79	16	149	59	39	132	34

Major Street Volume: 693
Minor Approach Volume: 224
Minor Approach Volume Threshold: 411

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	729	1312	0	134	1	0	0	0	392
ApproachDel:	xxxxxx			xxxxxx			6652.4			9.0		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=249.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=135]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2568]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=392]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2568]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	729	1312	0	134	1	0	0	0	392

Major Street Volume: 2041
Minor Approach Volume: 392
Minor Approach Volume Threshold: 67 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 2	151 1 125	0 735 0	2 1765 0
ApproachDel:	10.7	1225.4	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2781]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=94.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=277]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2781]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0		2		151	1		125		0	735		0		2	1765		0	

Major Street Volume: 2502
Minor Approach Volume: 277
Minor Approach Volume Threshold: -20 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	220	0	8	0	13	0	0	22	0
ApproachDel:	xxxxxx			9.7			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=228]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=263]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	0		0		0	220		0		8	0		13		0	0		22		0

Major Street Volume: 35
Minor Approach Volume: 228
Minor Approach Volume Threshold: 1113

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	30	0	0	0	34	54	5	0	56	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=179]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Initial Vol:	30		0		0	0		34		54	5		0		56	0		0		0

Major Street Volume: 118
Minor Approach Volume: 61
Minor Approach Volume Threshold: 789

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1			0 0 1! 0		
Initial Vol:	9	4	2	63	5	8	5	103	11	14	241	31
ApproachDel:	11.5			12.4			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=496]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=76]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=496]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	9	4	2	63	5	8	5	103	11	14	241	31

Major Street Volume: 405
Minor Approach Volume: 76
Minor Approach Volume Threshold: 596

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	685	0	313		0	0	0		0	134	0		0	243	0	
ApproachDel:	xxxxxx				xxxxxx				386.0				930.8			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=14.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=134]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1375]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=62.8]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=243]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1375]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	685	0	313		0	0	0		0	134	0		0	243	0	

Major Street Volume: 998
Minor Approach Volume: 243
Minor Approach Volume Threshold: 286

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	133	0	19	0	0	0	0	420	195

Major Street Volume: 615
Minor Approach Volume: 152
Minor Approach Volume Threshold: 445

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	16	0	76	130	442	0	0	466	196
ApproachDel:	xxxxxx			17.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=92]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1326]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	16	0	76	130	442	0	0	466	196

Major Street Volume: 1234
Minor Approach Volume: 92
Minor Approach Volume Threshold: 212

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	9	0	1	2	1	10	11	145	13	4	151	1
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=348]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=348]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	9	0	1	2	1	10	11	145	13	4	151	1

Major Street Volume: 325
Minor Approach Volume: 13
Minor Approach Volume Threshold: 519

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 0 2 0 0	0 0 1 0 0
Initial Vol:	109 0 336	0 0 0	0 345 0	0 503 0
ApproachDel:	23.5	xxxxxx	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=445]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1293]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Initial Vol:	109	0	336	0	0	0	0	345	0	0	503	0

Major Street Volume: 848
Minor Approach Volume: 445
Minor Approach Volume Threshold: 342

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0	0 0	0	0 0	0 1	0	1 0	0 0	0	0 0	0 0	1
Initial Vol:	0	0	0	0	257	4	82	0	0	0	0	254
ApproachDel:	xxxxxx			xxxxxx			12.9			9.3		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=82]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=597]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=254]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=597]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	257	4	82	0	0	0	0	254

Major Street Volume: 261
Minor Approach Volume: 254
Minor Approach Volume Threshold: 578

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0			0 1 0 1 0		
Initial Vol:	0	0	0	115	11	133	12	159	260	39	660	17

Major Street Volume: 1147
Minor Approach Volume: 259
Minor Approach Volume Threshold: 238

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0 0 0			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	402	0	0	0	0	0	0	169	0	0	30	0

Major Street Volume: 402
Minor Approach Volume: 169
Minor Approach Volume Threshold: 462

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0		0	0 0 1! 0		0	0 0 1! 0		0	0 0 1! 0		0
Initial Vol:	9	35	23	15	21	104	167	166	27	44	368	42

Major Street Volume: 814
Minor Approach Volume: 140
Minor Approach Volume Threshold: 274

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	247	27	110	1	3	2	3	45	155	198	120	12

Major Street Volume: 533
Minor Approach Volume: 384
Minor Approach Volume Threshold: 490

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1 1	0	0 1	1 0	0
Initial Vol:	0	0	0	168	0	142	0	1236	0	0	1263	0
ApproachDel:	xxxxxx			479.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=41.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=310]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2809]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	168	0	142	0	1236	0	0	1263	0

Major Street Volume: 2499
Minor Approach Volume: 310
Minor Approach Volume Threshold: -20 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	939	0	0	1310	171
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	939	0	0	1310	171

Major Street Volume: 2531
Minor Approach Volume: 0
Minor Approach Volume Threshold: -35 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	681	0	0	1326	80
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	681	0	0	1326	80

Major Street Volume: 2116
Minor Approach Volume: 0
Minor Approach Volume Threshold: 27 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 0 1	1 0 0 0 0	0 0 0 0 0	0 0 1! 0 0
Initial Vol:	0 0 1	1 0 0	0 0 0	2 0 2
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	8.4

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=4]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=6]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		0		1	1		0		0	0		0		0	2		0		2

Major Street Volume: 2
Minor Approach Volume: 4
Minor Approach Volume Threshold: 1877

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0		
Initial Vol:	0	0	0	21	3	8	6	120	127	17	252	22
ApproachDel:	xxxxxx			11.8			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=32]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=576]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0	0	0	1!	0
Initial Vol:	0	0	0		21	3		8	6	120	127		17	252		22

Major Street Volume: 544
Minor Approach Volume: 32
Minor Approach Volume Threshold: 495

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0	1	0 0	0	0	0	1 0	0	0	0	0 0	1	0	1	0 1
Initial Vol:	2	559		0	0	286		2	0		0	0	166		5	35

Major Street Volume: 849
Minor Approach Volume: 206
Minor Approach Volume Threshold: 444

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 1 0	1	0	0 1 0	1	0
Initial Vol:	0 524		59	119 355		0	0 4		2	22	0	51

Major Street Volume: 1057
Minor Approach Volume: 73
Minor Approach Volume Threshold: 350

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	202	106	53	26	149	80	24	81	76	18	94	11

Major Street Volume: 616
Minor Approach Volume: 181
Minor Approach Volume Threshold: 452

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	330	179	0	965	42	0	0	0	627
ApproachDel:	xxxxxx			xxxxxx			1773.1			9.6		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=496.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=1007]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2143]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.7]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=627]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2143]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	330	179	0	965	42	0	0	0	627

Major Street Volume: 509
Minor Approach Volume: 1007
Minor Approach Volume Threshold: 664

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 9	209 5 119	0 1313 5	16 1203 0
ApproachDel:	14.0	1263.0	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2879]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=116.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=333]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2879]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (No I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0		0		9	209		5		119	0	1313			5	16	1203			0

Major Street Volume: 2537
Minor Approach Volume: 333
Minor Approach Volume Threshold: -26 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	0		0		0	34		0		2	0		17		0	0		1		0
ApproachDel:	xxxxxx					8.7					xxxxxx					xxxxxx				

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=36]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=54]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	0	0	0	34	0	2	0	17	0	0	1	0

Major Street Volume: 18
Minor Approach Volume: 36
Minor Approach Volume Threshold: 1291

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	30	8	0	0	27	2	1	0	37	0	0	0
ApproachDel:	xxxxxx			xxxxxx			8.6			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=38]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=105]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Initial Vol:	30	8	0	0	27	2	1	0	37	0	0	0

Major Street Volume: 67
Minor Approach Volume: 38
Minor Approach Volume Threshold: 940

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	1 0 0	1	0	0 1 0	0	0
Initial Vol:	10	12	17	61	0	11	11	111	96	50	20	0
ApproachDel:	10.4			11.3			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=39]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=399]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=72]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=399]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 1 0 0 0		
Initial Vol:	10	12	17	61	0	11	11	111	96	50	20	0

Major Street Volume: 288
Minor Approach Volume: 72
Minor Approach Volume Threshold: 714

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	0	1	0 0
Initial Vol:	418	0	59		0	0	0		0	102	0		0	151	0	
ApproachDel:	xxxxxx				xxxxxx				33.1				47.4			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=102]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=730]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=151]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=730]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	418		0		59	0		0		0	0		102		0	0		151		0

Major Street Volume: 477
Minor Approach Volume: 151
Minor Approach Volume Threshold: 540

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Initial Vol:	0		0		0	90		0		27	0		0		0	0		661		52

Major Street Volume: 713
Minor Approach Volume: 117
Minor Approach Volume Threshold: 399

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	4	0	59	120	520	0	0	413	156
ApproachDel:	xxxxxx			13.1			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=63]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1272]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	4	0	59	120	520	0	0	413	156

Major Street Volume: 1209
Minor Approach Volume: 63
Minor Approach Volume Threshold: 219

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	12	1	2	1	1	4	5	235	8	3	61	1
ApproachDel:	0.0			0.0			0.0			0.0		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=334]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=334]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 0 1! 0			0 0 1! 0		
Initial Vol:	12	1	2	1	1	4	5	235	8	3	61	1

Major Street Volume: 313
Minor Approach Volume: 15
Minor Approach Volume Threshold: 529

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Initial Vol:	91	0	181	0	0	0	0	371	0	0	524	0
ApproachDel:	18.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=272]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1167]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0 0		0 0	0 0	0	0 0	2 0	0	0 0	1 0	0
Initial Vol:	91	0	181	0	0	0	0	371	0	0	524	0

Major Street Volume: 895
Minor Approach Volume: 272
Minor Approach Volume Threshold: 323

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 405 8	2 0 0	0 0 60
ApproachDel:	xxxxxx	xxxxxx	11.9	8.5

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=475]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=475]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	405	8	2	0	0	0	0	60

Major Street Volume: 413
Minor Approach Volume: 60
Minor Approach Volume Threshold: 455

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 1	0 0 1		0 1	0 1	0
Initial Vol:	0	0	0	78	28	54	10	201	350	3	300	11

Major Street Volume: 875
Minor Approach Volume: 160
Minor Approach Volume Threshold: 331

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	134	0	87	0	0	0	0	75	0	0	98	0

Major Street Volume: 221
Minor Approach Volume: 98
Minor Approach Volume Threshold: 622

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	9	25	48	79	64	119	174	261	13	48	288	107

Major Street Volume: 891
Minor Approach Volume: 262
Minor Approach Volume Threshold: 250

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	163	7	67	6	7	24	11	183	181	58	255	4

Major Street Volume: 692
Minor Approach Volume: 237
Minor Approach Volume Threshold: 408

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 1 0 0 1	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 0	236 0 109	0 1480 0	0 858 0
ApproachDel:	xxxxxx	497.1	xxxxxx	xxxxxx

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=47.6]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=345]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2683]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	236	0	109	0	1480	0	0	858	0

Major Street Volume: 2338
Minor Approach Volume: 345
Minor Approach Volume Threshold: 9 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	88	1041	0	0	907	81
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	88	1041	0	0	907	81

Major Street Volume: 2117
Minor Approach Volume: 0
Minor Approach Volume Threshold: 26 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	74	922	0	0	1033	74
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	74	922	0	0	1033	74

Major Street Volume: 2103
Minor Approach Volume: 0
Minor Approach Volume Threshold: 29 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 0 0 1	0 1 0 0 0	0 0 0 0 0	0 0 1! 0 0
Initial Vol:	0 0 1	6 145 0	0 0 0	14 0 1
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	9.3

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=167]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0		0		1	6	145		0		0		0		0	14		0		1

Major Street Volume: 152
Minor Approach Volume: 15
Minor Approach Volume Threshold: 722

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Initial Vol:	0	0	0	19	7	12	21	157	225	76	112	98
ApproachDel:	xxxxxx			13.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=38]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=727]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Initial Vol:	0		0		0	19		7		12	21		157		225	76		112		98

Major Street Volume: 689
Minor Approach Volume: 38
Minor Approach Volume Threshold: 413

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0 1	0	0	0	0 1	0	0	0	0 0	0	0	1	0 1	0	1
Initial Vol:	0	216		0	0	332		0	0	0		0	112		1	111

Major Street Volume: 548
Minor Approach Volume: 224
Minor Approach Volume Threshold: 633

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	0 134	263		294 324	0		0 0	1		86 1	84	

Major Street Volume: 1015
Minor Approach Volume: 171
Minor Approach Volume Threshold: 368

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	83	66	42	107	251	88	16	127	46	25	110	29

Major Street Volume: 637
Minor Approach Volume: 189
Minor Approach Volume Threshold: 440

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	577	1346	0	141	0	0	0	0	250
ApproachDel:	xxxxxx			xxxxxx			3081.1			8.7		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=120.7]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=141]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2314]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=250]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2314]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	577	1346	0	141	0	0	0	0	250

Major Street Volume: 1923
Minor Approach Volume: 250
Minor Approach Volume Threshold: 93 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 2	130 1 123	0 590 0	2 1701 0
ApproachDel:	10.1	731.2	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2549]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=51.6]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=254]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2549]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0			2	130		1		123		0	590		0		2	1701		0

Major Street Volume: 2293
Minor Approach Volume: 254
Minor Approach Volume Threshold: 17 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	0		0		0	136		0		8	0		13		0	0		18		0
ApproachDel:	xxxxxx					9.2					xxxxxx					xxxxxx				

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=144]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=175]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of South Pasadena
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 ASP SB Exit 31B (N/S) & State St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 1 0 0		
Initial Vol:	0	0	0	136	0	8	0	13	0	0	18	0

Major Street Volume: 31
Minor Approach Volume: 144
Minor Approach Volume Threshold: 1146

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1 0	0	0	0	0 0	0	1	0	0 0	1!	0	0	0 0	0	0	0
Initial Vol:	27	0	0		0	34	21		5	0	34		0	0	0	
ApproachDel:	xxxxxx				xxxxxx				8.7				xxxxxx			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=39]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=121]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Bridewell St (N/S) & Hough St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Initial Vol:	27		0		0	0		34		21	5		0		34	0		0		0

Major Street Volume: 82
Minor Approach Volume: 39
Minor Approach Volume Threshold: 886

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0			0 0 1! 0			1 0 0 1			0 0 1! 0		
Initial Vol:	8	3	2	43	4	7	5	92	12	12	228	28
ApproachDel:	11.1			11.7			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=444]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=54]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=444]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #8 Bridewell St (N/S) & ASP SB Exit 30 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0		
Initial Vol:	8	3	2	43	4	7	5	92	12	12	228	28

Major Street Volume: 377
Minor Approach Volume: 54
Minor Approach Volume Threshold: 621

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	668		0		296	0		0		0	0		139		0	0		251		0
ApproachDel:	xxxxxx					xxxxxx					361.6					884.8				

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=14.0]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=139]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1354]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=61.7]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=251]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1354]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 ASP NB Exit 30A (N/S) & Marmion Wy (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Initial Vol:	668		0		296	0		0		0	0		0		139	0		0		251	0

Major Street Volume: 964
Minor Approach Volume: 251
Minor Approach Volume Threshold: 297

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #11 La Riba Wy (N/S) & Ave 66 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 0 0 1			0 0 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	138	0	16	0	0	0	0	371	200

Major Street Volume: 571
Minor Approach Volume: 154
Minor Approach Volume Threshold: 469

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	4	0	61	164	318	0	0	453	97
ApproachDel:	xxxxxx			13.0			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=65]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1097]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #12 ASP NB Exit 29 (N/S) & Ave 60 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	4	0	61	164	318	0	0	453	97

Major Street Volume: 1032
Minor Approach Volume: 65
Minor Approach Volume Threshold: 274

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Stop Sign				Stop Sign				Stop Sign				Yield Sign			
Lanes:	1	0	0	0	0	0	0	0	1	0	0	1!	0	0	0	1
Initial Vol:	7	0	0	0	0	8	8	148	12	1	113	0				
ApproachDel:	0.0				0.0			0.0			0.0					

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=7]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=297]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=8]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=297]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #13 Arroyo Dr (N/S) & ASP SB Exit 29/Shults St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Yield Sign		
Lanes:	1 0 0 0 0			0 0 0 0 1			0 0 1! 0 0			0 1 0 0 0		
Initial Vol:	7	0	0	0	0	8	8	148	12	1	113	0

Major Street Volume: 282
Minor Approach Volume: 8
Minor Approach Volume Threshold: 557

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0 0		0 0	0 0	0	0 0	2 0	0	0 0	1 0	0
Initial Vol:	100	0	323	0	0	0	0	295	0	0	482	0
ApproachDel:	19.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=423]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1200]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #14 ASP NB Exit 28B (N/S) & Via Marisol (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 2 0 0			0 0 1 0 0		
Initial Vol:	100	0	323	0	0	0	0	295	0	0	482	0

Major Street Volume: 777
Minor Approach Volume: 423
Minor Approach Volume Threshold: 372

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Yield Sign
Lanes:	0 0 0 0 0	0 0 0 1 0	1 0 0 0 0	0 0 0 0 1
Initial Vol:	0 0 0	0 285 4	77 0 0	0 0 261
ApproachDel:	xxxxxx	xxxxxx	13.3	9.3

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=77]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=627]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=1][control=Yield Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Controller not stop sign.
Signal Warrant Rule #2: [approach volume=261]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=627]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Ave 57 (N/S) & ASP SB Exit 28B/Carlota Bl (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Yield Sign		
Lanes:	0 0 0 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 1		
Initial Vol:	0	0	0	0	285	4	77	0	0	0	0	261

Major Street Volume: 289
Minor Approach Volume: 261
Minor Approach Volume Threshold: 550

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Glen Ellen Pl (N/S) & ASP SB Exit 28A/Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0			0 0 1! 0			0 1 0 0 1			0 1 0 1 0		
Initial Vol:	0	0	0	118	11	142	12	144	264	40	626	17

Major Street Volume: 1103
Minor Approach Volume: 271
Minor Approach Volume Threshold: 251

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #17 ASP NB Exit 28A (N/S) & Ave 52 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Initial Vol:	389	0		0	0	0		0	0	159		0	0	10		0	

Major Street Volume: 389
Minor Approach Volume: 159
Minor Approach Volume Threshold: 471

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #18 Carlota Bl/ASP SB Exit 27 (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0		0 0 1! 0	0	
Initial Vol:	13	34	19	7	16	92	187	153	37	38	375	30

Major Street Volume: 820
Minor Approach Volume: 115
Minor Approach Volume Threshold: 272

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #19 Homer St (N/S) & ASP NB Exit 27/Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	257	30	68	1	3	1	3	24	152	169	97	10

Major Street Volume: 455
Minor Approach Volume: 355
Minor Approach Volume Threshold: 540

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	169	0	142	0	1081	0	0	1102	0
ApproachDel:	xxxxxx			272.1			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=23.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=311]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2494]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #20 ASP SB Exit 26A (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	0	0	0	169	0	142	0	1081	0	0	1102	0

Major Street Volume: 2183
Minor Approach Volume: 311
Minor Approach Volume Threshold: 38 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	768	0	0	1149	179
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #21 ASP NB on-ramp (N/S) & Ave 26 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 2 0 0			0 0 1 1 0		
Initial Vol:	0	0	0	0	0	0	111	768	0	0	1149	179

Major Street Volume: 2207
Minor Approach Volume: 0
Minor Approach Volume Threshold: 12 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	560	0	0	1156	82
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #24 ASP NB on-ramp (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 0			0 1 1 0 0			0 0 2 1 0		
Initial Vol:	0	0	0	0	0	0	29	560	0	0	1156	82

Major Street Volume: 1827
Minor Approach Volume: 0
Minor Approach Volume Threshold: 77 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1!	0	0
Initial Vol:	0	0			1	1	0			0	0	0			0	2	0			2
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					8.4				

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=4]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=6]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 ASP SB Exit 25 (N/S) & Casanova St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 1			1 0 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	0	0	1	1	0	0	0	0	0	2	0	2

Major Street Volume: 2
Minor Approach Volume: 4
Minor Approach Volume Threshold: 1877

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	0	1	0	0	1! 0 0
Initial Vol:	0	0	0		22	3	6		5	117	89		16	219	22	
ApproachDel:	xxxxxx				11.3				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=31]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=499]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #27 Amador Pl (N/S) & Amador St (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0	0	0	1!	0
Initial Vol:	0	0	0		22	3		6	5	117	89		16	219		22

Major Street Volume: 468
Minor Approach Volume: 31
Minor Approach Volume Threshold: 546

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #28 Stadium Wy (N/S) & ASP SB Exit 24D (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0 1	0	0	0	0 0	1	0	0	0 0	0	0	1	0 1	0	1
Initial Vol:	2	515		0	0	238		2	0	0		0	179		5	32

Major Street Volume: 757
Minor Approach Volume: 216
Minor Approach Volume Threshold: 494

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #29 Stadium Wy (N/S) & ASP NB Exit 24B (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	1	0	1 0	0	1	0	1 0
Initial Vol:	0	495		40	123	316		0	0		4	1	9		0	36

Major Street Volume: 974
Minor Approach Volume: 45
Minor Approach Volume Threshold: 385

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #309 Griffin Av (N/S) & Ave 43 (E/W)

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	1 0 0	1 0	0	1 0 0	1 0	0	0 0 1!	0 0	0	0 0 1!	0 0	0
Initial Vol:	155	93	42	30	124	90	19	59	40	12	82	11

Major Street Volume: 534
Minor Approach Volume: 118
Minor Approach Volume Threshold: 501

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		1 0 2	0 0		1 1 0	0 0		0 0 1!	0 1	
Initial Vol:	0	0	0	315	170	0	915	16	0	0	0	593
ApproachDel:	xxxxxx			xxxxxx			1371.5			9.5		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=354.7]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=931]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2009]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=593]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2009]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #317 Ave 19 (N/S) & San Fernando Rd (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			1 0 2 0 0			1 1 0 0 0			0 0 1! 0 1		
Initial Vol:	0	0	0	315	170	0	915	16	0	0	0	593

Major Street Volume: 485
Minor Approach Volume: 931
Minor Approach Volume Threshold: 685

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 1	1 0 0 1 0	0 0 1 1 0	0 1 1 0 0
Initial Vol:	0 0 8	82 4 114	0 1157 8	11 1021 0
ApproachDel:	12.9	127.4	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=8]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2405]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=7.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=200]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2405]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Arroyo Seco Parkway CMP Traffic Analysis
Study Intersections Located in the City of Los Angeles
Year 2035: Alternative 2 (With I-710) - PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #321 Ave 21 (N/S) & Main St (E/W)

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	0	0		8		82		4		114	0		1157		8	11		1021		0

Major Street Volume: 2197
Minor Approach Volume: 200
Minor Approach Volume Threshold: 36 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

APPENDIX D

HCS ANALYSIS - MAINLINE

APPENDIX D

HCS ANALYSIS - MAINLINE

EXISTING (YEAR 2011)

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	1534	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	417	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	417	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	417	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	7.6	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	1083	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	294	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	294	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	294	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.3	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1379	vph	1551	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	375		421	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	499	pcphpl	561	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	499	pcphpl	561	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		A	
Density, D	9.1	pc/mi/ln	10.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	499.6	562.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.23	4.29
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	973	vph	2509	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	264		682	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	352	pcphpl	909	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	352	pcphpl	909	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		B	
Density, D	6.4	pc/mi/ln	16.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	352.5	909.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.05	4.53
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2272	vph	2056	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	617		559	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	823	pcphpl	744	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	823	pcphpl	744	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		B	
Density, D	15.0	pc/mi/ln	13.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	823.2	744.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.48	4.43
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1603	vph	3326	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	436		904	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	580	pcphpl	1205	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	580	pcphpl	1205	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		C	
Density, D	10.5	pc/mi/ln	21.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	580.8	1205.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.31	4.68
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3339	vph	2692	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	907		732	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1209	pcphpl	975	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1209	pcphpl	975	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		B	
Density, D	22.0	pc/mi/ln	17.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1209.8	975.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.68	4.57
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2356	vph	4354	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	640		1183	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	853	pcphpl	1577	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	853	pcphpl	1577	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.4	mph
Level of service, LOS	B		D	
Density, D	15.5	pc/mi/ln	29.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	853.6	1577.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.50	4.81
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3523	vph	2741	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	957		745	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1276	pcphpl	993	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1276	pcphpl	993	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	23.2	pc/mi/ln	18.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1276.4	993.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.71	4.58
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2486	vph	4434	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	676		1205	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	900	pcphpl	1606	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	900	pcphpl	1606	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.2	mph
Level of service, LOS	B		D	
Density, D	16.4	pc/mi/ln	29.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	900.7	1606.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.53	4.82
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4312	vph	3308	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1172		899	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1562	pcphpl	1198	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1562	pcphpl	1198	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.4	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	28.7	pc/mi/ln	21.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1562.3	1198.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.81	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3043	vph	5351	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	827		1454	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1102	pcphpl	1938	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1102	pcphpl	1938	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.3	mph
Level of service, LOS	C		E	
Density, D	20.0	pc/mi/ln	37.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1102.5	1938.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.63	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4312	vph	3329	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1172		905	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1562	pcphpl	1206	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1562	pcphpl	1206	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.4	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	28.7	pc/mi/ln	21.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1562.3	1206.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.81	4.68
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3043	vph	5386	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	827		1464	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1102	pcphpl	1951	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1102	pcphpl	1951	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.2	mph
Level of service, LOS	C		E	
Density, D	20.0	pc/mi/ln	37.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1102.5	1951.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.63	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4510	vph	3622	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1226		984	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1634	pcphpl	1312	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1634	pcphpl	1312	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.1	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	30.2	pc/mi/ln	23.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1634.1	1312.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.83	4.72
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3182	vph	5859	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	865		1592	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1152	pcphpl	2122	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1152	pcphpl	2122	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	20.9	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1152.9	2122.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.65	4.96
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5088	vph	3945	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1383		1072	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1843	pcphpl	1429	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1843	pcphpl	1429	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	52.9	mph	54.9	mph
Level of service, LOS	D		D	
Density, D	34.8	pc/mi/ln	26.0+	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1843.5	1429.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.89	4.76
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3590	vph	6382	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	976		1734	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1300	pcphpl	2312	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1300	pcphpl	2312	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	23.6	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1300.7	2312.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.72	5.01
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5375	vph	4758	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1461		1293	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1947	pcphpl	1723	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1947	pcphpl	1723	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	52.3	mph	53.6	mph
Level of service, LOS	E		D	
Density, D	37.3	pc/mi/ln	32.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1947.5	1723.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.92	4.86
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3792	vph	4149	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1030		1127	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1373	pcphpl	1503	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1373	pcphpl	1503	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.7	mph
Level of service, LOS	C		D	
Density, D	25.0	pc/mi/ln	27.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1373.9	1503.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.74	4.79
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3720	vph	4633	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1011		1259	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1347	pcphpl	1678	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1347	pcphpl	1678	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	53.9	mph
Level of service, LOS	C		D	
Density, D	24.5	pc/mi/ln	31.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1347.8	1678.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.73	4.84
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2625	vph	2941	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	713		799	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	951	pcphpl	1065	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	951	pcphpl	1065	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		C	
Density, D	17.3	pc/mi/ln	19.4	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	951.1	1065.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.56	4.61
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3518	vph	5381	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	956		1462	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1274	pcphpl	1949	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1274	pcphpl	1949	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.3	mph
Level of service, LOS	C		E	
Density, D	23.2	pc/mi/ln	37.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1274.6	1949.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.71	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Project ID:	Existing Condition

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2482	vph	2864	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	674		778	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	899	pcphpl	1037	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	899	pcphpl	1037	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		C	
Density, D	16.3	pc/mi/ln	18.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	899.3	1037.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.53	4.60
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Solano Ave/I-5 & Riverside Dr
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	5760	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1565	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1565	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1565	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	28.5	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Solano Ave/I-5 & Riverside Dr
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	9316	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2532	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2532	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2532	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	41.8	mi/h
Number of lanes, N	4	
Density, D	60.6	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	8529	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2318	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1854	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1854	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	33.8	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	6018	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1635	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1308	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1308	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	23.8	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	5827	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1583	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1583	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1583	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	28.8	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	9426	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2561	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2561	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2561	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	40.7	mi/h
Number of lanes, N	4	
Density, D	62.9	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	8463	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2300	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1840	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1840	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	33.5	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	5971	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1623	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1298	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1298	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	23.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	8656	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2352	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1882	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1882	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	5	
Density, D	34.3	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Flow Inputs and Adjustments

Volume, V	6107	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1660	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1328	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1328	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

APPENDIX D

HCS ANALYSIS - MAINLINE

FUTURE (YEAR 2035) WITHOUT PROJECT

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	1637	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	445	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	445	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	445	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	8.1	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	1360	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	370	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	370	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	370	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	6.7	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1507	vph	1840	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	410		500	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	546	pcphpl	666	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	546	pcphpl	666	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		B	
Density, D	9.9	pc/mi/ln	12.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	546.0	666.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.28	4.38
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1273	vph	2672	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	346		726	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	461	pcphpl	968	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	461	pcphpl	968	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		B	
Density, D	8.4	pc/mi/ln	17.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	461.2	968.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.19	4.57
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2381	vph	2442	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	647		664	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	862	pcphpl	884	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	862	pcphpl	884	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		B	
Density, D	15.7	pc/mi/ln	16.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	862.7	884.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.51	4.52
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1983	vph	3609	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	539		981	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	718	pcphpl	1307	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	718	pcphpl	1307	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		C	
Density, D	13.1	pc/mi/ln	23.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	718.5	1307.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.41	4.72
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2289	vph	2275	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	622		618	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1244	pcphpl	824	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1244	pcphpl	824	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		B	
Density, D	22.6	pc/mi/ln	15.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1244.0	824.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.49	4.48
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1840	vph	3417	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	500		929	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	999	pcphpl	1238	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	999	pcphpl	1238	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	18.2	pc/mi/ln	22.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1000.0	1238.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.58	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3469	vph	2985	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	943		811	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1256	pcphpl	1081	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1256	pcphpl	1081	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	22.8	pc/mi/ln	19.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1256.9	1081.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.70	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2791	vph	4531	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	758		1231	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1011	pcphpl	1641	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1011	pcphpl	1641	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.1	mph
Level of service, LOS	C		D	
Density, D	18.4	pc/mi/ln	30.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1011.2	1641.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.59	4.83
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3396	vph	2985	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	923		811	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1230	pcphpl	1081	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1230	pcphpl	1081	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	22.4	pc/mi/ln	19.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1230.4	1081.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.69	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2605	vph	4531	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	708		1231	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	943	pcphpl	1641	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	943	pcphpl	1641	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.1	mph
Level of service, LOS	B		D	
Density, D	17.1	pc/mi/ln	30.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	943.8	1641.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.76	4.83
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3683	vph	3076	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1001		836	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1334	pcphpl	1114	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1334	pcphpl	1114	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	24.3	pc/mi/ln	20.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1334.4	1114.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.73	4.64
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2863	vph	4646	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	778		1262	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1037	pcphpl	1683	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1037	pcphpl	1683	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	53.8	mph
Level of service, LOS	C		D	
Density, D	18.9	pc/mi/ln	31.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1037.3	1683.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.60	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4508	vph	3619	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1225		983	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1633	pcphpl	1311	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1633	pcphpl	1311	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.1	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	30.2	pc/mi/ln	23.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1633.3	1311.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.83	4.72
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3440	vph	5586	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	935		1518	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1246	pcphpl	2023	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1246	pcphpl	2023	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	51.8	mph
Level of service, LOS	C		E	
Density, D	22.7	pc/mi/ln	39.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1246.4	2023.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.69	4.94
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off/ Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4352	vph	3490	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1183		948	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1576	pcphpl	1264	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1576	pcphpl	1264	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.4	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	29.0	pc/mi/ln	23.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1576.8	1264.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.81	4.70
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off/ Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3207	vph	5382	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	871		1462	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1161	pcphpl	1949	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1161	pcphpl	1949	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.3	mph
Level of service, LOS	C		E	
Density, D	21.1	pc/mi/ln	37.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1162.0	1950.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.66	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4472	vph	3596	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1215		977	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1620	pcphpl	1302	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1620	pcphpl	1302	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.2	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	29.9	pc/mi/ln	23.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1620.3	1302.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.83	4.72
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3352	vph	5545	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	911		1507	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1214	pcphpl	2009	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1214	pcphpl	2009	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	51.8	mph
Level of service, LOS	C		E	
Density, D	22.1	pc/mi/ln	38.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1214.5	2009.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.68	4.94
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off/ Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4396	vph	3511	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1195		954	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1592	pcphpl	1272	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1592	pcphpl	1272	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.3	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	29.3	pc/mi/ln	23.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1592.8	1272.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.82	4.70
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off/ Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3292	vph	5470	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	895		1486	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1192	pcphpl	1981	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1192	pcphpl	1981	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.0	mph
Level of service, LOS	C		E	
Density, D	21.7	pc/mi/ln	38.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1192.8	1981.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.67	4.93
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4662	vph	3893	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1267		1058	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1689	pcphpl	1410	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1689	pcphpl	1410	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	53.8	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	31.4	pc/mi/ln	25.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1689.1	1410.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.85	4.76
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3585	vph	6034	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	974		1640	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1298	pcphpl	2186	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1298	pcphpl	2186	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	23.6	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1298.9	2186.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.71	4.98
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off/ Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4620	vph	3764	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1255		1023	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1673	pcphpl	1363	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1673	pcphpl	1363	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	53.9	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	31.0	pc/mi/ln	24.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1673.9	1363.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.84	4.74
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off/ Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3432	vph	5920	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	933		1609	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1243	pcphpl	2144	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1243	pcphpl	2144	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	22.6	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1243.5	2144.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.69	4.97
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5260	vph	4174	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1429		1134	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1905	pcphpl	1512	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1905	pcphpl	1512	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	52.5	mph	54.7	mph
Level of service, LOS	E		D	
Density, D	36.3	pc/mi/ln	27.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1905.8	1512.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.91	4.79
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3929	vph	6581	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1068		1788	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1423	pcphpl	2384	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1423	pcphpl	2384	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	25.9	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1423.6	2384.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.76	5.02
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off/ Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5073	vph	4050	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1379		1101	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1838	pcphpl	1467	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1838	pcphpl	1467	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	53.0	mph	54.8	mph
Level of service, LOS	D		D	
Density, D	34.7	pc/mi/ln	26.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1838.0	1467.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.89	4.78
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off/ Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3808	vph	6464	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1035		1757	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1379	pcphpl	2342	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1379	pcphpl	2342	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	25.1	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1379.7	2342.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.75	5.01
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5509	vph	4343	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1497		1180	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1996	pcphpl	1573	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1996	pcphpl	1573	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	51.9	mph	54.4	mph
Level of service, LOS	E		D	
Density, D	38.4	pc/mi/ln	28.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1996.0	1573.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.93	4.81
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4152	vph	6884	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1128		1871	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1504	pcphpl	2494	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1504	pcphpl	2494	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.7	mph		mph
Level of service, LOS	D		F	
Density, D	27.5	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1504.3	2494.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.79	5.05
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3852	vph	3198	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1047		869	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1395	pcphpl	1158	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1395	pcphpl	1158	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	25.4	pc/mi/ln	21.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1395.7	1158.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.75	4.66
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3082	vph	4967	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	837		1350	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1116	pcphpl	1799	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1116	pcphpl	1799	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	53.2	mph
Level of service, LOS	C		D	
Density, D	20.3	pc/mi/ln	33.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1116.7	1799.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.64	4.88
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3631	vph	3123	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	987		849	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1315	pcphpl	1131	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1315	pcphpl	1131	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	23.9	pc/mi/ln	20.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1315.6	1131.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.72	4.65
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2920	vph	4910	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	793		1334	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1057	pcphpl	1778	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1057	pcphpl	1778	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	53.3	mph
Level of service, LOS	C		D	
Density, D	19.2	pc/mi/ln	33.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1058.0	1779.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.61	4.87
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5 / Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Future Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	1		1	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.3	mph	0.3	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4567	vph	3647	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1241		991	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1654	pcphpl	1321	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1654	pcphpl	1321	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.0	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	30.6	pc/mi/ln	24.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1654.7	1321.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.84	4.72
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5 / Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Future Without Project (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	1		1	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.3	mph	0.3	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3611	vph	5758	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	981		1565	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1308	pcphpl	2086	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1308	pcphpl	2086	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	51.3	mph
Level of service, LOS	C		E	
Density, D	23.8	pc/mi/ln	40.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1308.3	2086.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.72	4.96
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Solano Ave/I-5 & Riverside Dr
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	5985	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1626	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1626	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1626	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	29.6	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Solano Ave/I-5 & Riverside Dr
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	9695	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2635	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2635	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2635	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	37.8	mi/h
Number of lanes, N	4	
Density, D	69.7	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	8716	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2368	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1895	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1895	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	5	
Density, D	34.6	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	6483	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1762	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1409	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1409	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	6106	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1659	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1659	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1659	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	30.2	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	9703	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2637	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2637	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2637	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	37.7	mi/h
Number of lanes, N	4	
Density, D	69.9	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	8826	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2398	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1919	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1919	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.7	mi/h
Number of lanes, N	5	
Density, D	35.1	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	6563	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1783	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1427	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1427	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.9	pc/mi/ln
Level of service, LOS	C	

APPENDIX D

HCS ANALYSIS - MAINLINE

FUTURE (YEAR 2035) WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	1431	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	389	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	389	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	389	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	7.1	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	1245	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	338	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	338	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	338	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	6.1	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1363	vph	1711	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	370		465	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	493	pcphpl	619	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	493	pcphpl	619	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		B	
Density, D	9.0	pc/mi/ln	11.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	493.8	619.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.22	4.34
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1240	vph	2469	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	337		671	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	449	pcphpl	894	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	449	pcphpl	894	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		B	
Density, D	8.2	pc/mi/ln	16.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	449.3	894.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.18	4.53
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2273	vph	2403	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	618		653	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	823	pcphpl	870	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	823	pcphpl	870	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		B	
Density, D	15.0	pc/mi/ln	15.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	823.6	870.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.48	4.51
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1991	vph	3529	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	541		959	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	721	pcphpl	1278	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	721	pcphpl	1278	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		C	
Density, D	13.1	pc/mi/ln	23.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	721.4	1278.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.42	4.71
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2187	vph	2246	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	594		610	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1188	pcphpl	813	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1188	pcphpl	813	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		B	
Density, D	21.6	pc/mi/ln	14.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1188.6	813.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.67	4.48
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1845	vph	3396	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	501		923	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1002	pcphpl	1230	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1002	pcphpl	1230	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	18.2	pc/mi/ln	22.4	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1002.7	1230.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.58	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3378	vph	2954	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	918		803	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1223	pcphpl	1070	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1223	pcphpl	1070	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	22.2	pc/mi/ln	19.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1223.9	1070.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.68	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2844	vph	4485	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	773		1219	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1030	pcphpl	1624	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1030	pcphpl	1624	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.2	mph
Level of service, LOS	C		D	
Density, D	18.7	pc/mi/ln	30.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1030.4	1625.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.60	4.83
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3301	vph	2954	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	897		803	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1196	pcphpl	1070	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1196	pcphpl	1070	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	21.7	pc/mi/ln	19.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1196.0	1070.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.67	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Av off/on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2673	vph	4485	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	726		1219	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	968	pcphpl	1624	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	968	pcphpl	1624	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.2	mph
Level of service, LOS	B		D	
Density, D	17.6	pc/mi/ln	30.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	968.5	1625.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.57	4.83
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3538	vph	3035	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	961		825	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1281	pcphpl	1099	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1281	pcphpl	1099	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	23.3	pc/mi/ln	20.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1281.9	1099.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.71	4.63
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2900	vph	4560	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	788		1239	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1050	pcphpl	1652	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1050	pcphpl	1652	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	54.0	mph
Level of service, LOS	C		D	
Density, D	19.1	pc/mi/ln	30.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1050.7	1652.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.61	4.84
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4320	vph	3564	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1174		968	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1565	pcphpl	1291	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1565	pcphpl	1291	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.4	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	28.8	pc/mi/ln	23.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1565.2	1291.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.81	4.71
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3428	vph	5478	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	932		1489	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1242	pcphpl	1984	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1242	pcphpl	1984	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.0	mph
Level of service, LOS	C		E	
Density, D	22.6	pc/mi/ln	38.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1242.0	1984.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.69	4.93
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off/ Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4199	vph	3504	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1141		952	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1521	pcphpl	1269	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1521	pcphpl	1269	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.6	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	27.8	pc/mi/ln	23.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1521.4	1269.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.79	4.70
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off/ Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3236	vph	5343	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	879		1452	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1172	pcphpl	1935	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1172	pcphpl	1935	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.3	mph
Level of service, LOS	C		E	
Density, D	21.3	pc/mi/ln	37.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1172.5	1935.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.66	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4342	vph	3614	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1180		982	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1573	pcphpl	1309	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1573	pcphpl	1309	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.4	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	28.9	pc/mi/ln	23.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1573.2	1309.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.81	4.72
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3386	vph	5484	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	920		1490	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1226	pcphpl	1986	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1226	pcphpl	1986	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.0	mph
Level of service, LOS	C		E	
Density, D	22.3	pc/mi/ln	38.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1226.8	1987.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.69	4.93
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off/ Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4262	vph	3510	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1158		954	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1544	pcphpl	1271	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1544	pcphpl	1271	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.5	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	28.3	pc/mi/ln	23.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1544.2	1271.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.80	4.70
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off/ Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3308	vph	5408	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	899		1470	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1198	pcphpl	1959	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1198	pcphpl	1959	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	52.2	mph
Level of service, LOS	C		E	
Density, D	21.8	pc/mi/ln	37.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1198.6	1959.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.67	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4517	vph	3896	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1227		1059	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1636	pcphpl	1411	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1636	pcphpl	1411	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.1	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	30.2	pc/mi/ln	25.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1636.6	1411.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.83	4.76
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3624	vph	5956	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	985		1618	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1313	pcphpl	2157	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1313	pcphpl	2157	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	23.9	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1313.0	2158.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.72	4.97
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off/ Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4529	vph	3745	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1231		1018	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1640	pcphpl	1356	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1640	pcphpl	1356	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.1	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	30.3	pc/mi/ln	24.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1640.9	1356.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.83	4.74
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off/ Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3462	vph	5873	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	941		1596	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1254	pcphpl	2127	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1254	pcphpl	2127	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	22.8	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1254.3	2127.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.70	4.97
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5152	vph	4162	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1400		1131	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1866	pcphpl	1507	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1866	pcphpl	1507	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	52.8	mph	54.7	mph
Level of service, LOS	E		D	
Density, D	35.4	pc/mi/ln	27.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1866.7	1508.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.90	4.79
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3948	vph	6502	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1073		1767	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1430	pcphpl	2355	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1430	pcphpl	2355	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.9	mph		mph
Level of service, LOS	D		F	
Density, D	26.0+	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1430.4	2355.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.76	5.02
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off/ Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4963	vph	4040	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1349		1098	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1798	pcphpl	1463	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1798	pcphpl	1463	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	53.2	mph	54.8	mph
Level of service, LOS	D		D	
Density, D	33.8	pc/mi/ln	26.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1798.2	1463.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.88	4.78
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off/ Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3853	vph	6377	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1047		1733	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1396	pcphpl	2310	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1396	pcphpl	2310	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph		mph
Level of service, LOS	C		F	
Density, D	25.4	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1396.0	2310.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.75	5.01
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	5403	vph	4359	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1468		1185	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1957	pcphpl	1579	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1957	pcphpl	1579	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	52.2	mph	54.4	mph
Level of service, LOS	E		D	
Density, D	37.5	pc/mi/ln	29.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1957.6	1579.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.92	4.81
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4208	vph	6791	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1143		1845	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1524	pcphpl	2460	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1524	pcphpl	2460	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.6	mph		mph
Level of service, LOS	D		F	
Density, D	27.9	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1524.6	2460.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.80	5.04
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3830	vph	3263	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1041		887	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1387	pcphpl	1182	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1387	pcphpl	1182	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	25.2	pc/mi/ln	21.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1387.7	1182.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.75	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3129	vph	5011	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	850		1362	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1133	pcphpl	1815	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1133	pcphpl	1815	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	53.1	mph
Level of service, LOS	C		D	
Density, D	20.6	pc/mi/ln	34.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1133.7	1815.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.65	4.88
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3622	vph	3189	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	984		867	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1312	pcphpl	1155	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1312	pcphpl	1155	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	C		C	
Density, D	23.9	pc/mi/ln	21.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1312.3	1155.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.72	4.66
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	2971	vph	4881	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	807		1326	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1076	pcphpl	1768	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1076	pcphpl	1768	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	53.4	mph
Level of service, LOS	C		D	
Density, D	19.6	pc/mi/ln	33.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1076.4	1768.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.62	4.87
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5 / Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Future Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	1		1	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.3	mph	0.3	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	4554	vph	3717	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1237		1010	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1649	pcphpl	1346	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1649	pcphpl	1346	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	54.0	mph	55.0	mph
Level of service, LOS	D		C	
Density, D	30.5	pc/mi/ln	24.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1650.0	1346.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.84	4.73
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5 / Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Future Without Project (With I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	1		1	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.3	mph	0.3	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	3670	vph	5723	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	997		1555	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1329	pcphpl	2073	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1329	pcphpl	2073	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	51.4	mph
Level of service, LOS	C		E	
Density, D	24.2	pc/mi/ln	40.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1329.7	2073.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	4.73	4.95
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Solano Ave/I-5 & Riverside Dr
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	6083	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1653	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1653	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1653	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Solano Ave/I-5 & Riverside Dr
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	9713	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2639	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2639	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2639	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	37.6	mi/h
Number of lanes, N	4	
Density, D	70.1	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	8627	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2344	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1875	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1875	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	34.2	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	6519	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1771	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1417	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1417	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	6158	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1673	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1673	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1673	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	30.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	9731	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2644	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2644	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2644	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	37.4	mi/h
Number of lanes, N	4	
Density, D	70.7	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	8585	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2333	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1866	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1866	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	34.0	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With I-710)

Flow Inputs and Adjustments

Volume, V	6446	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1752	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1401	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1401	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

APPENDIX D

HCS ANALYSIS - MAINLINE

CONCEPT 1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	1336	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	363	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	363	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	363	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	6.6	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	1114	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	303	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	303	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	303	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.5	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1166	vph	1575	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	317		428	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	422	pcphpl	570	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	422	pcphpl	570	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	9.4	pc/mi/ln	12.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	422.5	570.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.07	4.22
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No I-710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	988	vph	2360	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	268		641	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	357	pcphpl	855	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	357	pcphpl	855	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		C	
Density, D	7.9	pc/mi/ln	19.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	358.0	855.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	3.99	4.43
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1829	vph	2014	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	497		547	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	662	pcphpl	729	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	662	pcphpl	729	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		B	
Density, D	14.7	pc/mi/ln	16.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	662.7	729.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.30	4.35
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1590	vph	3020	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	432		821	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	576	pcphpl	1094	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	576	pcphpl	1094	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		C	
Density, D	12.8	pc/mi/ln	24.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	576.1	1094.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.23	4.55
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Ave off / on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1707	vph	1871	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	464		508	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	927	pcphpl	1016	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	927	pcphpl	1016	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	20.6	pc/mi/ln	22.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	927.7	1016.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.47	4.31
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Ave off / on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1348	vph	2826	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	366		768	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	732	pcphpl	1535	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	732	pcphpl	1535	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.5	mph
Level of service, LOS	B		D	
Density, D	16.3	pc/mi/ln	34.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	732.6	1535.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.35	4.52
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2863	vph	2553	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	778		694	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1037	pcphpl	924	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1037	pcphpl	924	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	23.0	pc/mi/ln	20.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1037.3	925.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.53	4.47
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2252	vph	3860	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	612		1049	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	815	pcphpl	1398	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	815	pcphpl	1398	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		D	
Density, D	18.1	pc/mi/ln	31.1	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	815.9	1398.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.40	4.68
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Ave off / York Ave on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2771	vph	2553	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	753		694	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1505	pcphpl	924	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1505	pcphpl	924	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.6	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	33.7	pc/mi/ln	20.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1506.0	925.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.71	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Ave off / York Ave on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2065	vph	3860	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	561		1049	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1122	pcphpl	1398	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1122	pcphpl	1398	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		D	
Density, D	24.9	pc/mi/ln	31.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1122.3	1398.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.57	4.68
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3059	vph	2572	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	831		699	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1662	pcphpl	931	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1662	pcphpl	931	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.8	mph	45.0	mph
Level of service, LOS	E		C	
Density, D	37.9	pc/mi/ln	20.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1662.5	931.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.76	4.47
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2301	vph	3934	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	625		1069	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1250	pcphpl	1425	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1250	pcphpl	1425	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.9	mph
Level of service, LOS	D		D	
Density, D	27.8	pc/mi/ln	31.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1250.5	1425.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.62	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3799	vph	3131	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1032		851	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1376	pcphpl	1134	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1376	pcphpl	1134	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	30.6	pc/mi/ln	25.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1376.4	1134.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.67	4.57
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2791	vph	4862	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	758		1321	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1011	pcphpl	1761	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1011	pcphpl	1761	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.2	mph
Level of service, LOS	C		E	
Density, D	22.5	pc/mi/ln	40.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1011.2	1761.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.79
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off / Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3660	vph	3014	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	995		819	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1989	pcphpl	1638	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1989	pcphpl	1638	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph	43.9	mph
Level of service, LOS	F		E	
Density, D		pc/mi/ln	37.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1989.1	1638.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.86	4.76
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off / Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2645	vph	4663	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	719		1267	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1437	pcphpl	2534	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1437	pcphpl	2534	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.9	mph		mph
Level of service, LOS	D		F	
Density, D	32.0	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1437.5	2534.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.69	4.98
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3752	vph	3117	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1020		847	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1359	pcphpl	1129	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1359	pcphpl	1129	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	30.2	pc/mi/ln	25.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1359.4	1129.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.66	4.57
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2793	vph	4794	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	759		1303	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1011	pcphpl	1736	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1011	pcphpl	1736	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.3	mph
Level of service, LOS	C		E	
Density, D	22.5	pc/mi/ln	40.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1012.0	1737.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.79
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off / Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3678	vph	3052	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	999		829	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1998	pcphpl	1658	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1998	pcphpl	1658	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph	43.8	mph
Level of service, LOS	F		E	
Density, D		pc/mi/ln	37.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1998.9	1658.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.86	4.76
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off / Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2731	vph	4729	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	742		1285	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1484	pcphpl	2570	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1484	pcphpl	2570	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.7	mph		mph
Level of service, LOS	D		F	
Density, D	33.2	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1484.2	2570.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.71	4.99
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3988	vph	3469	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1084		943	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1444	pcphpl	1256	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1444	pcphpl	1256	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.9	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	32.2	pc/mi/ln	27.9	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1444.9	1256.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.69	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3116	vph	5286	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	847		1436	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1128	pcphpl	1915	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1128	pcphpl	1915	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	C		F	
Density, D	25.1	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1129.0	1915.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.57	4.84
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off / Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3959	vph	3329	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1076		905	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	2151	pcphpl	1809	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2151	pcphpl	1809	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph	42.9	mph
Level of service, LOS	F		E	
Density, D		pc/mi/ln	42.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	2151.6	1809.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.90	4.81
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off / Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2916	vph	5144	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	792		1398	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1584	pcphpl	2795	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1584	pcphpl	2795	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.2	mph		mph
Level of service, LOS	E		F	
Density, D	35.8	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1584.8	2795.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.74	5.03
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4462	vph	3699	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1212		1005	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1616	pcphpl	1340	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1616	pcphpl	1340	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.1	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	36.7	pc/mi/ln	29.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1616.7	1340.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.75	4.66
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3336	vph	5741	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	907		1560	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1208	pcphpl	2080	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1208	pcphpl	2080	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	26.8	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1208.7	2080.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.60	4.88
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off / Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4328	vph	3684	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1176		1001	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	2352	pcphpl	2002	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2352	pcphpl	2002	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph		mph
Level of service, LOS	F		F	
Density, D		pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	2352.2	2002.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.73	4.65
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off / Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3331	vph	5736	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	905		1559	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1810	pcphpl	3117	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1810	pcphpl	3117	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	42.9	mph		mph
Level of service, LOS	E		F	
Density, D	42.2	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1810.3	3117.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.81	5.08
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4764	vph	3962	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1295		1077	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1726	pcphpl	1435	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1726	pcphpl	1435	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.4	mph	44.9	mph
Level of service, LOS	E		D	
Density, D	39.8	pc/mi/ln	31.9	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1726.1	1435.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.78	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3638	vph	6135	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	989		1667	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1318	pcphpl	2222	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1318	pcphpl	2222	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	29.3	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1318.1	2222.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.65	4.91
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3498	vph	2969	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	951		807	
Trucks and buses	5	%	5	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.976		0.976	
Flow rate, vp	1299	pcphpl	1102	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1299	pcphpl	1102	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	28.9	pc/mi/ln	24.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1267.4	1075.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	5.95	5.87
Bicycle LOS	F	F

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2770	vph	4631	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	753		1258	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1003	pcphpl	1677	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1003	pcphpl	1677	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.7	mph
Level of service, LOS	C		E	
Density, D	22.3	pc/mi/ln	38.4	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1003.6	1677.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.77
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3296	vph	2897	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	896		787	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1194	pcphpl	1049	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1194	pcphpl	1049	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	26.5	pc/mi/ln	23.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1194.2	1049.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.60	4.53
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2627	vph	4514	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	714		1227	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	951	pcphpl	1635	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	951	pcphpl	1635	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.0	mph
Level of service, LOS	C		E	
Density, D	21.1	pc/mi/ln	37.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	951.8	1635.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.48	4.76
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4275	vph	3435	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1162		933	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1548	pcphpl	1244	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1548	pcphpl	1244	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.4	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	34.8	pc/mi/ln	27.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1548.9	1244.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.73	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (No 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3365	vph	5396	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	914		1466	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1219	pcphpl	1955	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1219	pcphpl	1955	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	27.1	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1219.2	1955.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.61	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	5821	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1582	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1582	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1582	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	28.8	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	9463	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2571	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2571	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2571	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	40.3	mi/h
Number of lanes, N	4	
Density, D	63.8	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	8457	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2298	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1838	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1838	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	33.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	6274	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1705	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1364	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1364	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	24.8	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	8440	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2293	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1835	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1835	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	33.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	6224	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1691	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1353	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1353	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	6010	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1633	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1633	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1633	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	29.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Flow Inputs and Adjustments

Volume, V	9620	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2614	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2614	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2614	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	38.6	mi/h
Number of lanes, N	4	
Density, D	67.6	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	8686	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2360	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1888	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1888	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	5	
Density, D	34.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No I-710)

Flow Inputs and Adjustments

Volume, V	6418	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1744	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1395	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1395	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.4	pc/mi/ln
Level of service, LOS	C	

APPENDIX D

HCS ANALYSIS - MAINLINE

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	1065	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	289	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	289	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	289	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.3	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	974	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	265	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	265	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	265	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	4.8	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	975	vph	1454	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	265		395	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	353	pcphpl	526	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	353	pcphpl	526	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	7.8	pc/mi/ln	11.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	353.3	526.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	3.98	4.18
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	918	vph	2084	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	249		566	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	332	pcphpl	755	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	332	pcphpl	755	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	7.4	pc/mi/ln	16.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	332.6	755.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	3.95	4.36
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1787	vph	1987	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	486		540	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	647	pcphpl	719	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	647	pcphpl	719	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		B	
Density, D	14.4	pc/mi/ln	16.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	647.5	719.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.29	4.34
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1566	vph	2918	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	426		793	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	567	pcphpl	1057	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	567	pcphpl	1057	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		C	
Density, D	12.6	pc/mi/ln	23.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	567.4	1057.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.22	4.54
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Ave off / on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1691	vph	1835	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	460		499	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	919	pcphpl	997	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	919	pcphpl	997	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	20.4	pc/mi/ln	22.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	919.0	997.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.46	4.51
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove Ave off / on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1332	vph	2788	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	362		758	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	723	pcphpl	1515	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	723	pcphpl	1515	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.6	mph
Level of service, LOS	B		D	
Density, D	16.1	pc/mi/ln	34.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	723.9	1515.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.34	4.72
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2830	vph	2510	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	769		682	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1025	pcphpl	909	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1025	pcphpl	909	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	22.8	pc/mi/ln	20.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1025.4	909.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.52	4.46
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2284	vph	3791	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	621		1030	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	827	pcphpl	1373	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	827	pcphpl	1373	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		D	
Density, D	18.4	pc/mi/ln	30.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	827.5	1373.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.41	4.67
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Blvd off / York Blvd on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2736	vph	2510	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	743		682	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1486	pcphpl	909	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1486	pcphpl	909	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.7	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	33.2	pc/mi/ln	20.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1487.0	909.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.71	4.46
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York Blvd off / York Blvd on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2098	vph	3791	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	570		1030	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1140	pcphpl	1373	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1140	pcphpl	1373	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		D	
Density, D	25.3	pc/mi/ln	30.5	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1140.2	1373.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.57	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2947	vph	2521	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	801		685	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1601	pcphpl	913	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1601	pcphpl	913	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.2	mph	45.0	mph
Level of service, LOS	E		C	
Density, D	36.3	pc/mi/ln	20.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1601.6	913.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.75	4.46
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2303	vph	3840	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	626		1043	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1251	pcphpl	1391	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1251	pcphpl	1391	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	27.8	pc/mi/ln	30.9	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1251.6	1391.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.62	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3629	vph	3050	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	986		829	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1314	pcphpl	1105	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1314	pcphpl	1105	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	29.2	pc/mi/ln	24.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1314.9	1105.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.65	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2737	vph	4731	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	744		1286	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	991	pcphpl	1714	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	991	pcphpl	1714	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.5	mph
Level of service, LOS	C		E	
Density, D	22.0	pc/mi/ln	39.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	991.7	1714.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.50	4.78
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off / Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3514	vph	2998	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	955		815	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1909	pcphpl	1629	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1909	pcphpl	1629	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph	44.0	mph
Level of service, LOS	F		E	
Density, D		pc/mi/ln	37.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1909.8	1629.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.84	4.75
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 off / Ave 60 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2646	vph	4618	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	719		1255	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1438	pcphpl	2509	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1438	pcphpl	2509	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.9	mph		mph
Level of service, LOS	D		F	
Density, D	32.0	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1438.0	2509.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.69	4.97
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3625	vph	3105	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	985		844	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1313	pcphpl	1124	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1313	pcphpl	1124	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	29.2	pc/mi/ln	25.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1313.4	1125.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.64	4.57
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2789	vph	4730	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	758		1285	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1010	pcphpl	1713	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1010	pcphpl	1713	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.5	mph
Level of service, LOS	C		E	
Density, D	22.4	pc/mi/ln	39.4	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1010.5	1713.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.78
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off / Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3551	vph	3026	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	965		822	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1929	pcphpl	1644	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1929	pcphpl	1644	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph	43.9	mph
Level of service, LOS	F		E	
Density, D		pc/mi/ln	37.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1929.9	1644.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.84	4.76
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57 off / Ave 57 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2710	vph	4664	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	736		1267	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1472	pcphpl	2534	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1472	pcphpl	2534	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.8	mph		mph
Level of service, LOS	D		F	
Density, D	32.9	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1472.8	2534.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.70	4.98
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3835	vph	3443	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1042		936	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1389	pcphpl	1247	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1389	pcphpl	1247	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	30.9	pc/mi/ln	27.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1389.5	1247.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.67	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3129	vph	5207	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	850		1415	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1133	pcphpl	1886	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1133	pcphpl	1886	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	42.3	mph
Level of service, LOS	C		E	
Density, D	25.2	pc/mi/ln	44.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1133.7	1886.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.57	4.83
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off / Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3830	vph	3292	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1041		895	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	2081	pcphpl	1789	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2081	pcphpl	1789	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph	43.0	mph
Level of service, LOS	F		E	
Density, D		pc/mi/ln	41.6	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	2081.5	1789.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.88	4.80
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 off / Ave 52 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2948	vph	5087	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	801		1382	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1602	pcphpl	2764	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1602	pcphpl	2764	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.2	mph		mph
Level of service, LOS	E		F	
Density, D	36.3	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1602.2	2764.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.75	5.02
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4370	vph	3665	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1187		996	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1583	pcphpl	1327	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1583	pcphpl	1327	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.3	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	35.8	pc/mi/ln	29.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1583.3	1327.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.74	4.65
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3371	vph	5660	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	916		1538	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1221	pcphpl	2050	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1221	pcphpl	2050	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	27.1	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1221.4	2050.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.61	4.87
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off / Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4234	vph	3640	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1151		989	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	2301	pcphpl	1978	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2301	pcphpl	1978	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		mph		mph
Level of service, LOS	F		F	
Density, D		pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	2301.1	1978.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.93	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 off / Ave 43 on
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	3.6	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3368	vph	5622	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	915		1528	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1830	pcphpl	3055	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1830	pcphpl	3055	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	42.7	mph		mph
Level of service, LOS	E		F	
Density, D	42.8	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1830.4	3055.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.81	5.07
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4663	vph	3930	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1267		1068	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1689	pcphpl	1423	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1689	pcphpl	1423	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.6	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	38.7	pc/mi/ln	31.7	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1689.5	1423.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.77	4.69
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3679	vph	6022	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1000		1636	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1332	pcphpl	2181	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1332	pcphpl	2181	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	29.6	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1333.0	2181.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.65	4.90
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3458	vph	2998	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	940		815	
Trucks and buses	5	%	5	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.976		0.976	
Flow rate, vp	1284	pcphpl	1113	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1284	pcphpl	1113	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	28.5	pc/mi/ln	24.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1252.9	1086.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	5.95	5.88
Bicycle LOS	F	F

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2800	vph	4638	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	761		1260	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1014	pcphpl	1680	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1014	pcphpl	1680	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.7	mph
Level of service, LOS	C		E	
Density, D	22.5	pc/mi/ln	38.4	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1014.5	1680.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.77
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3258	vph	2926	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	885		795	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1180	pcphpl	1060	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1180	pcphpl	1060	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	26.2	pc/mi/ln	23.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1180.4	1060.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.59	4.54
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2659	vph	4516	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	723		1227	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	963	pcphpl	1636	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	963	pcphpl	1636	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.0	mph
Level of service, LOS	C		E	
Density, D	21.4	pc/mi/ln	37.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp		45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	963.4	1636.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.49	4.76
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4231	vph	3478	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1150		945	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1532	pcphpl	1260	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1532	pcphpl	1260	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.5	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	34.4	pc/mi/ln	28.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1533.0	1260.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.72	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 1 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3398	vph	5390	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	923		1465	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1231	pcphpl	1952	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1231	pcphpl	1952	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	27.4	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1231.2	1952.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.61	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	5898	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1603	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1603	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1603	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	29.1	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	9465	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2572	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2572	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2572	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	40.3	mi/h
Number of lanes, N	4	
Density, D	63.8	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	8435	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2292	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1834	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1834	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	33.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	6335	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1721	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1377	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1377	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.0	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	8430	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2291	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1833	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1833	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	33.3	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	6282	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1707	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1366	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1366	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	24.8	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	6008	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1633	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1633	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1633	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	29.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	9653	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2623	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2623	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2623	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	38.3	mi/h
Number of lanes, N	4	
Density, D	68.5	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	8628	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2345	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1876	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1876	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	34.2	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	6426	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1746	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1397	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1397	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.4	pc/mi/ln
Level of service, LOS	C	

APPENDIX D

HCS ANALYSIS - MAINLINE

CONCEPT 2

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	1157	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	314	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	314	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	314	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.7	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	1017	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	276	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	276	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	276	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.0	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1072	vph	1462	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	291		397	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	388	pcphpl	529	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	388	pcphpl	529	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	8.6	pc/mi/ln	11.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	388.4	529.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.03	4.19
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	988	vph	2154	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	268		585	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	357	pcphpl	780	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	357	pcphpl	780	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	7.9	pc/mi/ln	17.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	358.0	780.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	3.99	4.38
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1903	vph	2008	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	517		546	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	689	pcphpl	727	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	689	pcphpl	727	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		B	
Density, D	15.3	pc/mi/ln	16.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	689.5	727.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.32	4.35
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1680	vph	3181	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	457		864	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	608	pcphpl	1152	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	608	pcphpl	1152	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		C	
Density, D	13.5	pc/mi/ln	25.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	608.7	1152.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.26	4.58
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2992	vph	2533	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	813		688	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1084	pcphpl	917	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1084	pcphpl	917	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	24.1	pc/mi/ln	20.4	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1084.1	917.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.55	4.46
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2470	vph	4096	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	671		1113	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	894	pcphpl	1484	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	894	pcphpl	1484	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	C		D	
Density, D	19.9	pc/mi/ln	33.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	894.9	1484.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.45	4.71
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3144	vph	2546	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	854		692	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1708	pcphpl	922	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1708	pcphpl	922	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.5	mph	45.0	mph
Level of service, LOS	E		C	
Density, D	39.2	pc/mi/ln	20.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1708.7	922.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.78	4.47
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2514	vph	4156	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	683		1129	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1366	pcphpl	1505	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1366	pcphpl	1505	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.6	mph
Level of service, LOS	D		D	
Density, D	30.4	pc/mi/ln	33.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1366.3	1505.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.67	4.71
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3903	vph	3085	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1061		838	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1414	pcphpl	1117	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1414	pcphpl	1117	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	31.4	pc/mi/ln	24.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1414.1	1117.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.68	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2988	vph	5068	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	812		1377	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1082	pcphpl	1836	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1082	pcphpl	1836	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	42.7	mph
Level of service, LOS	C		E	
Density, D	24.0	pc/mi/ln	43.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1082.6	1836.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.55	4.81
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3904	vph	3061	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1061		832	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1414	pcphpl	1109	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1414	pcphpl	1109	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	31.4	pc/mi/ln	24.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1414.5	1109.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.68	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3015	vph	4963	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	819		1349	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1092	pcphpl	1798	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1092	pcphpl	1798	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	42.9	mph
Level of service, LOS	C		E	
Density, D	24.3	pc/mi/ln	41.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1092.4	1798.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.55	4.80
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4151	vph	3417	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1128		929	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1503	pcphpl	1238	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1503	pcphpl	1238	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.6	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	33.7	pc/mi/ln	27.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1504.0	1238.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.71	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3298	vph	5449	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	896		1481	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1194	pcphpl	1974	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1194	pcphpl	1974	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	26.5	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1194.9	1974.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.60	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4823	vph	3828	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1311		1040	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1747	pcphpl	1386	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1747	pcphpl	1386	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.3	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	40.4	pc/mi/ln	30.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1747.5	1387.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.79	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3628	vph	6289	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	986		1709	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1314	pcphpl	2278	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1314	pcphpl	2278	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	29.2	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1314.5	2278.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.65	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	5102	vph	4032	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1386		1096	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1848	pcphpl	1460	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1848	pcphpl	1460	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	42.6	mph	44.8	mph
Level of service, LOS	E		D	
Density, D	43.4	pc/mi/ln	32.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1848.6	1460.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.82	4.70
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3933	vph	6472	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1069		1759	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1424	pcphpl	2344	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1424	pcphpl	2344	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.9	mph		mph
Level of service, LOS	D		F	
Density, D	31.7	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1425.0	2344.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.69	4.94
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3642	vph	3047	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	990		828	
Trucks and buses	5	%	5	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.976		0.976	
Flow rate, vp	1352	pcphpl	1131	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1352	pcphpl	1131	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	30.0	pc/mi/ln	25.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1319.6	1104.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	5.98	5.88
Bicycle LOS	F	F

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2933	vph	4722	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	797		1283	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1062	pcphpl	1710	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1062	pcphpl	1710	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.5	mph
Level of service, LOS	C		E	
Density, D	23.6	pc/mi/ln	39.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1062.7	1710.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.54	4.78
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3437	vph	2974	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	934		808	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1245	pcphpl	1077	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1245	pcphpl	1077	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	27.7	pc/mi/ln	23.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1245.3	1077.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.62	4.55
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2780	vph	4598	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	755		1249	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1007	pcphpl	1665	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1007	pcphpl	1665	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.8	mph
Level of service, LOS	C		E	
Density, D	22.4	pc/mi/ln	38.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1007.2	1665.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.77
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4388	vph	3514	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1192		955	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1589	pcphpl	1273	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1589	pcphpl	1273	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.2	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	35.9	pc/mi/ln	28.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1589.9	1273.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.74	4.63
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3498	vph	5431	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	951		1476	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1267	pcphpl	1967	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1267	pcphpl	1967	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	28.2	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1267.4	1967.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.63	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	8563	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2327	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1862	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1862	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	33.9	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	6369	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1731	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1385	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1385	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	8525	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2317	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1853	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1853	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	33.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	6308	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1714	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1371	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1371	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	5912	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1607	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1607	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1607	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	29.2	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	9439	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2565	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2565	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2565	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	40.6	mi/h
Number of lanes, N	4	
Density, D	63.3	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No I-710)

Flow Inputs and Adjustments

Volume, V	6129	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1665	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1665	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1665	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	30.3	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No I-710)

Flow Inputs and Adjustments

Volume, V	9703	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2637	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2637	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2637	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	37.7	mi/h
Number of lanes, N	4	
Density, D	69.9	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	8738	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2374	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1900	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1900	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	5	
Density, D	34.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	6479	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1761	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1408	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1408	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

APPENDIX D

HCS ANALYSIS - MAINLINE

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	1157	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	314	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	314	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	314	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.7	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / SB
From/To:	Upstream of State St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Flow Inputs and Adjustments

Volume, V	1017	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	276	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	276	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	276	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	5.0	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1072	vph	1462	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	291		397	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	388	pcphpl	529	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	388	pcphpl	529	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	8.6	pc/mi/ln	11.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	388.4	529.7
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.03	4.19
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	North of Fair Oaks Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	988	vph	2154	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	268		585	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	357	pcphpl	780	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	357	pcphpl	780	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		B	
Density, D	7.9	pc/mi/ln	17.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	358.0	780.4
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	3.99	4.38
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1903	vph	2008	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	517		546	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	689	pcphpl	727	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	689	pcphpl	727	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		B	
Density, D	15.3	pc/mi/ln	16.2	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	689.5	727.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.32	4.35
Bicycle LOS	D	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Fair Oaks Av / Orange Grove Av
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	1680	vph	3181	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	457		864	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	608	pcphpl	1152	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	608	pcphpl	1152	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	B		C	
Density, D	13.5	pc/mi/ln	25.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	608.7	1152.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.26	4.58
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2992	vph	2533	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	813		688	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1084	pcphpl	917	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1084	pcphpl	917	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	C		C	
Density, D	24.1	pc/mi/ln	20.4	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1084.1	917.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.55	4.46
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Orange Grove/York, Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2470	vph	4096	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	671		1113	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	894	pcphpl	1484	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	894	pcphpl	1484	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	C		D	
Density, D	19.9	pc/mi/ln	33.2	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	894.9	1484.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.45	4.71
Bicycle LOS	D	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3144	vph	2546	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	854		692	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1708	pcphpl	922	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1708	pcphpl	922	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.5	mph	45.0	mph
Level of service, LOS	E		C	
Density, D	39.2	pc/mi/ln	20.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1708.7	922.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.78	4.47
Bicycle LOS	E	D

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	York, Bridewell/Av 64, Marmion
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	3.6	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2514	vph	4156	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	683		1129	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1366	pcphpl	1505	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1366	pcphpl	1505	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.6	mph
Level of service, LOS	D		D	
Density, D	30.4	pc/mi/ln	33.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1366.3	1505.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.67	4.71
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3903	vph	3085	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1061		838	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1414	pcphpl	1117	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1414	pcphpl	1117	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	31.4	pc/mi/ln	24.8	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1414.1	1117.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.68	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 64, Marmion Wy / Ave 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2988	vph	5068	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	812		1377	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1082	pcphpl	1836	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1082	pcphpl	1836	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	42.7	mph
Level of service, LOS	C		E	
Density, D	24.0	pc/mi/ln	43.0	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1082.6	1836.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.55	4.81
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3904	vph	3061	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1061		832	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1414	pcphpl	1109	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1414	pcphpl	1109	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	31.4	pc/mi/ln	24.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1414.5	1109.1
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.68	4.56
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 60 / Ave 57, Via Marisol
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3015	vph	4963	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	819		1349	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1092	pcphpl	1798	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1092	pcphpl	1798	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	42.9	mph
Level of service, LOS	C		E	
Density, D	24.3	pc/mi/ln	41.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1092.4	1798.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.55	4.80
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4151	vph	3417	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1128		929	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1503	pcphpl	1238	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1503	pcphpl	1238	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.6	mph	45.0	mph
Level of service, LOS	D		D	
Density, D	33.7	pc/mi/ln	27.5	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1504.0	1238.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.71	4.62
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 57, Via Marisol / Ave 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3298	vph	5449	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	896		1481	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1194	pcphpl	1974	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1194	pcphpl	1974	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	26.5	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1194.9	1974.3
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.60	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4823	vph	3828	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1311		1040	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1747	pcphpl	1386	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1747	pcphpl	1386	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	43.3	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	40.4	pc/mi/ln	30.8	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1747.5	1387.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.79	4.67
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 52 / Ave 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3628	vph	6289	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	986		1709	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1314	pcphpl	2278	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1314	pcphpl	2278	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	29.2	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1314.5	2278.6
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.65	4.92
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	5102	vph	4032	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1386		1096	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1848	pcphpl	1460	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1848	pcphpl	1460	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	42.6	mph	44.8	mph
Level of service, LOS	E		D	
Density, D	43.4	pc/mi/ln	32.6	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1848.6	1460.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.82	4.70
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Ave 43 / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3933	vph	6472	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1069		1759	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1424	pcphpl	2344	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1424	pcphpl	2344	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.9	mph		mph
Level of service, LOS	D		F	
Density, D	31.7	pc/mi/ln		pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1425.0	2344.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.69	4.94
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3642	vph	3047	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	990		828	
Trucks and buses	5	%	5	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.976		0.976	
Flow rate, vp	1352	pcphpl	1131	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1352	pcphpl	1131	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	30.0	pc/mi/ln	25.1	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1319.6	1104.0
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	5.98	5.88
Bicycle LOS	F	F

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	I-5/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2933	vph	4722	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	797		1283	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1062	pcphpl	1710	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1062	pcphpl	1710	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.5	mph
Level of service, LOS	C		E	
Density, D	23.6	pc/mi/ln	39.3	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1062.7	1710.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.54	4.78
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3437	vph	2974	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	934		808	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1245	pcphpl	1077	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1245	pcphpl	1077	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	D		C	
Density, D	27.7	pc/mi/ln	23.9	pc/mi/ln

Bicycle Level of Service

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1245.3	1077.5
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.62	4.55
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1.SB 2.NB
From/To:	Figueroa St/Ave26,San Fernando
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	2780	vph	4598	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	755		1249	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1007	pcphpl	1665	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1007	pcphpl	1665	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	43.8	mph
Level of service, LOS	C		E	
Density, D	22.4	pc/mi/ln	38.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1007.2	1665.9
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.51	4.77
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	AM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	4388	vph	3514	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	1192		955	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1589	pcphpl	1273	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1589	pcphpl	1273	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	44.2	mph	45.0	mph
Level of service, LOS	E		D	
Density, D	35.9	pc/mi/ln	28.3	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1589.9	1273.2
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.74	4.63
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	L. La Point
Agency/Co:	IBI Group
Date:	4/16/2012
Analysis Period:	PM Peak Hour
Highway:	Arroyo Seco Parkway 1. SB 2.NB
From/To:	Figueroa St / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Project ID:	Alternative 2 (With 710)

FREE-FLOW SPEED

Direction	1		2	
Lane width	11.0	ft	11.0	ft
Lateral clearance:				
Right edge	1.0	ft	1.0	ft
Left edge	1.0	ft	1.0	ft
Total lateral clearance	2.0	ft	2.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	1.9	mph	1.9	mph
Lateral clearance adjustment, FLC	2.8	mph	2.8	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	3498	vph	5431	vph
Peak-hour factor, PHF	0.92		0.92	
Peak 15-minute volume, v15	951		1476	
Trucks and buses	0	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	3		3	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	1.000		1.000	
Flow rate, vp	1267	pcphpl	1967	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1267	pcphpl	1967	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph		mph
Level of service, LOS	D		F	
Density, D	28.2	pc/mi/ln		pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	45	45
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	1267.4	1967.8
Effective width of outside lane, We	12.00	12.00
Effective speed factor, St	4.42	4.42
Bicycle LOS Score, BLOS	4.63	4.85
Bicycle LOS	E	E

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	8563	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2327	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1862	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1862	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	33.9	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	SB I-5 / Academy Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	6369	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1731	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1385	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1385	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	8525	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2317	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1853	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1853	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	5	
Density, D	33.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Academy Rd / Amador St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	6308	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1714	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1371	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1371	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	5912	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1607	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1607	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1607	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	29.2	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Solano Ave / I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	9439	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2565	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2565	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2565	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	40.6	mi/h
Number of lanes, N	4	
Density, D	63.3	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No I-710)

Flow Inputs and Adjustments

Volume, V	6129	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1665	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1665	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1665	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	30.3	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway / NB
From/To:	Upstream of Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No I-710)

Flow Inputs and Adjustments

Volume, V	9703	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2637	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	2637	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2637	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	37.7	mi/h
Number of lanes, N	4	
Density, D	69.9	pc/mi/ln
Level of service, LOS	F	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	8738	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2374	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1900	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1900	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	5	
Density, D	34.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency or Company:	IBI Group
Date Performed:	4/16/2012
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	Arroyo Seco Parkway/SB
From/To:	Downstream of Amador
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With I-710)

Flow Inputs and Adjustments

Volume, V	6479	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1761	v
Trucks and buses	0	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	1.000	
Driver population factor, fp	1.00	
Flow rate, vp	1408	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1408	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

APPENDIX E

HCS ANALYSIS - RAMPS

APPENDIX E

HCS ANALYSIS - RAMPS

EXISTING (YEAR 2011)

MERGE RAMPS

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5726	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	34	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2434	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2020	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5726	34	2434	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1556	9	661	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6224	37	2646	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.213 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1327 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6261	9000	No
v_3 or v_{av34}	2448 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2489 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6261	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.368

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_O = 50.1 mph

Space mean speed for all vehicles, S = 50.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9283	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	33	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	3935	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2020	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9283	33	3935	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2523	9	1069	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10090	36	4277	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.213 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 2152 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10126	9000	Yes
v_3 or v_{av34}	3969 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 4036 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10126	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.548

Space mean speed in ramp influence area, S_R = 47.9 mph

Space mean speed in outer lanes, S_0 = 44.1 mph

Space mean speed for all vehicles, S = 45.5 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2864	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	77	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1208	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2864	77	1208	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	778	21	328	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3113	84	1313	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1800 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3197	6750	No
v_3 or v_{av34}	1313 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1800 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3197	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.0- pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.346

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 52.1 mph

Space mean speed for all vehicles, S = 51.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4633	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	125	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1953	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4633	125	1953	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1259	34	531	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5036	136	2123	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2912 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5172	6750	No
v_3 or v_{av34}	2124 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2912 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5172	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.402

Space mean speed in ramp influence area, S_R = 49.8 mph

Space mean speed in outer lanes, S_0 = 49.2 mph

Space mean speed for all vehicles, S = 49.5 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2941	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1208	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	77	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2941	1208	77	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	799	328	21	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3197	1313	84	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1981 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4510	6750	No
v_3 or v_{av34}	1216 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1981 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4510	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.321	
Space mean speed in ramp influence area,	S_R = 50.8	mph
Space mean speed in outer lanes,	S_0 = 52.4	mph
Space mean speed for all vehicles,	S = 51.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4758	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1953	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	125	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4758	1953	125	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1293	531	34	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5172	2123	136	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3204 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7295	6750	Yes
v_3 or v_{av34}	1968 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3204 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7295	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.019

Space mean speed in ramp influence area, S_R = 41.8 mph

Space mean speed in outer lanes, S_O = 49.7 mph

Space mean speed for all vehicles, S = 43.6 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3875	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	70	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	274	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3875	70	274	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1053	19	74	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4212	76	298	pcph

Estimation of V12 Merge Areas

L_{EQ} = -678.37 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2438 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4288	6750	No
v_3 or v_{av34}	1774 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2438 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4288	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.368

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_O = 50.4 mph

Space mean speed for all vehicles, S = 50.3 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6300	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	82	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	411	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6300	82	411	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1712	22	112	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6848	89	447	pcph

Estimation of V12 Merge Areas

L_{EQ} = -111.48 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3964 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6937	6750	Yes
v_3 or v_{av34}	2884 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4148 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6937	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 38.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.589

Space mean speed in ramp influence area, S_R = 47.3 mph

Space mean speed in outer lanes, S_O = 46.1 mph

Space mean speed for all vehicles, S = 46.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3513	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	109	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	358	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3513	109	358	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	955	30	97	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3818	118	389	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3464.71 (Equation 13-6 or 13-7)

P_{FM} = 0.635 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2426 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3936	6750	No
v_3 or v_{av34}	1392 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2426 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3936	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.370

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_O = 51.8 mph

Space mean speed for all vehicles, S = 50.7 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5761	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	98	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	543	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5761	98	543	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1565	27	148	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6262	107	590	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5254.95 (Equation 13-6 or 13-7)

P_{FM} = 0.680 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4259 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6369	6750	No
v_3 or v_{av34}	2003 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4259 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6369	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 39.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.627

Space mean speed in ramp influence area, S_R = 46.8 mph

Space mean speed in outer lanes, S_O = 49.6 mph

Space mean speed for all vehicles, S = 47.7 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3264	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	65	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	109	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3264	65	109	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	887	18	30	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3548	71	118	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1050.99 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2051 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3619	6750	No
v_3 or v_{av34}	1497 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2051 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3619	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.353

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_O = 51.4 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5316	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	70	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	161	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5316	70	161	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1445	19	44	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5778	76	175	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1558.67 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3341 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5854	6750	No
v_3 or v_{av34}	2437 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3341 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5854	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.439

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_O = 47.6 mph

Space mean speed for all vehicles, S = 48.6 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3220	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	88	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	567	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3220	88	567	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	875	24	154	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3500	96	616	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5358.85 (Equation 13-6 or 13-7)

P_{FM} = 0.621 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2173 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3596	6750	No
v_3 or v_{av34}	1327 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2173 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3596	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.357

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_O = 52.0 mph

Space mean speed for all vehicles, S = 51.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5225	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	126	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	917	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5225	126	917	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1420	34	249	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5679	137	997	pcph

Estimation of V12 Merge Areas

L_{EQ} = 8673.34 (Equation 13-6 or 13-7)

P_{FM} = 0.666 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3780 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5816	6750	No
v_3 or v_{av34}	1899 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3780 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5816	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 35.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.515

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 50.0 mph

Space mean speed for all vehicles, S = 48.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1964	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	92	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	505	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1964	92	505	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	534	25	137	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2135	100	549	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4775.99 (Equation 13-6 or 13-7)

P_{FM} = 0.607 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1295 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2235	6750	No
v_3 or v_{av34}	840 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1295 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2235	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.335

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_O = 53.8 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3230	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	96	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	817	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3230	96	817	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	878	26	222	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3511	104	888	pcph

Estimation of V12 Merge Areas

L_{EQ} = 7725.10 (Equation 13-6 or 13-7)

P_{FM} = 0.642 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2256 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3615	6750	No
v_3 or v_{av34}	1255 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2256 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3615	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.361

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 52.3 mph

Space mean speed for all vehicles, S = 51.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1379	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	893	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1379	893		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	375	243		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1499	971	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2470	4500	No

v_3 or v_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2470	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.325	
Space mean speed in ramp influence area,	S_R = 50.8	mph
Space mean speed in outer lanes,	S_O = N/A	mph
Space mean speed for all vehicles,	S = 50.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	973	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	630	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	973	630		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	264	171		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1058	685	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1058 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1743	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1058 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1743	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.301	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2191	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1148	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	81	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2191	1148	81	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	595	312	22	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2382	1248	88	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2382 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3630	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2382 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3630	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.415

Space mean speed in ramp influence area, S_R = 49.6 mph

Space mean speed in outer lanes, S_O = N/A mph

Space mean speed for all vehicles, S = 49.6 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1492	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	864	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	111	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1492	864	111	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	405	235	30	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1622	939	121	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1622 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2561	4500	No

v_3 or v_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1622 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2561	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.318

Space mean speed in ramp influence area, S_R = 50.9 mph

Space mean speed in outer lanes, S_O = N/A mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3285	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	238	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	789	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3285	238	789	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	893	65	214	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3571	259	858	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2069 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3830	6750	No
v_3 or v_{av34}	1502 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2069 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3830	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.359

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_O = 51.4 mph

Space mean speed for all vehicles, S = 50.7 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2273	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	213	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	557	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2273	213	557	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	618	58	151	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2471	232	605	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1432 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2703	6750	No
v_3 or v_{av34}	1039 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1432 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2703	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.339

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 53.1 mph

Space mean speed for all vehicles, S = 51.5 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3523	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	789	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	238	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3523	789	238	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	957	214	65	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3829	858	259	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2222 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4687	6750	No
v_3 or v_{av34}	1607 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2222 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4687	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.399

Space mean speed in ramp influence area, S_R = 49.8 mph

Space mean speed in outer lanes, S_0 = 51.0 mph

Space mean speed for all vehicles, S = 50.2 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2486	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	557	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	213	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2486	557	213	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	676	151	58	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2702	605	232	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1568 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3307	6750	No
v_3 or v_{av34}	1134 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1568 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3307	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.348

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_O = 52.7 mph

Space mean speed for all vehicles, S = 51.2 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4206	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	106	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	74	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4206	106	74	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1143	29	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4572	115	80	pcph

Estimation of V12 Merge Areas

L_{EQ} = 695.95 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2647 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4687	6750	No
v_3 or v_{av34}	1925 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2647 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4687	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.379

Space mean speed in ramp influence area, S_R = 50.1 mph

Space mean speed in outer lanes, S_O = 49.9 mph

Space mean speed for all vehicles, S = 50.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2896	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	147	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	71	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2896	147	71	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	787	40	19	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3148	160	77	pcph

Estimation of V12 Merge Areas

L_{EQ} = 669.86 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1822 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3308	6750	No
v_3 or v_{av34}	1326 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1822 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3308	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.346

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 52.0 mph

Space mean speed for all vehicles, S = 51.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4238	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	272	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	15	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4238	272	15	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1152	74	4	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4607	296	16	pcph

Estimation of V12 Merge Areas

L_{EQ} = 142.51 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2664 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4903	6750	No
v_3 or v_{av34}	1943 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2664 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4903	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.396

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 49.8 mph

Space mean speed for all vehicles, S = 49.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2972	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	210	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	80	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2972	210	80	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	808	57	22	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3230	228	87	pcph

Estimation of V12 Merge Areas

L_{EQ} = 774.88 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1868 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3458	6750	No
v_3 or v_{av34}	1362 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1868 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3458	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.352

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = 51.9 mph

Space mean speed for all vehicles, S = 51.0 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4495	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	593	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	15	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4495	593	15	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1221	161	4	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4886	645	16	pcph

Estimation of V12 Merge Areas

L_{EQ} = -412.37 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2829 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5531	6750	No
v_3 or v_{av34}	2057 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2829 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5531	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.445

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 49.4 mph

Space mean speed for all vehicles, S = 49.3 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3102	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	488	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	80	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3102	488	80	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	843	133	22	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3372	530	87	pcph

Estimation of V12 Merge Areas

L_{EQ} = -760.97 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1952 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3902	6750	No
v_3 or v_{av34}	1420 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1952 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3902	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.366

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = 51.7 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4935	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	153	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4935	440	153	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1341	120	42	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5364	478	166	pcph

Estimation of V12 Merge Areas

L_{EQ} = -332.49 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3110 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5842	6750	No
v_3 or v_{av34}	2254 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3110 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5842	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.460

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 48.7 mph

Space mean speed for all vehicles, S = 48.9 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3489	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	303	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	101	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3489	303	101	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	948	82	27	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3792	329	110	pcph

Estimation of V12 Merge Areas

L_{EQ} = -700.79 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2198 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4121	6750	No
v_3 or v_{av34}	1594 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2198 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4121	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.367

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 50.5 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3518	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	827	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	4184	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3518	827	4184	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	956	225	1137	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3824	899	4548	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2267 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4723	6750	No
v_3 or v_{av34}	1557 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2267 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4723	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.375	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 51.2	mph
Space mean speed for all vehicles,	S = 50.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2482	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	584	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2952	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2482	584	2952	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	674	159	802	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2698	635	3209	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1600 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3333	6750	No
v_3 or v_{av34}	1098 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1600 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3333	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.319

Space mean speed in ramp influence area, S_R = 50.9 mph

Space mean speed in outer lanes, S_0 = 52.8 mph

Space mean speed for all vehicles, S = 51.5 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4345	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4184	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	827	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4345	4184	827	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1181	1137	225	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4723	4548	899	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2621 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9271	6750	Yes
v_3 or v_{av34}	2102 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2698 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9271	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 5.476

Space mean speed in ramp influence area, S_R = -16.2 mph

Space mean speed in outer lanes, S_0 = 49.5 mph

Space mean speed for all vehicles, S = mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3066	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2952	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	584	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3066	2952	584	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	833	802	159	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3333	3209	635	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1850 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6542	6750	No
v_3 or v_{av34}	1483 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 1904 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6542	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.654	
Space mean speed in ramp influence area,	S_R = 46.5	mph
Space mean speed in outer lanes,	S_0 = 51.7	mph
Space mean speed for all vehicles,	S = 47.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5971	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	136	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	47	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5971	136	47	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1623	37	13	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6490	148	51	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.199 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 983 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5081	9000	No
v_3 or v_{av34}	1975 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 1973 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5081	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.336

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 51.5 mph

Space mean speed for all vehicles, S = 51.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8463	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	193	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	66	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8463	193	66	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2300	52	18	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9199	210	72	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.192 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1283 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6909	9000	No
v_3 or v_{av34}	2708 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2679 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6909	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.374

Space mean speed in ramp influence area, S_R = 50.1 mph

Space mean speed in outer lanes, S_O = 49.6 mph

Space mean speed for all vehicles, S = 49.8 mph

APPENDIX E

HCS ANALYSIS - RAMPS

EXISTING (YEAR 2011)

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5827	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	101	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	34	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5827		101		34		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1583		27		9		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6334	110	37	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2824 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6334	9000	No
$v_{FO} = v_F - v_R$	6224	9000	No
v_R	110	1800	No
v_3 or v_{av34}	1755 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2824 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2824	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.698	
Space mean speed in ramp influence area,	S_R = 45.9	mph
Space mean speed in outer lanes,	S_0 = 57.4	mph
Space mean speed for all vehicles,	S = 51.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9426	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	33	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9426		143		33		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2561		39		9		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10246	155	36	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4555 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10246	9000	Yes
$v_{FO} = v_F - v_R$	10091	9000	Yes
v_R	155	1800	No
v_3 or v_{av34}	2845 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4846 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4846	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 44.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.702	
Space mean speed in ramp influence area,	S_R = 45.9	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 49.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5760	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2434	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	462	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5760		2434		462	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1565		661		126	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6261	2646	502	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4222 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6261	9000	No
$v_{FO} = v_F - v_R$	3615	9000	No
v_R	2646	2000	Yes
v_3 or v_{av34}	1019 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4222 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4222	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.666

Space mean speed in ramp influence area, S_R = 46.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9316	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	3935	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	748	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9316		3935		748		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2532		1069		203		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10126	4277	813	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5798 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10126	9000	Yes
$v_{FO} = v_F - v_R$	5849	9000	No
v_R	4277	4000	Yes
v_3 or v_{av34}	2164 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 5798 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5798	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.813

Space mean speed in ramp influence area, S_R = 44.4 mph

Space mean speed in outer lanes, S_0 = 56.9 mph

Space mean speed for all vehicles, S = 48.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3326	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	462	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	77	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3326		462		77	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	904		126		21	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3615	502	84	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.647 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2515 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3615	6750	No
$v_{FO} = v_F - v_R$	3113	6750	No
v_R	502	2000	No
v_3 or v_{av34}	1100 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2515 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2515	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.473	
Space mean speed in ramp influence area,	S_R = 48.8	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.5	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5381	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	748	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	125	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5381		748		125		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1462		203		34		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5849	813	136	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.576 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3716 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5849	6750	No
$v_{FO} = v_F - v_R$	5036	6750	No
v_R	813	2000	No
v_3 or v_{av34}	2133 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3716 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3716	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 30.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.501	
Space mean speed in ramp influence area,	S_R = 48.5	mph
Space mean speed in outer lanes,	S_0 = 56.6	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4149	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	274	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	70	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4149		274		70		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1127		74		19		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4510	298	76	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.634 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2966 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4510	6750	No
$v_{FO} = v_F - v_R$	4212	6750	No
v_R	298	2000	No
v_3 or v_{av34}	1544 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2966 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2966	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.455

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = 58.2 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6711	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	411	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	82	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6711		411		82	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1824		112		22	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7295	447	89	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.557 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4262 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7295	6750	Yes
$v_{FO} = v_F - v_R$	6848	6750	Yes
v_R	447	2000	No
v_3 or v_{av34}	3033 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4595 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4595	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 41.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.468

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3945	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	432	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	109	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3945		432		109		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1072		117		30		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4288	470	118	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.631 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2880 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4288	6750	No
$v_{FO} = v_F - v_R$	3818	6750	No
v_R	470	2000	No
v_3 or v_{av34}	1408 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2880 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2880	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.470

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 58.7 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6382	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	621	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	98	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6382		621		98	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1734		169		27	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6937	675	107	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.556 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4154 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6937	6750	Yes
$v_{FO} = v_F - v_R$	6262	6750	No
v_R	675	2000	No
v_3 or v_{av34}	2783 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4237 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4237	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 37.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.489

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3622	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	358	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	109	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3622		358		109	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	984		97		30	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3937	389	118	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 894.03 (Equation 13-12 or 13-13)

P_{FD} = 0.644 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2673 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3937	6750	No
$v_{FO} = v_F - v_R$	3548	6750	No
v_R	389	2000	No
v_3 or v_{av34}	1264 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2673 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2673	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.463

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 59.3 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5859	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	543	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	98	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5859		543		98		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1592		148		27		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6368	590	107	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 619.84 (Equation 13-12 or 13-13)

P_{FD} = 0.574 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3905 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6368	6750	No
$v_{FO} = v_F - v_R$	5778	6750	No
v_R	590	2000	No
v_3 or v_{av34}	2463 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3905 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3905	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 54.6 mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3329	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	109	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	65	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3329		109		65		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	905		30		18		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3618	118	71	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 488.83 (Equation 13-12 or 13-13)

P_{FD} = 0.664 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2442 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3618	6750	No
$v_{FO} = v_F - v_R$	3500	6750	No
v_R	118	2000	No
v_3 or v_{av34}	1176 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2442 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2442	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.439

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 59.6 mph

Space mean speed for all vehicles, S = 52.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5386	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	161	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	70	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5386		161		70		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1464		44		19		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5854	175	76	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 395.13 (Equation 13-12 or 13-13)

P_{FD} = 0.606 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3614 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5854	6750	No
$v_{FO} = v_F - v_R$	5679	6750	No
v_R	175	2000	No
v_3 or v_{av34}	2240 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3614 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3614	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.444

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 55.5 mph

Space mean speed for all vehicles, S = 51.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3308	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	567	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	88	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3308		567		88	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	899		154		24	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3596	616	96	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 898.10 (Equation 13-12 or 13-13)

P_{FD} = 0.642 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2528 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3596	6750	No
$v_{FO} = v_F - v_R$	2980	6750	No
v_R	616	2000	No
v_3 or v_{av34}	1068 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2528 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2528	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.483

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5351	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	917	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	126	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5351		917		126	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1454		249		34	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5816	997	137	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1062.05 (Equation 13-12 or 13-13)

P_{FD} = 0.569 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3738 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5816	6750	No
$v_{FO} = v_F - v_R$	4819	6750	No
v_R	997	2000	No
v_3 or v_{av34}	2078 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3738 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3738	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.518

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2741	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	49	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2741		49			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	745		13			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2979	53	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.683 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2052 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2979	6750	No
$v_{FO} = v_F - v_R$	2926	6750	No
v_R	53	2000	No
v_3 or v_{av34}	927 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2052 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2052	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.433

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4434	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	80	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4434		80			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1205		22			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4820	87	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.635 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3095 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4820	6750	No
$v_{FO} = v_F - v_R$	4733	6750	No
v_R	87	2000	No
v_3 or v_{av34}	1725 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3095 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3095	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.436	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 57.5	mph
Space mean speed for all vehicles,	S = 52.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2692	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	728	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	92	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2692		728		92	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	732		198		25	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2926	791	100	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.650 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2180 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2926	6750	No
$v_{FO} = v_F - v_R$	2135	6750	No
v_R	791	2000	No
v_3 or v_{av34}	746 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2180 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2180	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.499

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4354	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1124	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	96	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4354		1124		96	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1183		305		26	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4733	1222	104	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.585 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3278 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4733	6750	No
$v_{FO} = v_F - v_R$	3511	6750	No
v_R	1222	2000	No
v_3 or v_{av34}	1455 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3278 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3278	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.538

Space mean speed in ramp influence area, S_R = 48.0 mph

Space mean speed in outer lanes, S_0 = 58.6 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2056	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	505	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2056		505			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	559		137			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2235	549	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.679 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1694 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2235	6750	No
$v_{FO} = v_F - v_R$	1686	6750	No
v_R	549	2000	No
v_3 or v_{av34}	541 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1694 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1694	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.477

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3326	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	817	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3326		817			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	904		222			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3615	888	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.629 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2603 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3615	6750	No
$v_{FO} = v_F - v_R$	2727	6750	No
v_R	888	2000	No
v_3 or v_{av34}	1012 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2603 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2603	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.508

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1534	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	155	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1534		155			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	417		42			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1667	168	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.711 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1233 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1667	6750	No
$v_{FO} = v_F - v_R$	1499	6750	No
v_R	168	2000	No
v_3 or v_{av34}	434 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1233 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1233	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 11.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1083	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	110	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1083		110			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	294		30			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1177	120	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.725 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 886 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1177	6750	No
$v_{FO} = v_F - v_R$	1057	6750	No
v_R	120	2000	No
v_3 or v_{av34}	291 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 886 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	886	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.439

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2272	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	81	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	893	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2440	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2272		81		893		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	617		22		243		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2470	88	971	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2470 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2470	4500	No
$v_{FO} = v_F - v_R$	2382	4500	No
v_R	88	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2470 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2470	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1603	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	111	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	630	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2440	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1603		111		630		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	436		30		171		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1742	121	685	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1742 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1742	4500	No
$v_{FO} = v_F - v_R$	1621	4500	No
v_R	121	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1742 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1742	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.439

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3339	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	54	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	238	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3339		54		238		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	907		15		65		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3629	59	259	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.667 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2439 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3629	6750	No
$v_{FO} = v_F - v_R$	3570	6750	No
v_R	59	1800	No
v_3 or v_{av34}	1190 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2439 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2439	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.693

Space mean speed in ramp influence area, S_R = 46.0 mph

Space mean speed in outer lanes, S_0 = 59.6 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2356	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	83	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	213	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2356		83		213		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	640		23		58		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2561	90	232	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.692 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1800 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2561	6750	No
$v_{FO} = v_F - v_R$	2471	6750	No
v_R	90	1800	No
v_3 or v_{av34}	761 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1800 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1800	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.696	
Space mean speed in ramp influence area,	S_R = 46.0	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4312	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	106	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	789	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4312		106		789		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1172		29		214		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4687	115	858	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 5045.25 (Equation 13-12 or 13-13)

P_{FD} = 0.736 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3479 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4687	6750	No
$v_{FO} = v_F - v_R$	4572	6750	No
v_R	115	1800	No
v_3 or v_{av34}	1208 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3479 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3479	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.698	
Space mean speed in ramp influence area,	S_R = 45.9	mph
Space mean speed in outer lanes,	S_0 = 59.5	mph
Space mean speed for all vehicles,	S = 48.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3043	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	147	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	557	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3043		147		557		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	827		40		151		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3308	160	605	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 4484.01 (Equation 13-12 or 13-13)

P_{FD} = 0.730 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2459 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3308	6750	No
$v_{FO} = v_F - v_R$	3148	6750	No
v_R	160	1800	No
v_3 or v_{av34}	849 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2459 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2459	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.702

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 48.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4312	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	106	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4312		74		106		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1172		20		29		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4687	80	115	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 665.81 (Equation 13-12 or 13-13)

P_{FD} = 0.639 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3025 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4687	6750	No
$v_{FO} = v_F - v_R$	4607	6750	No
v_R	80	2000	No
v_3 or v_{av34}	1662 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3025 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3025	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 57.8 mph

Space mean speed for all vehicles, S = 52.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3043	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	71	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	147	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3043		71		147		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	827		19		40		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3308	77	160	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1132.89 (Equation 13-12 or 13-13)

P_{FD} = 0.674 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2254 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3308	6750	No
$v_{FO} = v_F - v_R$	3231	6750	No
v_R	77	2000	No
v_3 or v_{av34}	1054 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2254 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2254	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4510	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	15	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	106	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4510		15		106		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1226		4		29		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4902	16	115	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 630.03 (Equation 13-12 or 13-13)

P_{FD} = 0.637 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3127 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4902	6750	No
$v_{FO} = v_F - v_R$	4886	6750	No
v_R	16	2000	No
v_3 or v_{av34}	1775 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3127 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3127	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.0- pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.429

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 57.3 mph

Space mean speed for all vehicles, S = 52.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3182	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	80	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	210	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3182		80		210	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	865		22		57	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3459	87	228	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1583.94 (Equation 13-12 or 13-13)

P_{FD} = 0.723 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2524 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3459	6750	No
$v_{FO} = v_F - v_R$	3372	6750	No
v_R	87	2000	No
v_3 or v_{av34}	935 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2524 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2524	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5088	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	153	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	440	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5088		153		440		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1383		42		120		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5530	166	478	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.614 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3460 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5530	6750	No
$v_{FO} = v_F - v_R$	5364	6750	No
v_R	166	2000	No
v_3 or v_{av34}	2070 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3460 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3460	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 56.2 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3590	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	101	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	303	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3590		101		303		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	976		27		82		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3902	110	329	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.657 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2603 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3902	6750	No
$v_{FO} = v_F - v_R$	3792	6750	No
v_R	110	2000	No
v_3 or v_{av34}	1299 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2603 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2603	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.438

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5375	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1655	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	202	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5375		1655		202	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1461		450		55	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5842	1799	220	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3618 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5842	6750	No
$v_{FO} = v_F - v_R$	4043	6750	No
v_R	1799	4000	No
v_3 or v_{av34}	2224 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3618 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3618	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -5.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.590	
Space mean speed in ramp influence area,	S_R = 47.3	mph
Space mean speed in outer lanes,	S_0 = 55.6	mph
Space mean speed for all vehicles,	S = 50.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3792	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1167	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	143	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3792		1167		143		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1030		317		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4122	1268	155	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2552 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4122	6750	No
$v_{FO} = v_F - v_R$	2854	6750	No
v_R	1268	4000	No
v_3 or v_{av34}	1570 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2552 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2552	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -14.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.542	
Space mean speed in ramp influence area,	S_R = 48.0	mph
Space mean speed in outer lanes,	S_0 = 58.1	mph
Space mean speed for all vehicles,	S = 51.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3720	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	202	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	827	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3720		202		827		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1011		55		225		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4043	220	899	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.649 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2700 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4043	6750	No
$v_{FO} = v_F - v_R$	3823	6750	No
v_R	220	2000	No
v_3 or v_{av34}	1343 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2700 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2700	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.448	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 59.0	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2625	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	584	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2625		143		584		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	713		39		159		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2853	155	635	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.682 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1994 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2853	6750	No
$v_{FO} = v_F - v_R$	2698	6750	No
v_R	155	2000	No
v_3 or v_{av34}	859 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1994 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1994	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 14.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8529	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	66	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	193	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8529		66		193		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2318		18		52		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9271	72	210	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3274 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7417	9000	No
$v_{FO} = v_F - v_R$	7345	9000	No
v_R	72	2000	No
v_3 or v_{av34}	2071 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3274 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3274	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.434	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 56.2	mph
Space mean speed for all vehicles,	S = 52.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2011
Description:	Existing Condition

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6018	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	47	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	136	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6018		47		136		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1635		13		37		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6541	51	148	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2453 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5560	9000	No
$v_{FO} = v_F - v_R$	5509	9000	No
v_R	51	2000	No
v_3 or v_{av34}	1553 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2453 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2453	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.433

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 58.2 mph

Space mean speed for all vehicles, S = 53.9 mph

APPENDIX E

HCS ANALYSIS - RAMPS

FUTURE (YEAR 2035) WITHOUT PROJECT

MERGE RAMPS

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5925	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	60	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	181	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5925		60		181		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1610		16		49		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6440	65	197	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.210 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1350 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6505	9000	No
v_3 or v_{av34}	2545 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		Yes	

If yes, v_{12A} = 2576 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6505	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.374	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 49.8	mph
Space mean speed for all vehicles,	S = 50.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9541	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	154	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	162	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9541	154	162	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2593	42	44	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10371	167	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.197 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 2042 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10538	9000	Yes
v_3 or v_{av34}	4164 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 4148 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10538	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 38.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.611	
Space mean speed in ramp influence area,	S_R = 47.1	mph
Space mean speed in outer lanes,	S_0 = 43.6	mph
Space mean speed for all vehicles,	S = 45.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3123	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	75	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	524	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3123	75	524	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	849	20	142	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3395	82	570	pcph

Estimation of V12 Merge Areas

L_{EQ} = -863.02 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1963 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3477	6750	No
v_3 or v_{av34}	1432 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1963 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3477	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.350	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 51.6	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4910	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	57	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	848	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4910	57	848	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1334	15	230	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5337	62	922	pcph

Estimation of V12 Merge Areas

L_{EQ} = -451.71 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3086 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5399	6750	No
v_3 or v_{av34}	2251 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3086 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5399	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.411	
Space mean speed in ramp influence area,	S_R = 49.7	mph
Space mean speed in outer lanes,	S_0 = 48.7	mph
Space mean speed for all vehicles,	S = 49.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3198	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1145	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	75	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3198	1145	75	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	869	311	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3476	1245	82	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1104.49 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2153 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4721	6750	No
v_3 or v_{av34}	1323 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2153 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4721	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.333

Space mean speed in ramp influence area, S_R = 50.7 mph

Space mean speed in outer lanes, S_0 = 52.0 mph

Space mean speed for all vehicles, S = 51.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4967	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1917	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	57	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4967	1917	57	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1350	521	15	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5399	2084	62	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1695.56 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3345 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7483	6750	Yes
v_3 or v_{av34}	2054 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3345 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7483	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.105	
Space mean speed in ramp influence area,	S_R = 40.6	mph
Space mean speed in outer lanes,	S_0 = 49.4	mph
Space mean speed for all vehicles,	S = 42.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4050	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	124	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	293	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4050	124	293	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1101	34	80	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4402	135	318	pcph

Estimation of V12 Merge Areas

L_{EQ} = -625.08 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2548 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4537	6750	No
v_3 or v_{av34}	1854 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2548 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4537	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.377	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 50.1	mph
Space mean speed for all vehicles,	S = 50.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6464	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	117	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	420	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6464	117	420	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1757	32	114	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7026	127	457	pcph

Estimation of V12 Merge Areas

L_{EQ} = -65.26 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4067 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7153	6750	Yes
v_3 or v_{av34}	2959 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4326 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7153	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 39.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.654	
Space mean speed in ramp influence area,	S_R = 46.5	mph
Space mean speed in outer lanes,	S_0 = 46.1	mph
Space mean speed for all vehicles,	S = 46.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3764	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	129	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	382	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3764	129	382	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1023	35	104	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4091	140	415	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3696.28 (Equation 13-6 or 13-7)

P_{FM} = 0.641 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2623 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4231	6750	No
v_3 or v_{av34}	1468 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2623 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4231	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.382	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 50.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5920	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	114	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	564	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5920	114	564	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1609	31	153	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6435	124	613	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5459.81 (Equation 13-6 or 13-7)

P_{FM} = 0.685 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4409 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6559	6750	No
v_3 or v_{av34}	2026 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4409 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6559	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 40.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.683	
Space mean speed in ramp influence area,	S_R = 46.1	mph
Space mean speed in outer lanes,	S_0 = 49.5	mph
Space mean speed for all vehicles,	S = 47.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3511	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	85	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	382	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3511	85	382	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	954	23	104	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3816	92	415	pcph

Estimation of V12 Merge Areas

L_{EQ} = -770.79 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2206 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3908	6750	No
v_3 or v_{av34}	1610 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2206 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3908	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.359	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 51.0	mph
Space mean speed for all vehicles,	S = 50.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5470	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	75	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	564	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5470	75	564	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1486	20	153	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5946	82	613	pcph

Estimation of V12 Merge Areas

L_{EQ} = -317.11 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3438 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6028	6750	No
v_3 or v_{av34}	2508 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3438 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6028	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.452	
Space mean speed in ramp influence area,	S_R = 49.1	mph
Space mean speed in outer lanes,	S_0 = 47.2	mph
Space mean speed for all vehicles,	S = 48.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3490	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	129	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	106	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3490	129	106	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	948	35	29	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3793	140	115	pcph

Estimation of V12 Merge Areas

L_{EQ} = -754.34 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2196 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3933	6750	No
v_3 or v_{av34}	1597 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2196 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3933	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.360	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 50.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5382	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	204	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	163	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5382	204	163	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1462	55	44	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5850	222	177	pcph

Estimation of V12 Merge Areas

L_{EQ} = -296.59 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3387 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6072	6750	No
v_3 or v_{av34}	2463 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3387 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6072	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 33.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.464	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 47.5	mph
Space mean speed for all vehicles,	S = 48.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2275	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	167	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	601	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2275	167	601	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	618	45	163	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2473	182	653	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5680.73 (Equation 13-6 or 13-7)

P_{FM} = 0.618 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1527 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2655	6750	No
v_3 or v_{av34}	946 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1527 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2655	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.341	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 53.4	mph
Space mean speed for all vehicles,	S = 51.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3417	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	192	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	937	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3417	192	937	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	929	52	255	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3714	209	1018	pcph

Estimation of V12 Merge Areas

L_{EQ} = 8856.02 (Equation 13-6 or 13-7)

P_{FM} = 0.656 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2437 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3923	6750	No
v_3 or v_{av34}	1277 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2437 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3923	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.374	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 52.2	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1507	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	874	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1507	874		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	410	237		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1638	950	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1638 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2588	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1638 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2588	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.331	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1273	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	710	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1273	710		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	346	193		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1384	772	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1384 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2156	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1384 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2156	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2289	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1180	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	92	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2289	1180	92	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	622	321	25	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2488	1283	100	pcph

Estimation of V12 Merge Areas

L_{EQ} = 572.63 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2488 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3771	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2488 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3771	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 29.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.437	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1840	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	951	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	143	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1840	951	143	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	500	258	39	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2000	1034	155	pcph

Estimation of V12 Merge Areas

L_{EQ} = 572.63 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2000 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3034	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2000 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3034	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3396	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	287	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	73	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3396	287	73	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	923	78	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3691	312	79	pcph

Estimation of V12 Merge Areas

L_{EQ} = -730.48 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2139 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4003	6750	No
v_3 or v_{av34}	1552 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2139 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4003	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.364

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 51.2 mph

Space mean speed for all vehicles, S = 50.6 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2605	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	258	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	186	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2605	258	186	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	708	70	51	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2832	280	202	pcph

Estimation of V12 Merge Areas

L_{EQ} = -921.15 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1641 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3112	6750	No
v_3 or v_{av34}	1191 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1641 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3112	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.346	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = 52.5	mph
Space mean speed for all vehicles,	S = 51.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3683	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	825	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	287	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3683	825	287	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1001	224	78	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4003	897	312	pcph

Estimation of V12 Merge Areas

L_{EQ} = 272.75 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2323 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4900	6750	No
v_3 or v_{av34}	1680 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2323 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4900	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.412	
Space mean speed in ramp influence area,	S_R = 49.6	mph
Space mean speed in outer lanes,	S_0 = 50.8	mph
Space mean speed for all vehicles,	S = 50.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2863	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	577	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	258	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2863	577	258	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	778	157	70	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3112	627	280	pcph

Estimation of V12 Merge Areas

L_{EQ} = 272.75 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1806 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3739	6750	No
v_3 or v_{av34}	1306 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1806 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3739	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.358	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 52.1	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4352	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	120	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	156	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4352	120	156	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1183	33	42	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4730	130	170	pcph

Estimation of V12 Merge Areas

L_{EQ} = 490.44 (Equation 13-6 or 13-7)

P_{FM} = 0.551 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2607 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4860	6750	No
v_3 or v_{av34}	2123 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2702 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4860	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.384

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = 49.5 mph

Space mean speed for all vehicles, S = 49.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3207	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	145	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	233	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3207	145	233	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	871	39	63	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3486	158	253	pcph

Estimation of V12 Merge Areas

L_{EQ} = 230.22 (Equation 13-6 or 13-7)

P_{FM} = 0.567 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 1978 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3644	6750	No
v_3 or v_{av34}	1508 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 1992 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3644	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.351

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = 51.4 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4396	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	266	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	76	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4396	266	76	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1195	72	21	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4778	289	83	pcph

Estimation of V12 Merge Areas

L_{EQ} = -522.76 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2763 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5067	6750	No
v_3 or v_{av34}	2015 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2763 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5067	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.403	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = 49.5	mph
Space mean speed for all vehicles,	S = 49.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3292	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	293	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	60	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3292	293	60	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	895	80	16	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3578	318	65	pcph

Estimation of V12 Merge Areas

L_{EQ} = -773.36 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2069 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3896	6750	No
v_3 or v_{av34}	1509 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2069 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3896	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.363	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 51.4	mph
Space mean speed for all vehicles,	S = 50.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4620	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	640	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	42	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4620	640	42	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1255	174	11	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5022	696	46	pcph

Estimation of V12 Merge Areas

L_{EQ} = -372.35 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2907 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5718	6750	No
v_3 or v_{av34}	2115 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2907 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5718	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.463

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 49.2 mph

Space mean speed for all vehicles, S = 49.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3432	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	497	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	153	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3432	497	153	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	933	135	42	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3730	540	166	pcph

Estimation of V12 Merge Areas

L_{EQ} = -682.22 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2159 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4270	6750	No
v_3 or v_{av34}	1571 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2159 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4270	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.377

Space mean speed in ramp influence area, S_R = 50.1 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 50.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5073	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	436	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	187	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5073	436	187	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1379	118	51	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5514	474	203	pcph

Estimation of V12 Merge Areas

L_{EQ} = -301.25 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3197 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5988	6750	No
v_3 or v_{av34}	2317 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3197 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5988	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 33.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.472	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 48.4	mph
Space mean speed for all vehicles,	S = 48.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3432	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	344	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	121	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3432	344	121	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	933	93	33	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3730	374	132	pcph

Estimation of V12 Merge Areas

L_{EQ} = -704.42 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2162 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4104	6750	No
v_3 or v_{av34}	1568 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2162 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4104	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.368	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 51.2	mph
Space mean speed for all vehicles,	S = 50.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3631	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	936	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	221	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3631	936	221	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	987	254	60	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3947	1017	240	pcph

Estimation of V12 Merge Areas

L_{EQ} = 734.70 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2340 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4964	6750	No
v_3 or v_{av34}	1607 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2340 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4964	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.394

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 51.0 mph

Space mean speed for all vehicles, S = 50.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2920	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	691	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	162	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2920	691	162	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	793	188	44	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3174	751	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = 512.35 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1882 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3925	6750	No
v_3 or v_{av34}	1292 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1882 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3925	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.337	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 52.1	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4567	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4149	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	936	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4567	4149	936	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1241	1127	254	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4964	4510	1017	pcph

Estimation of V12 Merge Areas

L_{EQ} = 952.33 (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2755 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9474	6750	Yes
v_3 or v_{av34}	2209 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2836 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9474	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 6.051

Space mean speed in ramp influence area, S_R = -23.7 mph

Space mean speed in outer lanes, S_0 = 49.1 mph

Space mean speed for all vehicles, S = mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3611	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2872	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	691	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3611	2872	691	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	981	780	188	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3925	3122	751	pcph

Estimation of V12 Merge Areas

L_{EQ} = 952.33 (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2178 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7047	6750	Yes
v_3 or v_{av34}	1747 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2242 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7047	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.839	
Space mean speed in ramp influence area,	S_R = 44.1	mph
Space mean speed in outer lanes,	S_0 = 50.7	mph
Space mean speed for all vehicles,	S = 45.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8619	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	207	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	97	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8619	207	97	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2342	56	26	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9368	225	105	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.190 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1303 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7093	9000	No
v_3 or v_{av34}	2782 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2747 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7093	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.380

Space mean speed in ramp influence area, S_R = 50.1 mph

Space mean speed in outer lanes, S_0 = 49.4 mph

Space mean speed for all vehicles, S = 49.7 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6419	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	144	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	64	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6419	144	64	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1744	39	17	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6977	157	70	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.198 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1010 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5251	9000	No
v_3 or v_{av34}	2042 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2037 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5251	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.338	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 51.3	mph
Space mean speed for all vehicles,	S = 51.0	mph

APPENDIX E

HCS ANALYSIS - RAMPS

FUTURE (YEAR 2035) WITHOUT PROJECT

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6158	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	138	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	63	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6158		138		63		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1673		37		17		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6693	150	68	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3003 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6693	9000	No
$v_{FO} = v_F - v_R$	6543	9000	No
v_R	150	1800	No
v_3 or v_{av34}	1845 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3003 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3003	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.701

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 57.0 mph

Space mean speed for all vehicles, S = 51.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9731	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	137	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	119	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9731		137		119		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2644		37		32		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10577	149	129	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4696 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10577	9000	Yes
$v_{FO} = v_F - v_R$	10428	9000	Yes
v_R	149	1800	No
v_3 or v_{av34}	2940 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 5177 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5177	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 47.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.701

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 49.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6083	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2366	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	528	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6083		2366		528		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1653		643		143		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6612	2572	574	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4333 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6612	9000	No
$v_{FO} = v_F - v_R$	4040	9000	No
v_R	2572	2000	Yes
v_3 or v_{av34}	1139 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4333 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4333	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 31.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.659

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9713	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	3990	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	842	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9713		3990		842		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2639		1084		229		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10558	4337	915	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5954 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10558	9000	Yes
$v_{FO} = v_F - v_R$	6221	9000	No
v_R	4337	4000	Yes
v_3 or v_{av34}	2302 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 5954 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5954	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.818

Space mean speed in ramp influence area, S_R = 44.4 mph

Space mean speed in outer lanes, S_0 = 56.4 mph

Space mean speed for all vehicles, S = 48.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3717	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	528	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	74	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3717		528		74	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1010		143		20	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4040	574	80	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.633 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2767 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4040	6750	No
$v_{FO} = v_F - v_R$	3466	6750	No
v_R	574	2000	No
v_3 or v_{av34}	1273 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2767 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2767	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.480	
Space mean speed in ramp influence area,	S_R = 48.8	mph
Space mean speed in outer lanes,	S_0 = 59.3	mph
Space mean speed for all vehicles,	S = 51.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5723	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	842	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	130	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5723		842		130		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1555		229		35		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6221	915	141	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.562 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3899 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6221	6750	No
$v_{FO} = v_F - v_R$	5306	6750	No
v_R	915	2000	No
v_3 or v_{av34}	2322 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3899 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3899	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 32.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.510

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 55.9 mph

Space mean speed for all vehicles, S = 50.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4359	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	319	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	122	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4359		319		122		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1185		87		33		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4738	347	133	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 865.87 (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3094 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4738	6750	No
$v_{FO} = v_F - v_R$	4391	6750	No
v_R	347	2000	No
v_3 or v_{av34}	1644 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3094 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3094	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 28.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.459

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 57.8 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6791	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	414	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	125	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6791		414		125		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1845		112		34		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7382	450	136	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 658.32 (Equation 13-12 or 13-13)

P_{FD} = 0.555 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4296 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7382	6750	Yes
$v_{FO} = v_F - v_R$	6932	6750	Yes
v_R	450	2000	No
v_3 or v_{av34}	3086 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4682 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4682	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.469	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 50.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4162	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	417	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	151	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4162		417		151		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1131		113		41		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4524	453	164	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3002 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4524	6750	No
$v_{FO} = v_F - v_R$	4071	6750	No
v_R	453	2000	No
v_3 or v_{av34}	1522 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3002 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3002	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.469

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 58.3 mph

Space mean speed for all vehicles, S = 51.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6502	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	629	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	83	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6502		629		83	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1767		171		23	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7067	684	90	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.552 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4207 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7067	6750	Yes
$v_{FO} = v_F - v_R$	6383	6750	No
v_R	684	2000	No
v_3 or v_{av34}	2860 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4367 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4367	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.490

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3896	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	386	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	104	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3896		386		104	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1059		105		28	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4235	420	113	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.635 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2842 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4235	6750	No
$v_{FO} = v_F - v_R$	3815	6750	No
v_R	420	2000	No
v_3 or v_{av34}	1393 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2842 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2842	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.466	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 58.8	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5956	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	548	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	76	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5956		548		76	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1618		149		21	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6474	596	83	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.571 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3951 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6474	6750	No
$v_{FO} = v_F - v_R$	5878	6750	No
v_R	596	2000	No
v_3 or v_{av34}	2523 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3951 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3951	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.482

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 54.4 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3614	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	110	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	60	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3614		110		60		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	982		30		16		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3928	120	65	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.656 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2619 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3928	6750	No
$v_{FO} = v_F - v_R$	3808	6750	No
v_R	120	2000	No
v_3 or v_{av34}	1309 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2619 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2619	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.439	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 52.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5484	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	141	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	135	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5484		141		135		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1490		38		37		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5961	153	147	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.604 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3661 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5961	6750	No
$v_{FO} = v_F - v_R$	5808	6750	No
v_R	153	2000	No
v_3 or v_{av34}	2300 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3661 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3661	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 55.3 mph

Space mean speed for all vehicles, S = 51.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3564	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	529	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	60	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3564		529		60	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	968		144		16	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3874	575	65	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 558.41 (Equation 13-12 or 13-13)

P_{FD} = 0.637 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2675 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3874	6750	No
$v_{FO} = v_F - v_R$	3299	6750	No
v_R	575	2000	No
v_3 or v_{av34}	1199 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2675 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2675	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.480

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 59.6 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5478	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	918	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	135	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5478		918		135		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1489		249		37		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5954	998	147	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1112.84 (Equation 13-12 or 13-13)

P_{FD} = 0.565 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3799 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5954	6750	No
$v_{FO} = v_F - v_R$	4956	6750	No
v_R	998	2000	No
v_3 or v_{av34}	2155 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3799 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3799	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.518

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 55.8 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3035	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	81	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3035		81			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	825		22			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3299	88	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.673 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2251 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3299	6750	No
$v_{FO} = v_F - v_R$	3211	6750	No
v_R	88	2000	No
v_3 or v_{av34}	1048 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2251 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2251	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4560	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	75	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4560		75			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1239		20			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4957	82	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.632 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3164 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4957	6750	No
$v_{FO} = v_F - v_R$	4875	6750	No
v_R	82	2000	No
v_3 or v_{av34}	1793 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3164	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 57.2 mph

Space mean speed for all vehicles, S = 51.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2954	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	708	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	157	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2954		708		157	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	803		192		43	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3211	770	171	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.644 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2343 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3211	6750	No
$v_{FO} = v_F - v_R$	2441	6750	No
v_R	770	2000	No
v_3 or v_{av34}	868 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2343 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2343	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.497

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4485	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1089	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	133	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4485		1089		133	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1219		296		36	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4875	1184	145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.584 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3338 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4875	6750	No
$v_{FO} = v_F - v_R$	3691	6750	No
v_R	1184	2000	No
v_3 or v_{av34}	1537 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3338 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3338	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.535	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 58.2	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2403	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	692	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2403		692			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	653		188			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2612	752	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.660 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1980 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2612	6750	No
$v_{FO} = v_F - v_R$	1860	6750	No
v_R	752	2000	No
v_3 or v_{av34}	632 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1980 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1980	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.496

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3529	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3529		1060				vph
Peak-hour factor, PHF	0.92		0.92				
Peak 15-min volume, v15	959		288				v
Trucks and buses	0		0				%
Recreational vehicles	0		0				%
Terrain type:	Level		Level				
Grade	0.00	%	0.00	%		%	
Length	0.00	mi	0.00	mi		mi	
Trucks and buses PCE, ET	1.5		1.5				
Recreational vehicle PCE, ER	1.2		1.2				

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3836	1152	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.611 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2792 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3836	6750	No
$v_{FO} = v_F - v_R$	2684	6750	No
v_R	1152	2000	No
v_3 or v_{av34}	1044 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2792 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2792	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.532

Space mean speed in ramp influence area, S_R = 48.1 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1431	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	68	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1431		68			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	389		18			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1555	74	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.718 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1137 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1555	6750	No
$v_{FO} = v_F - v_R$	1481	6750	No
v_R	74	2000	No
v_3 or v_{av34}	418 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 1137 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1137	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.435	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1233	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1233		5			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	335					v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1340	5	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.726 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 975 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1340	6750	No
$v_{FO} = v_F - v_R$	1335	6750	No
v_R	5	2000	No
v_3 or v_{av34}	365 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 975 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	975	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2273	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	86	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1191	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2273		86		1191		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	618		23		324		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2471	93	1295	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2471 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2471	4500	No
$v_{FO} = v_F - v_R$	2378	4500	No
v_R	93	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2471 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2471	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1991	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	146	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	999	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1991		146		999		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	541		40		271		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2164	159	1086	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2164 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2164	4500	No
$v_{FO} = v_F - v_R$	2005	4500	No
v_R	159	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2164	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3378	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	77	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	237	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3378		77		237		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	918		21		64		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3672	84	258	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.664 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2468 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3672	6750	No
$v_{FO} = v_F - v_R$	3588	6750	No
v_R	84	1800	No
v_3 or v_{av34}	1204 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2468 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2468	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.696

Space mean speed in ramp influence area, S_R = 46.0 mph

Space mean speed in outer lanes, S_0 = 59.5 mph

Space mean speed for all vehicles, S = 49.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2844	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	171	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	227	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2844		171		227		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	773		46		62		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3091	186	247	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.674 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2144 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3091	6750	No
$v_{FO} = v_F - v_R$	2905	6750	No
v_R	186	1800	No
v_3 or v_{av34}	947 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2144 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2144	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.705

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4320	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	121	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	782	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4320		121		782		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1174		33		212		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4696	132	850	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 5030.30 (Equation 13-12 or 13-13)

P_{FD} = 0.734 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3480 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4696	6750	No
$v_{FO} = v_F - v_R$	4564	6750	No
v_R	132	1800	No
v_3 or v_{av34}	1216 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3480 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3480	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.700

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 59.5 mph

Space mean speed for all vehicles, S = 48.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3428	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	192	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	528	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3428		192		528		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	932		52		143		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3726	209	574	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 4076.30 (Equation 13-12 or 13-13)

P_{FD} = 0.707 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2694 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3726	6750	No
$v_{FO} = v_F - v_R$	3517	6750	No
v_R	209	1800	No
v_3 or v_{av34}	1032 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2694 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2694	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.707

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 49.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4342	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	80	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	255	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4342		80		255		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1180		22		69		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4720	87	277	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.638 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3043 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4720	6750	No
$v_{FO} = v_F - v_R$	4633	6750	No
v_R	87	2000	No
v_3 or v_{av34}	1677 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3043 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3043	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.436	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 57.7	mph
Space mean speed for all vehicles,	S = 52.0	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3386	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	78	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	316	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3386		78		316		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	920		21		86		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3680	85	343	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.664 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2472 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3680	6750	No
$v_{FO} = v_F - v_R$	3595	6750	No
v_R	85	2000	No
v_3 or v_{av34}	1208 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2472 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2472	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.436	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 59.5	mph
Space mean speed for all vehicles,	S = 52.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (WIth 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4517	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	255	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4517		5		255		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1227		11		69		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4910	5	277	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1509.13 (Equation 13-12 or 13-13)

P_{FD} = 0.696 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3420 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4910	6750	No
$v_{FO} = v_F - v_R$	4905	6750	No
v_R	5	2000	No
v_3 or v_{av34}	1490 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3420 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3420	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 58.4 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3624	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	162	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	316	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3624		162		316		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	985		44		86		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3939	176	343	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2314.11 (Equation 13-12 or 13-13)

P_{FD} = 0.775 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3091 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3939	6750	No
$v_{FO} = v_F - v_R$	3763	6750	No
v_R	176	2000	No
v_3 or v_{av34}	848 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3091 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3091	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.444

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5152	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	189	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	440	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5152		189		440		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1400		51		120		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5600	205	478	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.611 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5600	6750	No
$v_{FO} = v_F - v_R$	5395	6750	No
v_R	205	2000	No
v_3 or v_{av34}	2101 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3499	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.446

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 56.0 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3948	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	95	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	355	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3948		95		355		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1073		26		96		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4291	103	386	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.648 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2817 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4291	6750	No
$v_{FO} = v_F - v_R$	4188	6750	No
v_R	103	2000	No
v_3 or v_{av34}	1474 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2817 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2817	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.437	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 58.5	mph
Space mean speed for all vehicles,	S = 52.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5403	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1573	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	208	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5403		1573		208		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1468		427		57		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5873	1710	226	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3583 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5873	6750	No
$v_{FO} = v_F - v_R$	4163	6750	No
v_R	1710	4000	No
v_3 or v_{av34}	2290 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3583 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3583	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -5.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.582

Space mean speed in ramp influence area, S_R = 47.4 mph

Space mean speed in outer lanes, S_0 = 55.3 mph

Space mean speed for all vehicles, S = 50.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4208	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1079	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	158	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4208		1079		158		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1143		293		43		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4574	1173	172	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2703 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4574	6750	No
$v_{FO} = v_F - v_R$	3401	6750	No
v_R	1173	4000	No
v_3 or v_{av34}	1871 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2703 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2703	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -13.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.534	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 56.9	mph
Space mean speed for all vehicles,	S = 51.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3830	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	208	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	932	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3830		208		932		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1041		57		253		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4163	226	1013	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.646 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2767 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4163	6750	No
$v_{FO} = v_F - v_R$	3937	6750	No
v_R	226	2000	No
v_3 or v_{av34}	1396 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2767 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2767	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 58.8 mph

Space mean speed for all vehicles, S = 52.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3129	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	158	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	699	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3129		158		699		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	850		43		190		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3401	172	760	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.667 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2326 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3401	6750	No
$v_{FO} = v_F - v_R$	3229	6750	No
v_R	172	2000	No
v_3 or v_{av34}	1075 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2326 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2326	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.0 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8627	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	42	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	160	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8627		42		160		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2344		11		43		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9377	46	174	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3297 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7502	9000	No
$v_{FO} = v_F - v_R$	7456	9000	No
v_R	46	2000	No
v_3 or v_{av34}	2102 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3297 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3297	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.432	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 56.0	mph
Space mean speed for all vehicles,	S = 52.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6519	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	73	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	125	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6519		73		125		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1771		20		34		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7086	79	136	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2516 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5669	9000	No
$v_{FO} = v_F - v_R$	5590	9000	No
v_R	79	2000	No
v_3 or v_{av34}	1576 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2516 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2516	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 58.1 mph

Space mean speed for all vehicles, S = 53.9 mph

APPENDIX E

HCS ANALYSIS - RAMPS

FUTURE (YEAR 2035) WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

MERGE RAMPS

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6020	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	63	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	138	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6020	63	138	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1636	17	37	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6543	68	150	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.209 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1369 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6611	9000	No
v_3 or v_{av34}	2587 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2617 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6611	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.377	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 49.7	mph
Space mean speed for all vehicles,	S = 49.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9594	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	119	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	137	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9594	119	137	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2607	32	37	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10428	129	149	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.202 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 2103 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10557	9000	Yes
v_3 or v_{av34}	4162 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 4171 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10557	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 38.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.607	
Space mean speed in ramp influence area,	S_R = 47.1	mph
Space mean speed in outer lanes,	S_0 = 43.5	mph
Space mean speed for all vehicles,	S = 44.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3189	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	528	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3189	74	528	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	867	20	143	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3466	80	574	pcph

Estimation of V12 Merge Areas

L_{EQ} = -848.26 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2004 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3546	6750	No
v_3 or v_{av34}	1462 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2004 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3546	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.352	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4881	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	130	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	842	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4881	130	842	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1326	35	229	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5305	141	915	pcph

Estimation of V12 Merge Areas

L_{EQ} = -441.66 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3067 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5446	6750	No
v_3 or v_{av34}	2238 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3067 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5446	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 30.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.417	
Space mean speed in ramp influence area,	S_R = 49.6	mph
Space mean speed in outer lanes,	S_0 = 48.7	mph
Space mean speed for all vehicles,	S = 49.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3263	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1096	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	74	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3263	1096	74	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	887	298	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3547	1191	80	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1108.13 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2197 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4738	6750	No
v_3 or v_{av34}	1350 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2197 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4738	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.331	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 51.9	mph
Space mean speed for all vehicles,	S = 51.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5011	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1780	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	130	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5011	1780	130	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1362	484	35	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5447	1935	141	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1673.95 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3374 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7382	6750	Yes
v_3 or v_{av34}	2073 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3374 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7382	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.004	
Space mean speed in ramp influence area,	S_R = 41.9	mph
Space mean speed in outer lanes,	S_0 = 49.3	mph
Space mean speed for all vehicles,	S = 43.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4040	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	319	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	293	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4040	319	293	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1098	87	80	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4391	347	318	pcph

Estimation of V12 Merge Areas

L_{EQ} = -582.07 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2542 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4738	6750	No
v_3 or v_{av34}	1849 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2542 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4738	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.390	
Space mean speed in ramp influence area,	S_R = 49.9	mph
Space mean speed in outer lanes,	S_0 = 50.1	mph
Space mean speed for all vehicles,	S = 50.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6377	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	125	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	414	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6377	125	414	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1733	34	112	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6932	136	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = -83.45 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4013 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7068	6750	Yes
v_3 or v_{av34}	2919 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4232 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7068	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 39.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.627	
Space mean speed in ramp influence area,	S_R = 46.8	mph
Space mean speed in outer lanes,	S_0 = 46.1	mph
Space mean speed for all vehicles,	S = 46.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3745	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	151	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	386	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3745	151	386	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1018	41	105	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4071	164	420	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3740.81 (Equation 13-6 or 13-7)

P_{FM} = 0.642 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2615 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4235	6750	No
v_3 or v_{av34}	1456 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2615 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4235	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.383	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 51.6	mph
Space mean speed for all vehicles,	S = 50.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5873	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	83	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	548	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5873	83	548	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1596	23	149	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6384	90	596	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5308.39 (Equation 13-6 or 13-7)

P_{FM} = 0.681 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4350 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6474	6750	No
v_3 or v_{av34}	2034 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4350 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6474	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 39.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.651	
Space mean speed in ramp influence area,	S_R = 46.5	mph
Space mean speed in outer lanes,	S_0 = 49.5	mph
Space mean speed for all vehicles,	S = 47.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3510	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	104	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	386	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3510	104	386	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	954	28	105	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3815	113	420	pcph

Estimation of V12 Merge Areas

L_{EQ} = -766.51 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2206 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3928	6750	No
v_3 or v_{av34}	1609 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2206 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3928	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.360	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 51.0	mph
Space mean speed for all vehicles,	S = 50.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5408	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	76	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	548	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5408	76	548	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1470	21	149	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5878	83	596	pcph

Estimation of V12 Merge Areas

L_{EQ} = -331.45 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3399 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5961	6750	No
v_3 or v_{av34}	2479 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3399 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5961	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.447	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 47.4	mph
Space mean speed for all vehicles,	S = 48.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3504	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	60	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	529	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3504	60	529	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	952	16	144	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3809	65	575	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5002.17 (Equation 13-6 or 13-7)

P_{FM} = 0.616 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2347 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3874	6750	No
v_3 or v_{av34}	1462 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2347 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3874	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.363	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 50.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5343	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	135	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	918	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5343	135	918	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1452	37	249	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5808	147	998	pcph

Estimation of V12 Merge Areas

L_{EQ} = 8682.04 (Equation 13-6 or 13-7)

P_{FM} = 0.666 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3867 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5955	6750	No
v_3 or v_{av34}	1941 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3867 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5955	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.535	
Space mean speed in ramp influence area,	S_R = 48.0	mph
Space mean speed in outer lanes,	S_0 = 49.8	mph
Space mean speed for all vehicles,	S = 48.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2246	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	157	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	692	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2246	157	692	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	610	43	188	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2441	171	752	pcph

Estimation of V12 Merge Areas

L_{EQ} = 6541.97 (Equation 13-6 or 13-7)

P_{FM} = 0.628 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1533 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2612	6750	No
v_3 or v_{av34}	908 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1533 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2612	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.341

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 53.5 mph

Space mean speed for all vehicles, S = 51.6 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3396	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	133	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1060	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3396	133	1060	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	923	36	288	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3691	145	1152	pcph

Estimation of V12 Merge Areas

L_{EQ} = 10021.75 Equation 13-6 or 13-7)

P_{FM} = 0.670 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2474 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3836	6750	No
v_3 or v_{av34}	1217 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2474 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3836	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.373	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 52.4	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1363	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	910	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1363	910		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	370	247		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, f_{HV}	1.000	1.000	
Driver population factor, f_P	1.00	1.00	
Flow rate, v_p	1482	989	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1482 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2471	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1482 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2471	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.325	
Space mean speed in ramp influence area,	S_R = 50.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1240	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	751	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1240	751		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	337	204		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, f_{HV}	1.000	1.000	
Driver population factor, f_P	1.00	1.00	
Flow rate, v_p	1348	816	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1348 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2164	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1348 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2164	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2187	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1191	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	86	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2187	1191	86	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	594	324	23	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2377	1295	93	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2377 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3672	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2377 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3672	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.421	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1845	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	999	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	146	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1845	999	146	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	501	271	40	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2005	1086	159	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2005 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3091	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2005 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3091	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.354	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3301	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	237	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	77	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3301	237	77	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	897	64	21	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3588	258	84	pcph

Estimation of V12 Merge Areas

L_{EQ} = -764.08 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2079 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3846	6750	No
v_3 or v_{av34}	1509 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2079 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3846	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.359	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 51.4	mph
Space mean speed for all vehicles,	S = 50.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2673	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	227	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	528	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2673	227	528	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	726	62	143	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2905	247	574	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1725.17 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1683 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3152	6750	No
v_3 or v_{av34}	1222 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1683 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3152	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.0- pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.346

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 52.4 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3538	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	782	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	237	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3538	782	237	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	961	212	64	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3846	850	258	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2232 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4696	6750	No
v_3 or v_{av34}	1614 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2232 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4696	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.399	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = 51.0	mph
Space mean speed for all vehicles,	S = 50.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2900	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	528	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	227	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2900	528	227	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	788	143	62	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3152	574	247	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1829 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3726	6750	No
v_3 or v_{av34}	1323 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1829 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3726	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.357

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = 52.0 mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4199	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	80	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4199	143	80	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1141	39	22	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4564	155	87	pcph

Estimation of V12 Merge Areas

L_{EQ} = 756.85 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2642 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4719	6750	No
v_3 or v_{av34}	1922 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2642 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4719	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.381	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 49.9	mph
Space mean speed for all vehicles,	S = 50.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3236	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	150	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	78	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3236	150	78	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	879	41	21	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3517	163	85	pcph

Estimation of V12 Merge Areas

L_{EQ} = 237.92 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2036 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3680	6750	No
v_3 or v_{av34}	1481 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2036 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3680	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.353

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = 51.5 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4262	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	255	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4262	255	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1158	69	21	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4633	277	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = 44.53 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2679 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4910	6750	No
v_3 or v_{av34}	1954 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2679 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4910	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.395

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 49.8 mph

Space mean speed for all vehicles, S = 49.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3308	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	316	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	162	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3308	316	162	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	899	86	44	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3596	343	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = -764.15 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2079 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3939	6750	No
v_3 or v_{av34}	1517 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2079 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3939	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.364

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 51.3 mph

Space mean speed for all vehicles, S = 50.7 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4512	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	623	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4512	623	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1226	169	11	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4904	677	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = -401.67 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2839 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5581	6750	No
v_3 or v_{av34}	2065 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2839 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5581	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.451	
Space mean speed in ramp influence area,	S_R = 49.1	mph
Space mean speed in outer lanes,	S_0 = 49.4	mph
Space mean speed for all vehicles,	S = 49.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3462	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	486	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	162	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3462	486	162	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	941	132	44	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3763	528	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = -677.73 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2178 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4291	6750	No
v_3 or v_{av34}	1585 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2178 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4291	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.378

Space mean speed in ramp influence area, S_R = 50.1 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 50.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4964	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	189	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4964	440	189	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1349	120	51	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5396	478	205	pcph

Estimation of V12 Merge Areas

L_{EQ} = -325.64 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3128 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5874	6750	No
v_3 or v_{av34}	2268 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3128 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5874	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.462	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 48.6	mph
Space mean speed for all vehicles,	S = 48.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3853	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	355	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	95	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3853	355	95	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1047	96	26	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4188	386	103	pcph

Estimation of V12 Merge Areas

L_{EQ} = -603.84 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2428 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4574	6750	No
v_3 or v_{av34}	1760 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2428 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4574	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.384	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 50.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3622	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	932	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	208	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3622	932	208	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	984	253	57	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3937	1013	226	pcph

Estimation of V12 Merge Areas

L_{EQ} = 731.70 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2334 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4950	6750	No
v_3 or v_{av34}	1603 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2334 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4950	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.393

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 51.0 mph

Space mean speed for all vehicles, S = 50.3 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2971	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	699	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	158	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2971	699	158	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	807	190	43	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3229	760	172	pcph

Estimation of V12 Merge Areas

L_{EQ} = 526.05 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1914 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3989	6750	No
v_3 or v_{av34}	1315 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1914 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3989	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.339	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 52.1	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4554	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4073	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	42	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4554	4073	42	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1237	1107	11	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4950	4427	46	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2747 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9377	6750	Yes
v_3 or v_{av34}	2203 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2828 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9377	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 5.525	
Space mean speed in ramp influence area,	S_R = -16.8	mph
Space mean speed in outer lanes,	S_0 = 49.2	mph
Space mean speed for all vehicles,	S =	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3670	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2849	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	699	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3670	2849	699	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	997	774	190	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3989	3097	760	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2214 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7086	6750	Yes
v_3 or v_{av34}	1775 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2279 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7086	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.849	
Space mean speed in ramp influence area,	S_R = 44.0	mph
Space mean speed in outer lanes,	S_0 = 50.6	mph
Space mean speed for all vehicles,	S = 45.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8585	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	160	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	42	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8585	160	42	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2333	43	11	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9332	174	46	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.196 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1339 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7006	9000	No
v_3 or v_{av34}	2746 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2732 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7006	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.375	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 49.4	mph
Space mean speed for all vehicles,	S = 49.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6446	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	125	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	73	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6446	125	73	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1752	34	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, f_{HV}	1.000	1.000	1.000	
Driver population factor, f_P	1.00	1.00	1.00	
Flow rate, v_p	7007	136	79	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.201 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1027 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5252	9000	No
v_3 or v_{av34}	2044 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2046 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5252	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.338	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 51.3	mph
Space mean speed for all vehicles,	S = 51.0	mph

APPENDIX E

HCS ANALYSIS - RAMPS

FUTURE (YEAR 2035) WITHOUT PROJECT (SR-710 SENSITIVITY ANALYSIS)

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6158	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	138	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	63	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6158		138		63		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1673		37		17		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6693	150	68	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3003 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6693	9000	No
$v_{FO} = v_F - v_R$	6543	9000	No
v_R	150	1800	No
v_3 or v_{av34}	1845 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3003 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3003	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.701

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 57.0 mph

Space mean speed for all vehicles, S = 51.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9731	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	137	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	119	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9731		137		119		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2644		37		32		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10577	149	129	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4696 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10577	9000	Yes
$v_{FO} = v_F - v_R$	10428	9000	Yes
v_R	149	1800	No
v_3 or v_{av34}	2940 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 5177 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5177	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 47.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.701

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 49.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6083	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2366	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	528	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6083		2366		528		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1653		643		143		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6612	2572	574	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4333 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6612	9000	No
$v_{FO} = v_F - v_R$	4040	9000	No
v_R	2572	2000	Yes
v_3 or v_{av34}	1139 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4333 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4333	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 31.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.659

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9713	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	3990	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	842	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9713		3990		842		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2639		1084		229		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10558	4337	915	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5954 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10558	9000	Yes
$v_{FO} = v_F - v_R$	6221	9000	No
v_R	4337	4000	Yes
v_3 or v_{av34}	2302 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 5954 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5954	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.818

Space mean speed in ramp influence area, S_R = 44.4 mph

Space mean speed in outer lanes, S_0 = 56.4 mph

Space mean speed for all vehicles, S = 48.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3717	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	528	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	74	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3717		528		74	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1010		143		20	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4040	574	80	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.633 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2767 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4040	6750	No
$v_{FO} = v_F - v_R$	3466	6750	No
v_R	574	2000	No
v_3 or v_{av34}	1273 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2767 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2767	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.480	
Space mean speed in ramp influence area,	S_R = 48.8	mph
Space mean speed in outer lanes,	S_0 = 59.3	mph
Space mean speed for all vehicles,	S = 51.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5723	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	842	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	130	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5723		842		130		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1555		229		35		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6221	915	141	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.562 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3899 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6221	6750	No
$v_{FO} = v_F - v_R$	5306	6750	No
v_R	915	2000	No
v_3 or v_{av34}	2322 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3899 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3899	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 32.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.510

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 55.9 mph

Space mean speed for all vehicles, S = 50.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4359	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	319	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	122	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4359		319		122		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1185		87		33		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4738	347	133	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 865.87 (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3094 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4738	6750	No
$v_{FO} = v_F - v_R$	4391	6750	No
v_R	347	2000	No
v_3 or v_{av34}	1644 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3094 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3094	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 28.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.459

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 57.8 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6791	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	414	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	125	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6791		414		125		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1845		112		34		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7382	450	136	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 658.32 (Equation 13-12 or 13-13)

P_{FD} = 0.555 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4296 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7382	6750	Yes
$v_{FO} = v_F - v_R$	6932	6750	Yes
v_R	450	2000	No
v_3 or v_{av34}	3086 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4682 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4682	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.469	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 50.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4162	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	417	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	151	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4162		417		151		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1131		113		41		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4524	453	164	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3002 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4524	6750	No
$v_{FO} = v_F - v_R$	4071	6750	No
v_R	453	2000	No
v_3 or v_{av34}	1522 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3002 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3002	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.469

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 58.3 mph

Space mean speed for all vehicles, S = 51.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6502	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	629	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	83	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6502		629		83	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1767		171		23	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7067	684	90	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.552 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4207 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7067	6750	Yes
$v_{FO} = v_F - v_R$	6383	6750	No
v_R	684	2000	No
v_3 or v_{av34}	2860 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4367 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4367	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.490

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3896	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	386	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	104	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3896		386		104	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1059		105		28	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4235	420	113	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.635 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2842 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4235	6750	No
$v_{FO} = v_F - v_R$	3815	6750	No
v_R	420	2000	No
v_3 or v_{av34}	1393 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2842 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2842	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.466	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 58.8	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5956	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	548	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	76	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5956		548		76	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1618		149		21	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6474	596	83	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.571 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3951 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6474	6750	No
$v_{FO} = v_F - v_R$	5878	6750	No
v_R	596	2000	No
v_3 or v_{av34}	2523 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3951 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3951	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.482

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 54.4 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3614	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	110	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	60	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3614		110		60		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	982		30		16		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3928	120	65	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.656 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2619 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3928	6750	No
$v_{FO} = v_F - v_R$	3808	6750	No
v_R	120	2000	No
v_3 or v_{av34}	1309 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2619 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2619	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.439	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 52.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5484	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	141	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	135	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5484		141		135		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1490		38		37		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5961	153	147	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.604 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3661 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5961	6750	No
$v_{FO} = v_F - v_R$	5808	6750	No
v_R	153	2000	No
v_3 or v_{av34}	2300 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3661 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3661	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 55.3 mph

Space mean speed for all vehicles, S = 51.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3564	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	529	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	60	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3564		529		60	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	968		144		16	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3874	575	65	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 558.41 (Equation 13-12 or 13-13)

P_{FD} = 0.637 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2675 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3874	6750	No
$v_{FO} = v_F - v_R$	3299	6750	No
v_R	575	2000	No
v_3 or v_{av34}	1199 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2675 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2675	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.480

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 59.6 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5478	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	918	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	135	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5478		918		135		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1489		249		37		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5954	998	147	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1112.84 (Equation 13-12 or 13-13)

P_{FD} = 0.565 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3799 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5954	6750	No
$v_{FO} = v_F - v_R$	4956	6750	No
v_R	998	2000	No
v_3 or v_{av34}	2155 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3799 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3799	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.518

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 55.8 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3035	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	81	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3035		81			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	825		22			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3299	88	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.673 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2251 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3299	6750	No
$v_{FO} = v_F - v_R$	3211	6750	No
v_R	88	2000	No
v_3 or v_{av34}	1048 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2251 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2251	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4560	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	75	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4560		75			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1239		20			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4957	82	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.632 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3164 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4957	6750	No
$v_{FO} = v_F - v_R$	4875	6750	No
v_R	82	2000	No
v_3 or v_{av34}	1793 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3164	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 57.2 mph

Space mean speed for all vehicles, S = 51.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2954	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	708	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	157	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2954		708		157	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	803		192		43	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3211	770	171	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.644 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2343 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3211	6750	No
$v_{FO} = v_F - v_R$	2441	6750	No
v_R	770	2000	No
v_3 or v_{av34}	868 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2343 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2343	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.497

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4485	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1089	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	133	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4485		1089		133	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1219		296		36	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4875	1184	145	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.584 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3338 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4875	6750	No
$v_{FO} = v_F - v_R$	3691	6750	No
v_R	1184	2000	No
v_3 or v_{av34}	1537 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3338 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3338	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.535	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 58.2	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2403	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	692	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2403		692			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	653		188			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2612	752	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.660 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1980 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2612	6750	No
$v_{FO} = v_F - v_R$	1860	6750	No
v_R	752	2000	No
v_3 or v_{av34}	632 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1980 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1980	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.496

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3529	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1060	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3529		1060				vph
Peak-hour factor, PHF	0.92		0.92				
Peak 15-min volume, v15	959		288				v
Trucks and buses	0		0				%
Recreational vehicles	0		0				%
Terrain type:	Level		Level				
Grade	0.00	%	0.00	%		%	
Length	0.00	mi	0.00	mi		mi	
Trucks and buses PCE, ET	1.5		1.5				
Recreational vehicle PCE, ER	1.2		1.2				

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3836	1152	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.611 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2792 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3836	6750	No
$v_{FO} = v_F - v_R$	2684	6750	No
v_R	1152	2000	No
v_3 or v_{av34}	1044 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2792 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2792	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.532

Space mean speed in ramp influence area, S_R = 48.1 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1431	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	68	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1431		68			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	389		18			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1555	74	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.718 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1137 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1555	6750	No
$v_{FO} = v_F - v_R$	1481	6750	No
v_R	74	2000	No
v_3 or v_{av34}	418 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 1137 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1137	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.435	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1233	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1233		5			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	335					v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1340	5	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.726 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 975 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1340	6750	No
$v_{FO} = v_F - v_R$	1335	6750	No
v_R	5	2000	No
v_3 or v_{av34}	365 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 975 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	975	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2273	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	86	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1191	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2273		86		1191		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	618		23		324		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2471	93	1295	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2471 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2471	4500	No
$v_{FO} = v_F - v_R$	2378	4500	No
v_R	93	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2471 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2471	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1991	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	146	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	999	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1991		146		999		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	541		40		271		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2164	159	1086	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2164 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2164	4500	No
$v_{FO} = v_F - v_R$	2005	4500	No
v_R	159	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2164	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3378	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	77	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	237	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3378		77		237		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	918		21		64		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3672	84	258	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.664 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2468 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3672	6750	No
$v_{FO} = v_F - v_R$	3588	6750	No
v_R	84	1800	No
v_3 or v_{av34}	1204 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2468 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2468	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.696

Space mean speed in ramp influence area, S_R = 46.0 mph

Space mean speed in outer lanes, S_0 = 59.5 mph

Space mean speed for all vehicles, S = 49.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2844	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	171	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	227	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2844		171		227		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	773		46		62		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3091	186	247	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.674 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2144 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3091	6750	No
$v_{FO} = v_F - v_R$	2905	6750	No
v_R	186	1800	No
v_3 or v_{av34}	947 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2144 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2144	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.705

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.5 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4320	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	121	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	782	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4320		121		782		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1174		33		212		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4696	132	850	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 5030.30 (Equation 13-12 or 13-13)

P_{FD} = 0.734 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3480 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4696	6750	No
$v_{FO} = v_F - v_R$	4564	6750	No
v_R	132	1800	No
v_3 or v_{av34}	1216 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3480 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3480	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.700

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 59.5 mph

Space mean speed for all vehicles, S = 48.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3428	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	192	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	528	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3428		192		528		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	932		52		143		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3726	209	574	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 4076.30 (Equation 13-12 or 13-13)

P_{FD} = 0.707 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2694 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3726	6750	No
$v_{FO} = v_F - v_R$	3517	6750	No
v_R	209	1800	No
v_3 or v_{av34}	1032 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2694 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2694	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.707

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 49.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4342	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	80	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	255	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4342		80		255		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1180		22		69		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4720	87	277	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.638 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3043 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4720	6750	No
$v_{FO} = v_F - v_R$	4633	6750	No
v_R	87	2000	No
v_3 or v_{av34}	1677 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3043 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3043	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.436	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 57.7	mph
Space mean speed for all vehicles,	S = 52.0	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3386	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	78	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	316	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3386		78		316		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	920		21		86		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3680	85	343	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.664 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2472 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3680	6750	No
$v_{FO} = v_F - v_R$	3595	6750	No
v_R	85	2000	No
v_3 or v_{av34}	1208 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2472 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2472	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.436	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 59.5	mph
Space mean speed for all vehicles,	S = 52.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (WIth 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4517	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	255	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4517		5		255		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1227		11		69		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4910	5	277	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1509.13 (Equation 13-12 or 13-13)

P_{FD} = 0.696 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3420 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4910	6750	No
$v_{FO} = v_F - v_R$	4905	6750	No
v_R	5	2000	No
v_3 or v_{av34}	1490 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3420 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3420	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 58.4 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3624	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	162	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	316	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3624		162		316		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	985		44		86		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3939	176	343	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2314.11 (Equation 13-12 or 13-13)

P_{FD} = 0.775 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3091 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3939	6750	No
$v_{FO} = v_F - v_R$	3763	6750	No
v_R	176	2000	No
v_3 or v_{av34}	848 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3091 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3091	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.444

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5152	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	189	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	440	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5152		189		440		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1400		51		120		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5600	205	478	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.611 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5600	6750	No
$v_{FO} = v_F - v_R$	5395	6750	No
v_R	205	2000	No
v_3 or v_{av34}	2101 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3499	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.446

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 56.0 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3948	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	95	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	355	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3948		95		355		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1073		26		96		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4291	103	386	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.648 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2817 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4291	6750	No
$v_{FO} = v_F - v_R$	4188	6750	No
v_R	103	2000	No
v_3 or v_{av34}	1474 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2817 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2817	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.437	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 58.5	mph
Space mean speed for all vehicles,	S = 52.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5403	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1573	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	208	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5403		1573		208		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1468		427		57		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5873	1710	226	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3583 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5873	6750	No
$v_{FO} = v_F - v_R$	4163	6750	No
v_R	1710	4000	No
v_3 or v_{av34}	2290 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3583 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3583	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -5.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.582

Space mean speed in ramp influence area, S_R = 47.4 mph

Space mean speed in outer lanes, S_0 = 55.3 mph

Space mean speed for all vehicles, S = 50.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4208	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1079	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	158	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4208		1079		158		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1143		293		43		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4574	1173	172	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2703 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4574	6750	No
$v_{FO} = v_F - v_R$	3401	6750	No
v_R	1173	4000	No
v_3 or v_{av34}	1871 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2703 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2703	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -13.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.534	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 56.9	mph
Space mean speed for all vehicles,	S = 51.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3830	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	208	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	932	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3830		208		932		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1041		57		253		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4163	226	1013	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.646 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2767 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4163	6750	No
$v_{FO} = v_F - v_R$	3937	6750	No
v_R	226	2000	No
v_3 or v_{av34}	1396 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2767 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2767	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 58.8 mph

Space mean speed for all vehicles, S = 52.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3129	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	158	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	699	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3129		158		699		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	850		43		190		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3401	172	760	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.667 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2326 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3401	6750	No
$v_{FO} = v_F - v_R$	3229	6750	No
v_R	172	2000	No
v_3 or v_{av34}	1075 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2326 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2326	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.0 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8627	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	42	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	160	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8627		42		160		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2344		11		43		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9377	46	174	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3297 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7502	9000	No
$v_{FO} = v_F - v_R$	7456	9000	No
v_R	46	2000	No
v_3 or v_{av34}	2102 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3297 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3297	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.432	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 56.0	mph
Space mean speed for all vehicles,	S = 52.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6519	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	73	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	125	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6519		73		125		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1771		20		34		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7086	79	136	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2516 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5669	9000	No
$v_{FO} = v_F - v_R$	5590	9000	No
v_R	79	2000	No
v_3 or v_{av34}	1576 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2516 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2516	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 58.1 mph

Space mean speed for all vehicles, S = 53.9 mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 1

MERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5783	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	38	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	227	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5783	38	227	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1571	10	62	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6286	41	247	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.213 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1337 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6327	9000	No
v_3 or v_{av34}	2474 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2514 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6327	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.370

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = 50.0 mph

Space mean speed for all vehicles, S = 50.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9395	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	68	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	225	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9395	68	225	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2553	18	61	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10212	74	245	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.209 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 2130 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10286	9000	Yes
v_3 or v_{av34}	4041 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 4084 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10286	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.569	
Space mean speed in ramp influence area,	S_R = 47.6	mph
Space mean speed in outer lanes,	S_0 = 43.9	mph
Space mean speed for all vehicles,	S = 45.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2897	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	72	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	538	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2897	72	538	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	787	20	146	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3149	78	585	pcph

Estimation of V12 Merge Areas

L_{EQ} = -916.52 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1821 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3227	6750	No
v_3 or v_{av34}	1328 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1821 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3227	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.346	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = 52.0	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4514	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	117	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	882	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4514	117	882	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1227	32	240	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4907	127	959	pcph

Estimation of V12 Merge Areas

L_{EQ} = -529.82 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2837 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5034	6750	No
v_3 or v_{av34}	2070 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2837 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5034	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.396	
Space mean speed in ramp influence area,	S_R = 49.9	mph
Space mean speed in outer lanes,	S_0 = 49.3	mph
Space mean speed for all vehicles,	S = 49.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2969	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	993	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	72	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2969	993	72	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	807	270	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3227	1079	78	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1015.68 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1999 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4306	6750	No
v_3 or v_{av34}	1228 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1999 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4306	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.301	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = 52.4	mph
Space mean speed for all vehicles,	S = 51.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4631	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1504	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	117	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4631	1504	117	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1258	409	32	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5034	1635	127	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1521.37 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3119 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6669	6750	No
v_3 or v_{av34}	1915 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3119 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6669	4600	Yes

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.669	
Space mean speed in ramp influence area,	S_R = 46.3	mph
Space mean speed in outer lanes,	S_0 = 49.9	mph
Space mean speed for all vehicles,	S = 47.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3684	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	15	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	278	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3684	15	278	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1001	4	76	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4004	16	302	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4004 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4020	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4004 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4020	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.433	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5736	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	399	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5736	5	399	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1559		108	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6235	5	434	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 6235 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6240	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 6235 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6240	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 44.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 2.216	
Space mean speed in ramp influence area,	S_R = 26.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 26.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3329	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	140	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	417	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3329	140	417	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	905	38	113	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3618	152	453	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3618 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3770	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3618 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3770	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.448	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5144	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	142	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	557	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5144	142	557	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1398	39	151	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5591	154	605	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5388.55 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5591 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5745	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5591 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5745	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 46.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.498	
Space mean speed in ramp influence area,	S_R = 35.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 35.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3052	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	65	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	417	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3052	65	417	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	829	18	113	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3317	71	453	pcph

Estimation of V12 Merge Areas

L_{EQ} = -882.07 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3317 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3388	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3317 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3388	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.366	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4729	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	65	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	557	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4729	65	557	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1285	18	151	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5140	71	605	pcph

Estimation of V12 Merge Areas

L_{EQ} = -491.95 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5140 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5211	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5140 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5211	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 39.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.966	
Space mean speed in ramp influence area,	S_R = 42.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 42.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3014	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	117	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	103	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3014	117	103	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	819	32	28	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3276	127	112	pcph

Estimation of V12 Merge Areas

L_{EQ} = -867.76 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3276 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3403	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3276 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3403	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.333	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4663	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	199	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	131	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4663	199	131	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1267	54	36	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5068	216	142	pcph

Estimation of V12 Merge Areas

L_{EQ} = -465.22 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5068 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5284	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5068 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5284	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.985	
Space mean speed in ramp influence area,	S_R = 42.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 42.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1871	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	439	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1871	143	439	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	508	39	119	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2034	155	477	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4149.63 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2034 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2189	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2034 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2189	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 13.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.251	
Space mean speed in ramp influence area,	S_R = 51.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2826	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	194	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	660	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2826	194	660	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	768	53	179	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3072	211	717	pcph

Estimation of V12 Merge Areas

L_{EQ} = 6237.49 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3072 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3283	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3072 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3283	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.320	
Space mean speed in ramp influence area,	S_R = 50.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1166	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	663	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1166	663		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	317	180		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1267	721	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1267 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1988	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1267 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1988	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.307	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	988	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp		vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	988			vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	268	193		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1074	772	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1074 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1846	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1074 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1846	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.304	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1707	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1156	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	122	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1707	1156	122	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	464	314	33	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1855	1257	133	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1855 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3112	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1855 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3112	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.355	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1348	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	904	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	242	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1348	904	242	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	366	246	66	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1465	983	263	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1465 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2448	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1465 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2448	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2771	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	288	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	92	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2771	288	92	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	753	78	25	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3012	313	100	pcph

Estimation of V12 Merge Areas

L_{EQ} = -875.57 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3012 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3325	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3012 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3325	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.345	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2065	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	236	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	187	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2065	236	187	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	561	64	51	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2245	257	203	pcph

Estimation of V12 Merge Areas

L_{EQ} = -1051.69 Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2245 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2502	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2245 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2502	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.285	
Space mean speed in ramp influence area,	S_R = 51.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3059	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	740	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	288	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3059	740	288	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	831	201	78	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3325	804	313	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3325 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4129	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3325 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4129	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.458	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2301	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	490	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	236	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2301	490	236	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	625	133	64	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2501	533	257	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2501 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3034	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2501 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3034	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.297	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3660	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	92	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	74	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3660	92	74	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	995	25	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3978	100	80	pcph

Estimation of V12 Merge Areas

L_{EQ} = 323.09 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3978 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4078	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3978 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4078	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.467	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 48.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2645	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	148	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	62	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2645	148	62	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	719	40	17	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2875	161	67	pcph

Estimation of V12 Merge Areas

L_{EQ} = 100.10 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2875 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3036	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2875 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3036	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.318	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3678	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	310	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	29	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3678	310	29	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	999	84	8	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3998	337	32	pcph

Estimation of V12 Merge Areas

L_{EQ} = 285.01 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3998 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4335	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3998 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4335	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.584

Space mean speed in ramp influence area, S_R = 47.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 47.4 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2731	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	385	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	200	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2731	385	200	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	742	105	54	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2968	418	217	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1932.75 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2968 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3386	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2968 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3386	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.401	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3959	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	503	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	29	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3959	503	29	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1076	137	8	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4303	547	32	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4303 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4850	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4303 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4850	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 33.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.714	
Space mean speed in ramp influence area,	S_R = 45.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 45.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2916	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	420	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	200	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2916	420	200	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	792	114	54	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3170	457	217	pcph

Estimation of V12 Merge Areas

L_{EQ} = -819.82 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3170 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3627	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3170 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3627	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.363

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.3 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4328	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	436	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	134	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4328	436	134	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1176	118	36	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4704	474	146	pcph

Estimation of V12 Merge Areas

L_{EQ} = -474.59 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4704 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5178	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4704 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5178	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.908	
Space mean speed in ramp influence area,	S_R = 43.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 43.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3331	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	307	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3331	307	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	905	83		v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3621	334	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = -736.31 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3621 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3955	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3621 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3955	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.420	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3296	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	979	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	4182	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3296	979	4182	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	896	266	1136	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3583	1064	4546	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1424.76 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2124 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4647	6750	No
v_3 or v_{av34}	1459 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2124 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4647	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.377	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 50.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2627	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	738	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2909	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2627	738	2909	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	714	201	790	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2855	802	3162	pcph

Estimation of V12 Merge Areas

L_{EQ} = 920.15 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1693 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3657	6750	No
v_3 or v_{av34}	1162 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1693 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3657	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.330	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 52.6	mph
Space mean speed for all vehicles,	S = 51.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4275	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4182	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	979	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4275	4182	979	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1162	1136	266	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4647	4546	1064	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2579 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9193	6750	Yes
v_3 or v_{av34}	2068 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2655 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9193	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 5.235

Space mean speed in ramp influence area, S_R = -13.1 mph

Space mean speed in outer lanes, S_0 = 49.6 mph

Space mean speed for all vehicles, S = mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3365	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2909	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	738	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3365	2909	738	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	914	790	201	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3658	3162	802	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2030 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6820	6750	Yes
v_3 or v_{av34}	1628 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2090 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6820	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.751	
Space mean speed in ramp influence area,	S_R = 45.2	mph
Space mean speed in outer lanes,	S_0 = 51.2	mph
Space mean speed for all vehicles,	S = 46.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8440	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	246	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	17	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8440	246	17	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2293	67	5	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9174	267	18	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.184 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1231 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6941	9000	No
v_3 or v_{av34}	2721 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2669 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6941	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.377	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 49.6	mph
Space mean speed for all vehicles,	S = 49.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6224	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	194	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	50	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6224	194	50	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1691	53	14	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6765	211	54	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.191 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 945 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5150	9000	No
v_3 or v_{av34}	1997 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 1975 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5150	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.338

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 51.5 mph

Space mean speed for all vehicles, S = 51.1 mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 1

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6010	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	227	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	38	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6010		227		38	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1633		62		10	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6533	247	41	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2988 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6533	9000	No
$v_{FO} = v_F - v_R$	6286	9000	No
v_R	247	1800	No
v_3 or v_{av34}	1772 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2988 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2988	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.710	
Space mean speed in ramp influence area,	S_R = 45.8	mph
Space mean speed in outer lanes,	S_0 = 57.3	mph
Space mean speed for all vehicles,	S = 51.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9620	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	225	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	68	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9620		225		68		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2614		61		18		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10457	245	74	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4697 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10457	9000	Yes
$v_{FO} = v_F - v_R$	10212	9000	Yes
v_R	245	1800	No
v_3 or v_{av34}	2880 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 5057 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5057	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 46.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.710

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 49.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5821	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2386	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	538	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5821		2386		538		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1582		648		146		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6327	2593	585	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4221 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6327	9000	No
$v_{FO} = v_F - v_R$	3734	9000	No
v_R	2593	2000	Yes
v_3 or v_{av34}	1053 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4221 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4221	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.661

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9463	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	4067	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	538	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	9463		4067		538	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	2571		1105		146	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10286	4421	585	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5946 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10286	9000	Yes
$v_{FO} = v_F - v_R$	5865	9000	No
v_R	4421	4000	Yes
v_3 or v_{av34}	2170 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 5946 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5946	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.826

Space mean speed in ramp influence area, S_R = 44.3 mph

Space mean speed in outer lanes, S_0 = 56.9 mph

Space mean speed for all vehicles, S = 48.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3435	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	538	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	72	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3435		538		72		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	933		146		20		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3734	585	78	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.640 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2600 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3734	6750	No
$v_{FO} = v_F - v_R$	3149	6750	No
v_R	585	2000	No
v_3 or v_{av34}	1134 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2600 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2600	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5396	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	882	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	117	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5396		882		117		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1466		240		32		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5865	959	127	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.569 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3752 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5865	6750	No
$v_{FO} = v_F - v_R$	4906	6750	No
v_R	959	2000	No
v_3 or v_{av34}	2113 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3752 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3752	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.514

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 56.0 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3962	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	278	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	15	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3962		278		15	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1077		76		4	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4307	302	16	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.638 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2859 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4307	6750	No
$v_{FO} = v_F - v_R$	4005	6750	No
v_R	302	2000	No
v_3 or v_{av34}	1448 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2859 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2859	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.455

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = 58.6 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6135	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	399	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	5	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6135		399		5	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1667		108		32	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6668	434	5	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.573 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4008 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6668	6750	No
$v_{FO} = v_F - v_R$	6234	6750	No
v_R	434	2000	No
v_3 or v_{av34}	2660 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4008 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4008	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.467

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 53.9 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3699	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	370	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	140	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3699		370		140		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1005		101		38		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4021	402	152	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.641 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2722 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4021	6750	No
$v_{FO} = v_F - v_R$	3619	6750	No
v_R	402	2000	No
v_3 or v_{av34}	1299 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2722 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2722	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.464

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5741	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	597	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5741		597		142		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1560		162		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6240	649	154	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.574 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3859 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6240	6750	No
$v_{FO} = v_F - v_R$	5591	6750	No
v_R	649	2000	No
v_3 or v_{av34}	2381 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3859 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3859	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.486

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 54.9 mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3469	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	417	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	140	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3469		417		140		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	943		113		38		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3771	453	152	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1232.72 (Equation 13-12 or 13-13)

P_{FD} = 0.648 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2602 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3771	6750	No
$v_{FO} = v_F - v_R$	3318	6750	No
v_R	453	2000	No
v_3 or v_{av34}	1169 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2602 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2602	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.469

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 59.7 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5286	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	557	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	142	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5286		557		142		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1436		151		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5746	605	154	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 979.78 (Equation 13-12 or 13-13)

P_{FD} = 0.589 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3631 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5746	6750	No
$v_{FO} = v_F - v_R$	5141	6750	No
v_R	605	2000	No
v_3 or v_{av34}	2115 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3631 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3631	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.482

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 56.0 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3117	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	103	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	117	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3117		103		117		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	847		28		32		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3388	112	127	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.670 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2307 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3388	6750	No
$v_{FO} = v_F - v_R$	3276	6750	No
v_R	112	2000	No
v_3 or v_{av34}	1081 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2307 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2307	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.438

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.0 mph

Space mean speed for all vehicles, S = 52.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4794	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	131	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	199	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4794		131		199		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1303		36		54		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5211	142	216	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.623 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3301 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5211	6750	No
$v_{FO} = v_F - v_R$	5069	6750	No
v_R	142	2000	No
v_3 or v_{av34}	1910 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3301 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3301	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.441	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 51.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3131	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	559	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	117	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3131		559		117		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	851		152		32		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3403	608	127	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1232.28 (Equation 13-12 or 13-13)

P_{FD} = 0.647 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2416 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3403	6750	No
$v_{FO} = v_F - v_R$	2795	6750	No
v_R	608	2000	No
v_3 or v_{av34}	987 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2416 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2416	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.483

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4862	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	928	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	199	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4862		928		199		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1321		252		54		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5285	1009	216	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1864.14 (Equation 13-12 or 13-13)

P_{FD} = 0.581 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3495 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5285	6750	No
$v_{FO} = v_F - v_R$	4276	6750	No
v_R	1009	2000	No
v_3 or v_{av34}	1790 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3495 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3495	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.519

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 57.3 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2572	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	19	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2572		19			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	699		5			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2796	21	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.689 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1933 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2796	6750	No
$v_{FO} = v_F - v_R$	2775	6750	No
v_R	21	2000	No
v_3 or v_{av34}	863 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1933 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1933	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.430

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3934	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3934		74			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1069		20			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4276	80	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.649 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2805 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4276	6750	No
$v_{FO} = v_F - v_R$	4196	6750	No
v_R	80	2000	No
v_3 or v_{av34}	1471 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2805 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2805	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 58.5 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2553	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	682	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	143	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2553		682		143		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	694		185		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2775	741	155	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.657 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2076 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2775	6750	No
$v_{FO} = v_F - v_R$	2034	6750	No
v_R	741	2000	No
v_3 or v_{av34}	699 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2076 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2076	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.495	
Space mean speed in ramp influence area,	S_R = 48.6	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3860	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1034	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	194	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3860		1034		194		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1049		281		53		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4196	1124	211	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.603 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2978 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4196	6750	No
$v_{FO} = v_F - v_R$	3072	6750	No
v_R	1124	2000	No
v_3 or v_{av34}	1218 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2978 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2978	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.529	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 59.5	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2014	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	439	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2014		439			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	547		119			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2189	477	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.683 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1647 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2189	6750	No
$v_{FO} = v_F - v_R$	1712	6750	No
v_R	477	2000	No
v_3 or v_{av34}	542 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1647 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1647	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.471

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3020	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	660	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3020		660			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	821		179			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3283	717	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.645 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2372 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3283	6750	No
$v_{FO} = v_F - v_R$	2566	6750	No
v_R	717	2000	No
v_3 or v_{av34}	911 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2372 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2372	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.493

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1336	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	170	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1336		170			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	363		46			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1452	185	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.715 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1091 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1452	6750	No
$v_{FO} = v_F - v_R$	1267	6750	No
v_R	185	2000	No
v_3 or v_{av34}	361 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1091 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1091	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 9.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.445

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1114	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	126	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1114		126			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	303		34			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1211	137	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.723 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 914 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1211	6750	No
$v_{FO} = v_F - v_R$	1074	6750	No
v_R	137	2000	No
v_3 or v_{av34}	297 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 914 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	914	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.440

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1829	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	122	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1156	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1829		122		1156		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	497		33		314		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1988	133	1257	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1988 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1988	4500	No
$v_{FO} = v_F - v_R$	1855	4500	No
v_R	133	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 1988 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1988	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 14.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.440

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1590	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	242	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	904	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1590		242		904		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	432		66		246		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1728	263	983	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1728 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1728	4500	No
$v_{FO} = v_F - v_R$	1465	4500	No
v_R	263	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1728 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1728	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 11.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.452	
Space mean speed in ramp influence area,	S_R = 49.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2863	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	92	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	288	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2863		92		288		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	778		25		78		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3112	100	313	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.678 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2141 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3112	6750	No
$v_{FO} = v_F - v_R$	3012	6750	No
v_R	100	1800	No
v_3 or v_{av34}	971 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2141 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2141	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.697

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2252	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	187	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	236	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2252		187		236		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	612		51		64		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2448	203	257	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.689 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1751 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2448	6750	No
$v_{FO} = v_F - v_R$	2245	6750	No
v_R	203	1800	No
v_3 or v_{av34}	697 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1751 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1751	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 13.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.706

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3799	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	139	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	740	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3799		139		740		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1032		38		201		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4129	151	804	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 5204.19 (Equation 13-12 or 13-13)

P_{FD} = 0.745 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3114 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4129	6750	No
$v_{FO} = v_F - v_R$	3978	6750	No
v_R	151	1800	No
v_3 or v_{av34}	1015 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3114 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3114	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.702

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 48.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2791	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	146	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	490	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2791		146		490		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	758		40		133		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3034	159	533	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 4141.48 (Equation 13-12 or 13-13)

P_{FD} = 0.724 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2240 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3034	6750	No
$v_{FO} = v_F - v_R$	2875	6750	No
v_R	159	1800	No
v_3 or v_{av34}	794 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2240 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2240	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.702

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 48.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3752	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	310	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3752		74		310		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1020		20		84		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4078	80	337	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.654 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2696 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4078	6750	No
$v_{FO} = v_F - v_R$	3998	6750	No
v_R	80	2000	No
v_3 or v_{av34}	1382 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2696 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2696	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.435	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 58.8	mph
Space mean speed for all vehicles,	S = 52.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2793	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	62	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	385	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2793		62		385		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	759		17		105		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3036	67	418	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.681 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2089 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3036	6750	No
$v_{FO} = v_F - v_R$	2969	6750	No
v_R	67	2000	No
v_3 or v_{av34}	947 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2089 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2089	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.434

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3988	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	29	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	310	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3988		29		310		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1084		8		84		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4335	32	337	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2002.70 (Equation 13-12 or 13-13)

P_{FD} = 0.756 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3284 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4335	6750	No
$v_{FO} = v_F - v_R$	4303	6750	No
v_R	32	2000	No
v_3 or v_{av34}	1051 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3284 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3284	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.431

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3116	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	385	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3116		200		385		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	847		54		105		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3387	217	418	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.665 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2326 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3387	6750	No
$v_{FO} = v_F - v_R$	3170	6750	No
v_R	217	2000	No
v_3 or v_{av34}	1061 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2326 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2326	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 52.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4462	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	134	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	436	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4462		134		436		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1212		36		118		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4850	146	474	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.632 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3119 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4850	6750	No
$v_{FO} = v_F - v_R$	4704	6750	No
v_R	146	2000	No
v_3 or v_{av34}	1731 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3119 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3119	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.441

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 57.5 mph

Space mean speed for all vehicles, S = 51.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3336	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	307	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3336		5		307		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	907		33		83		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3626	5	334	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.669 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2428 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3626	6750	No
$v_{FO} = v_F - v_R$	3621	6750	No
v_R	5	2000	No
v_3 or v_{av34}	1198 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2428 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2428	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 59.6 mph

Space mean speed for all vehicles, S = 52.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4764	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1266	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	202	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4764		1266		202		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1295		344		55		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5178	1376	220	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3087 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5178	6750	No
$v_{FO} = v_F - v_R$	3802	6750	No
v_R	1376	4000	No
v_3 or v_{av34}	2091 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3087 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3087	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -9.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.552

Space mean speed in ramp influence area, S_R = 47.8 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3638	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	868	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	143	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3638		868		143		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	989		236		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3954	943	155	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2298 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3954	6750	No
$v_{FO} = v_F - v_R$	3011	6750	No
v_R	943	4000	No
v_3 or v_{av34}	1656 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2298 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2298	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -16.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.513	
Space mean speed in ramp influence area,	S_R = 48.3	mph
Space mean speed in outer lanes,	S_0 = 57.8	mph
Space mean speed for all vehicles,	S = 51.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)3498

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3498	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	202	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	979	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3498		202		979		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	951		55		266		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3802	220	1064	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1123.86 (Equation 13-12 or 13-13)

P_{FD} = 0.655 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2566 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3802	6750	No
$v_{FO} = v_F - v_R$	3582	6750	No
v_R	220	2000	No
v_3 or v_{av34}	1236 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2566 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2566	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 59.4 mph

Space mean speed for all vehicles, S = 52.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2770	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	738	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2770		143		738		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	753		39		201		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3011	155	802	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.678 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2090 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3011	6750	No
$v_{FO} = v_F - v_R$	2856	6750	No
v_R	155	2000	No
v_3 or v_{av34}	921 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2090 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2090	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8457	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	17	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	246	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8457		17		246		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2298		5		67		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9192	18	267	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3216 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7354	9000	No
$v_{FO} = v_F - v_R$	7336	9000	No
v_R	18	2000	No
v_3 or v_{av34}	2069 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3216 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3216	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.430

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 56.2 mph

Space mean speed for all vehicles, S = 53.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6274	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	50	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	194	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6274		50		194		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1705		14		53		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6820	54	211	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2558 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5797	9000	No
$v_{FO} = v_F - v_R$	5743	9000	No
v_R	54	2000	No
v_3 or v_{av34}	1619 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2558 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2558	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.433	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 57.9	mph
Space mean speed for all vehicles,	S = 53.8	mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

MERGE RAMPS

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5835	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	63	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	173	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5835	63	173	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1586	17	47	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6342	68	188	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.209 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1327 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6410	9000	No
v_3 or v_{av34}	2507 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2536 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6410	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.372	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 49.9	mph
Space mean speed for all vehicles,	S = 50.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9475	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	193	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9475	5	193	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2575		52	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10299	5	210	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.217 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 2237 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10304	9000	Yes
v_3 or v_{av34}	4031 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 4119 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	10304	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.561	
Space mean speed in ramp influence area,	S_R = 47.7	mph
Space mean speed in outer lanes,	S_0 = 43.7	mph
Space mean speed for all vehicles,	S = 45.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2926	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	73	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	552	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2926	73	552	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	795	20	150	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3180	79	600	pcph

Estimation of V12 Merge Areas

L_{EQ} = -909.67 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1839 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3259	6750	No
v_3 or v_{av34}	1341 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1839 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3259	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.347	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = 52.0	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4516	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	122	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	874	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4516	122	874	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1227	33	237	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4909	133	950	pcph

Estimation of V12 Merge Areas

L_{EQ} = -528.11 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2838 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5042	6750	No
v_3 or v_{av34}	2071 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2838 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5042	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.396	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = 49.3	mph
Space mean speed for all vehicles,	S = 49.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2999	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	931	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	73	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2999	931	73	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	815	253	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3260	1012	79	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1008.41 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2020 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4272	6750	No
v_3 or v_{av34}	1240 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2020 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4272	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.297	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = 52.3	mph
Space mean speed for all vehicles,	S = 51.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4638	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1384	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	122	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4638	1384	122	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1260	376	33	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5041	1504	133	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1494.83 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3123 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6545	6750	No
v_3 or v_{av34}	1918 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3123 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6545	4600	Yes

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 31.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.615

Space mean speed in ramp influence area, S_R = 47.0 mph

Space mean speed in outer lanes, S_0 = 49.9 mph

Space mean speed for all vehicles, S = 47.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3640	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	25	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	290	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3640	25	290	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	989	7	79	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3957	27	315	pcph

Estimation of V12 Merge Areas

L_{EQ} = -743.42 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3957 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3984	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3957 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3984	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.426	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5622	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	38	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	400	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5622	38	400	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1528	10	109	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6111	41	435	pcph

Estimation of V12 Merge Areas

L_{EQ} = -279.47 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 6111 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6152	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 6111 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6152	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 44.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 2.048	
Space mean speed in ramp influence area,	S_R = 28.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 28.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3292	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	151	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	417	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3292	151	417	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	895	41	113	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3578	164	453	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4034.74 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3578 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3742	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3578 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3742	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 30.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.444	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5087	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	120	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	543	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5087	120	543	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1382	33	148	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5529	130	590	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5254.95 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5529 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5659	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5529 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5659	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 45.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.398	
Space mean speed in ramp influence area,	S_R = 36.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 36.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3026	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	79	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	417	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3026	79	417	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	822	21	113	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3289	86	453	pcph

Estimation of V12 Merge Areas

L_{EQ} = -884.85 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3289 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3375	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3289 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3375	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4664	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	66	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	543	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	620	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4664	66	543	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1267	18	148	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5070	72	590	pcph

Estimation of V12 Merge Areas

L_{EQ} = -506.71 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5070 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5142	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5070 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5142	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 39.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.918	
Space mean speed in ramp influence area,	S_R = 43.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 43.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2998	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	52	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	107	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2998	52	107	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	815	14	29	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3259	57	116	pcph

Estimation of V12 Merge Areas

L_{EQ} = -886.38 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3259 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3316	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3259 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3316	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.323

Space mean speed in ramp influence area, S_R = 50.8 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4617	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	114	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	113	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4617	114	113	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1255	31	31	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5018	124	123	pcph

Estimation of V12 Merge Areas

L_{EQ} = -495.61 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 5018 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5142	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 5018 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5142	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 36.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.883	
Space mean speed in ramp influence area,	S_R = 43.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 43.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1835	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	152	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	675	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1835	152	675	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	499	41	183	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1995	165	734	pcph

Estimation of V12 Merge Areas

L_{EQ} = -1133.76 Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1995 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2160	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1995 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2160	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 12.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.250	
Space mean speed in ramp influence area,	S_R = 51.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2787	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	130	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1004	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2787	130	1004	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	757	35	273	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3029	141	1091	pcph

Estimation of V12 Merge Areas

L_{EQ} = -917.62 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3029 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3170	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3029 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3170	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.309	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	975	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	812	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	975	812		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	265	221		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1060	883	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1060 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1943	4500	No

v_3 or v_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1060 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1943	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.306	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	918	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	648	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	918	648		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	249	176		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, f_{HV}	1.000	1.000	
Driver population factor, f_P	1.00	1.00	
Flow rate, v_p	998	704	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 998 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1702	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 998 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1702	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 14.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.300	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1691	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1139	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	96	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1691	1139	96	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	460	310	26	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1838	1238	104	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1838 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3076	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1838 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3076	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.352

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.4 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1332	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	952	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	234	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1332	952	234	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	362	259	64	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1448	1035	254	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1448 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2483	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1448 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2483	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.315	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2736	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	211	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	94	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2736	211	94	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	743	57	26	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2974	229	102	pcph

Estimation of V12 Merge Areas

L_{EQ} = -901.68 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2974 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3203	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2974 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3203	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.333	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2098	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	205	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	186	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2098	205	186	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	570	56	51	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2280	223	202	pcph

Estimation of V12 Merge Areas

L_{EQ} = -1051.48 Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2280 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2503	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2280 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2503	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.285	
Space mean speed in ramp influence area,	S_R = 51.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2947	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	682	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	211	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2947	682	211	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	801	185	57	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3203	741	229	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3203 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3944	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3203 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3944	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.417	
Space mean speed in ramp influence area,	S_R = 49.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2303	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	434	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	205	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2303	434	205	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	626	118	56	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2503	472	223	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2503 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2975	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2503 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2975	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.292	
Space mean speed in ramp influence area,	S_R = 51.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3513	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	112	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	116	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3513	112	116	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	955	30	32	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3818	122	126	pcph

Estimation of V12 Merge Areas

L_{EQ} = 293.56 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3818 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3940	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3818 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3940	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.438	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2646	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	1200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	91	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2646	143	91	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	719	39	25	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2876	155	99	pcph

Estimation of V12 Merge Areas

L_{EQ} = 99.03 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2876 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3031	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2876 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3031	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.318

Space mean speed in ramp influence area, S_R = 50.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3551	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	284	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3551	284	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	965	77		v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3860	309	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = 44.53 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3860 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4169	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3860 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4169	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 34.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.538	
Space mean speed in ramp influence area,	S_R = 48.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 48.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2710	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	419	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	181	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2710	419	181	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	736	114	49	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2946	455	197	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1754.62 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2946 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3401	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2946 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3401	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.403	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3830	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	540	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3830	540	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1041	147		v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4163	587	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = -579.50 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4163 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4750	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4163 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4750	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.667	
Space mean speed in ramp influence area,	S_R = 46.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 46.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2948	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	423	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	181	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2948	423	181	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	801	115	49	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3204	460	197	pcph

Estimation of V12 Merge Areas

L_{EQ} = -811.90 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3204 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3664	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3204 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3664	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.368	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4234	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	429	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	136	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4234	429	136	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1151	117	37	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4602	466	148	pcph

Estimation of V12 Merge Areas

L_{EQ} = -498.13 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4602 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5068	4500	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4602 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5068	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 35.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.836	
Space mean speed in ramp influence area,	S_R = 44.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 44.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3368	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	311	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	3	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3368	311	3	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	915	85	1	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3661	338	3	pcph

Estimation of V12 Merge Areas

L_{EQ} = -726.89 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3661 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3999	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3661 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3999	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.429

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3258	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	973	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	200	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3258	973	200	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	885	264	54	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3541	1058	217	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1288.22 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2099 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4599	6750	No
v_3 or v_{av34}	1442 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2099 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4599	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.374	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 51.6	mph
Space mean speed for all vehicles,	S = 50.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2659	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	739	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	141	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2659	739	141	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	723	201	38	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2890	803	153	pcph

Estimation of V12 Merge Areas

L_{EQ} = 462.70 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1713 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3693	6750	No
v_3 or v_{av34}	1177 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1713 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3693	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.331

Space mean speed in ramp influence area, S_R = 50.7 mph

Space mean speed in outer lanes, S_0 = 52.6 mph

Space mean speed for all vehicles, S = 51.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4231	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4204	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	973	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4231	4204	973	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1150	1142	264	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4599	4570	1058	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2552 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9169	6750	Yes
v_3 or v_{av34}	2047 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2628 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9169	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 5.219

Space mean speed in ramp influence area, S_R = -12.9 mph

Space mean speed in outer lanes, S_0 = 49.7 mph

Space mean speed for all vehicles, S = mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Without Project (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3398	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2937	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	739	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3398	2937	739	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	923	798	201	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3693	3192	803	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2050 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6885	6750	Yes
v_3 or v_{av34}	1643 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2110 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6885	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.789	
Space mean speed in ramp influence area,	S_R = 44.7	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 46.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8430	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	198	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8430	198	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2291	54	26	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9163	215	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.191 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1272 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6878	9000	No
v_3 or v_{av34}	2695 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2665 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6878	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.373	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 49.6	mph
Space mean speed for all vehicles,	S = 49.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6282	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	145	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	53	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6282	145	53	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1707	39	14	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6828	158	58	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.198 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 987 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5143	9000	No
v_3 or v_{av34}	1999 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 1994 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5143	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.337

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 51.4 mph

Space mean speed for all vehicles, S = 51.1 mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6008	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	173	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	63	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6008		173		63	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1633		47		17	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6530	188	68	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2953 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6530	9000	No
$v_{FO} = v_F - v_R$	6342	9000	No
v_R	188	1800	No
v_3 or v_{av34}	1788 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2953 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2953	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.705

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 57.3 mph

Space mean speed for all vehicles, S = 51.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9653	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	193	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	5	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	9653		193		5	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	2623		52		42	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10492	210	5	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4693 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10492	9000	Yes
$v_{FO} = v_F - v_R$	10282	9000	Yes
v_R	210	1800	No
v_3 or v_{av34}	2899 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5092 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5092	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 46.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.707	
Space mean speed in ramp influence area,	S_R = 45.8	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 49.6	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5898	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2420	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	552	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5898		2420		552		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1603		658		150		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6411	2630	600	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4279 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6411	9000	No
$v_{FO} = v_F - v_R$	3781	9000	No
v_R	2630	2000	Yes
v_3 or v_{av34}	1066 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4279 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4279	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.665

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9465	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	4075	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	874	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	9465		4075		874	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	2572		1107		237	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10288	4429	950	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6984 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10288	9000	Yes
$v_{FO} = v_F - v_R$	5859	9000	No
v_R	4429	2000	Yes
v_3 or v_{av34}	1652 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 6984 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	6984	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 56.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.827	
Space mean speed in ramp influence area,	S_R = 44.3	mph
Space mean speed in outer lanes,	S_0 = 59.2	mph
Space mean speed for all vehicles,	S = 47.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3478	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	552	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	73	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3478		552		73		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	945		150		20		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3780	600	79	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.638 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2629 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3780	6750	No
$v_{FO} = v_F - v_R$	3180	6750	No
v_R	600	2000	No
v_3 or v_{av34}	1151 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2629 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2629	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.482

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5390	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	874	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	122	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5390		874		122	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1465		237		33	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5859	950	133	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.570 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3747 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5859	6750	No
$v_{FO} = v_F - v_R$	4909	6750	No
v_R	950	2000	No
v_3 or v_{av34}	2112 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3747 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3747	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.514

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 56.7 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3930	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	290	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	25	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3930		290		25	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1068		79		7	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4272	315	27	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.639 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2842 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4272	6750	No
$v_{FO} = v_F - v_R$	3957	6750	No
v_R	315	2000	No
v_3 or v_{av34}	1430 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2842 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2842	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.456

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = 58.7 mph

Space mean speed for all vehicles, S = 51.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6022	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	400	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	38	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6022		400		38	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1636		109		10	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6546	435	41	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.576 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3957 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6546	6750	No
$v_{FO} = v_F - v_R$	6111	6750	No
v_R	435	2000	No
v_3 or v_{av34}	2589 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3957 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3957	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.467

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 54.1 mph

Space mean speed for all vehicles, S = 50.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3665	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	373	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	151	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3665		373		151		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	996		101		41		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3984	405	164	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.642 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2702 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3984	6750	No
$v_{FO} = v_F - v_R$	3579	6750	No
v_R	405	2000	No
v_3 or v_{av34}	1282 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2702 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2702	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.464

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5660	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	573	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	120	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5660		573		120		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1538		156		33		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6152	623	130	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.578 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3816 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6152	6750	No
$v_{FO} = v_F - v_R$	5529	6750	No
v_R	623	2000	No
v_3 or v_{av34}	2336 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3816 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3816	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 34.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.484

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 55.1 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3443	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	417	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	151	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3443		417		151		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	936		113		41		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3742	453	164	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1337.27 (Equation 13-12 or 13-13)

P_{FD} = 0.655 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2607 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3742	6750	No
$v_{FO} = v_F - v_R$	3289	6750	No
v_R	453	2000	No
v_3 or v_{av34}	1135 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2607 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2607	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.469	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 59.8	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5207	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	543	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	120	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1180	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5207		543		120		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1415		148		33		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5660	590	130	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 831.52 (Equation 13-12 or 13-13)

P_{FD} = 0.591 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3588 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5660	6750	No
$v_{FO} = v_F - v_R$	5070	6750	No
v_R	590	2000	No
v_3 or v_{av34}	2072 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3588 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3588	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 56.2 mph

Space mean speed for all vehicles, S = 51.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3105	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	107	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	52	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3105		107		52	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	844		29		14	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3375	116	57	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 86.10 (Equation 13-12 or 13-13)

P_{FD} = 0.670 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2300 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3375	6750	No
$v_{FO} = v_F - v_R$	3259	6750	No
v_R	116	2000	No
v_3 or v_{av34}	1075 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2300 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2300	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.438	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 52.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4730	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	113	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	114	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4730		113		114		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1285		31		31		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5141	123	124	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3263 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5141	6750	No
$v_{FO} = v_F - v_R$	5018	6750	No
v_R	123	2000	No
v_3 or v_{av34}	1878 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3263 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3263	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.439	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 56.9	mph
Space mean speed for all vehicles,	S = 51.8	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3050	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	529	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	52	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3050		529		52		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	829		144		14		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3315	575	57	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 550.49 (Equation 13-12 or 13-13)

P_{FD} = 0.651 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2358 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3315	6750	No
$v_{FO} = v_F - v_R$	2740	6750	No
v_R	575	2000	No
v_3 or v_{av34}	957 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2358 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2358	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.480

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4731	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	891	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	114	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4731		891		114		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1286		242		31		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5142	968	124	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1071.76 (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3418 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5142	6750	No
$v_{FO} = v_F - v_R$	4174	6750	No
v_R	968	2000	No
v_3 or v_{av34}	1724 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3418 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3418	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 28.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.515

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 57.5 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2521	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	11	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2521		11			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	685		3			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2740	12	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.691 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1897 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2740	6750	No
$v_{FO} = v_F - v_R$	2728	6750	No
v_R	12	2000	No
v_3 or v_{av34}	843 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1897 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1897	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.429

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3840	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	49	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3840		49			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1043		13			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4174	53	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.653 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2745 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4174	6750	No
$v_{FO} = v_F - v_R$	4121	6750	No
v_R	53	2000	No
v_3 or v_{av34}	1429 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2745 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2745	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.433

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 58.7 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2510	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	675	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	152	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2510		675		152		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	682		183		41		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2728	734	165	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.658 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2046 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2728	6750	No
$v_{FO} = v_F - v_R$	1994	6750	No
v_R	734	2000	No
v_3 or v_{av34}	682 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2046 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2046	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.494	
Space mean speed in ramp influence area,	S_R = 48.6	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3791	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1004	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	130	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3791		1004		130	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1030		273		35	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4121	1091	141	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.607 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2930 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4121	6750	No
$v_{FO} = v_F - v_R$	3030	6750	No
v_R	1091	2000	No
v_3 or v_{av34}	1191 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2930 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2930	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.526

Space mean speed in ramp influence area, S_R = 48.2 mph

Space mean speed in outer lanes, S_0 = 59.6 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1987	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	533	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1987		533			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	540		145			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2160	579	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.679 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1653 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2160	6750	No
$v_{FO} = v_F - v_R$	1581	6750	No
v_R	579	2000	No
v_3 or v_{av34}	507 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1653 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1653	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.480

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2917	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	834	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2917		834			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	793		227			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3171	907	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.639 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2354 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3171	6750	No
$v_{FO} = v_F - v_R$	2264	6750	No
v_R	907	2000	No
v_3 or v_{av34}	817 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2354 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2354	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 20.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.510	
Space mean speed in ramp influence area,	S_R = 48.4	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1065	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	90	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1065		90			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	289		24			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1158	98	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.727 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 868 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1158	6750	No
$v_{FO} = v_F - v_R$	1060	6750	No
v_R	98	2000	No
v_3 or v_{av34}	290 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 868 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	868	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.437

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	974	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	56	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	974		56			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	265		15			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1059	61	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.731 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 790 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1059	6750	No
$v_{FO} = v_F - v_R$	998	6750	No
v_R	61	2000	No
v_3 or v_{av34}	269 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 790 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	790	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.433

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1787	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	96	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1139	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1787		96		1139		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	486		26		310		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1942	104	1238	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1942 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1942	4500	No
$v_{FO} = v_F - v_R$	1838	4500	No
v_R	104	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 1942 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1942	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 13.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.437

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1566	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	234	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	952	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1566		234		952		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	426		64		259		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1702	254	1035	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1702 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1702	4500	No
$v_{FO} = v_F - v_R$	1448	4500	No
v_R	254	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1702 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1702	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 11.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.451

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2830	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	94	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	211	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2830		94		211		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	769		26		57		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3076	102	229	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.678 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2120 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3076	6750	No
$v_{FO} = v_F - v_R$	2974	6750	No
v_R	102	1800	No
v_3 or v_{av34}	956 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2120 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2120	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.697

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2284	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	186	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	205	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2284		186		205		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	621		51		56		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2483	202	223	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.689 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1773 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2483	6750	No
$v_{FO} = v_F - v_R$	2281	6750	No
v_R	202	1800	No
v_3 or v_{av34}	710 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1773 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1773	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.706

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3629	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	116	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	682	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3629		116		682		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	986		32		185		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3945	126	741	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 4869.91 (Equation 13-12 or 13-13)

P_{FD} = 0.737 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2942 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3945	6750	No
$v_{FO} = v_F - v_R$	3819	6750	No
v_R	126	1800	No
v_3 or v_{av34}	1003 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2942 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2942	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.699

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 48.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2737	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	91	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	434	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2737		91		434		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	744		25		118		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2975	99	472	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3578.44 (Equation 13-12 or 13-13)

P_{FD} = 0.712 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2146 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2975	6750	No
$v_{FO} = v_F - v_R$	2876	6750	No
v_R	99	1800	No
v_3 or v_{av34}	829 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2146 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2146	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.697

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3625	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	284	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3625		74		284		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	985		20		77		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3940	80	309	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.658 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2619 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3940	6750	No
$v_{FO} = v_F - v_R$	3860	6750	No
v_R	80	2000	No
v_3 or v_{av34}	1321 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2619 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2619	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 59.1 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2789	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	79	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	419	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2789		79		419		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	758		21		114		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3032	86	455	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.680 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2090 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3032	6750	No
$v_{FO} = v_F - v_R$	2946	6750	No
v_R	86	2000	No
v_3 or v_{av34}	942 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2090 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2090	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3835	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	284	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3835		5		284	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1042		11		77	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4168	5	309	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1856.03 (Equation 13-12 or 13-13)

P_{FD} = 0.745 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3106 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4168	6750	No
$v_{FO} = v_F - v_R$	4163	6750	No
v_R	5	2000	No
v_3 or v_{av34}	1062 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3106 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3106	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 51.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3129	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	181	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	419	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3129		181		419		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	850		49		114		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3401	197	455	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3389.17 (Equation 13-12 or 13-13)

P_{FD} = 0.865 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2968 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3401	6750	No
$v_{FO} = v_F - v_R$	3204	6750	No
v_R	197	2000	No
v_3 or v_{av34}	433 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2968 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2968	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.446

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 50.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4370	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	136	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	429	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4370		136		429		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1187		37		117		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4750	148	466	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.634 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3068 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4750	6750	No
$v_{FO} = v_F - v_R$	4602	6750	No
v_R	148	2000	No
v_3 or v_{av34}	1682 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3068 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3068	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.441	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 57.7	mph
Space mean speed for all vehicles,	S = 51.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3371	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	3	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	311	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3371		3		311		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	916		1		85		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3664	3	338	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.668 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2450 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3664	6750	No
$v_{FO} = v_F - v_R$	3661	6750	No
v_R	3	2000	No
v_3 or v_{av34}	1214 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2450 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2450	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 59.5 mph

Space mean speed for all vehicles, S = 52.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4663	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1205	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	200	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4663		1205		200		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1267		327		54		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5068	1310	217	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3001 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5068	6750	No
$v_{FO} = v_F - v_R$	3758	6750	No
v_R	1310	4000	No
v_3 or v_{av34}	2067 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3001 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3001	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -10.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.546	
Space mean speed in ramp influence area,	S_R = 47.9	mph
Space mean speed in outer lanes,	S_0 = 56.2	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3679	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	879	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	141	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3679		879		141		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1000		239		38		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3999	955	153	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2325 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3999	6750	No
$v_{FO} = v_F - v_R$	3044	6750	No
v_R	955	4000	No
v_3 or v_{av34}	1674 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2325 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2325	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -16.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.514

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 57.7 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3458	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	973	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3458		200		973		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	940		54		264		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3759	217	1058	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.656 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2541 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3759	6750	No
$v_{FO} = v_F - v_R$	3542	6750	No
v_R	217	2000	No
v_3 or v_{av34}	1218 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2541 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2541	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 18.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 59.5 mph

Space mean speed for all vehicles, S = 52.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2800	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	141	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	739	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2800		141		739		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	761		38		201		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3043	153	803	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.677 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2109 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3043	6750	No
$v_{FO} = v_F - v_R$	2890	6750	No
v_R	153	2000	No
v_3 or v_{av34}	934 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2109 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2109	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8435	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	198	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8435		5		198		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2292		26		54		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9168	5	215	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3201 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7335	9000	No
$v_{FO} = v_F - v_R$	7330	9000	No
v_R	5	2000	No
v_3 or v_{av34}	2067 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3201 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3201	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 29.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 56.2 mph

Space mean speed for all vehicles, S = 53.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 1 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6335	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	53	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	145	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6335		53		145		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1721		14		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6886	58	158	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2585 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5854	9000	No
$v_{FO} = v_F - v_R$	5796	9000	No
v_R	58	2000	No
v_3 or v_{av34}	1634 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2585 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2585	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.433	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 57.9	mph
Space mean speed for all vehicles,	S = 53.8	mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 2

MERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2936	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	75	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	529	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2936	75	529	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	798	20	144	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3191	82	575	pcph

Estimation of V12 Merge Areas

L_{EQ} = -906.68 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1845 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3273	6750	No
v_3 or v_{av34}	1346 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1845 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3273	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.347	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = 52.0	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4616	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	123	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	849	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4616	123	849	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1254	33	231	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5017	134	923	pcph

Estimation of V12 Merge Areas

L_{EQ} = -504.79 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2901 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5151	6750	No
v_3 or v_{av34}	2116 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2901 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5151	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.401	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = 49.2	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3011	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1038	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	75	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3011	1038	75	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	818	282	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3273	1128	82	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2028 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4401	6750	No
v_3 or v_{av34}	1245 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2028 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4401	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.308	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 52.3	mph
Space mean speed for all vehicles,	S = 51.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4739	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1843	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	123	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4739	1843	123	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1288	501	33	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5151	2003	134	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3191 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7154	6750	Yes
v_3 or v_{av34}	1960 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3191 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7154	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 35.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.919	
Space mean speed in ramp influence area,	S_R = 43.1	mph
Space mean speed in outer lanes,	S_0 = 49.7	mph
Space mean speed for all vehicles,	S = 44.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3761	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	87	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	288	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3761	87	288	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1022	24	78	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4088	95	313	pcph

Estimation of V12 Merge Areas

L_{EQ} = -700.84 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2367 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4183	6750	No
v_3 or v_{av34}	1721 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2367 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4183	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 50.6	mph
Space mean speed for all vehicles,	S = 50.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6122	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	285	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	460	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6122	285	460	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1664	77	125	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6654	310	500	pcph

Estimation of V12 Merge Areas

L_{EQ} = -105.70 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3852 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6964	6750	Yes
v_3 or v_{av34}	2802 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3954 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6964	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 38.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.597	
Space mean speed in ramp influence area,	S_R = 47.2	mph
Space mean speed in outer lanes,	S_0 = 46.1	mph
Space mean speed for all vehicles,	S = 46.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2986	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	180	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	103	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2986	180	103	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	811	49	28	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3246	196	112	pcph

Estimation of V12 Merge Areas

L_{EQ} = -859.41 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1879 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3442	6750	No
v_3 or v_{av34}	1367 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1879 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3442	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.351	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 51.9	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4917	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	272	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	129	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4917	272	129	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1336	74	35	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5345	296	140	pcph

Estimation of V12 Merge Areas

L_{EQ} = -388.83 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3094 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5641	6750	No
v_3 or v_{av34}	2251 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3094 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5641	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 31.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.435	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 48.7	mph
Space mean speed for all vehicles,	S = 49.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1890	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	142	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	441	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1890	142	441	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	514	39	120	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2054	154	479	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4167.03 (Equation 13-6 or 13-7)

P_{FM} = 0.599 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1231 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2208	6750	No
v_3 or v_{av34}	823 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1231 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2208	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.335

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 53.8 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3108	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	166	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	817	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3108	166	817	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	845	45	222	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3378	180	888	pcph

Estimation of V12 Merge Areas

L_{EQ} = 7725.10 (Equation 13-6 or 13-7)

P_{FM} = 0.642 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2170 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3558	6750	No
v_3 or v_{av34}	1208 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2170 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3558	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.360

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 52.5 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1261	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	740	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1261	740		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	343	201		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1371	804	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1371 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2175	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1371 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2175	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.313	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1067	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	633	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1067	633		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	290	172		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1160	688	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1160 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1848	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1160 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1848	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.304	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1884	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1175	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	117	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1884	1175	117	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	512	319	32	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, f_{HV}	1.000	1.000	1.000	
Driver population factor, f_P	1.00	1.00	1.00	
Flow rate, v_p	2048	1277	127	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2048 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3325	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2048 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3325	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.376

Space mean speed in ramp influence area, S_R = 50.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1483	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	957	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	217	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1483	957	217	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	403	260	59	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1612	1040	236	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1612 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2652	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1612 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2652	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.323	
Space mean speed in ramp influence area,	S_R = 50.8	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2984	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	305	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	75	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2984	305	75	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	811	83	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3243	332	82	pcph

Estimation of V12 Merge Areas

L_{EQ} = -822.07 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1879 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3575	6750	No
v_3 or v_{av34}	1364 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1879 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3575	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.354	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 51.9	mph
Space mean speed for all vehicles,	S = 51.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2254	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	244	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	186	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2254	244	186	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	612	66	51	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2450	265	202	pcph

Estimation of V12 Merge Areas

L_{EQ} = -1006.11 Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1420 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2715	6750	No
v_3 or v_{av34}	1030 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1420 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2715	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.340	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 53.1	mph
Space mean speed for all vehicles,	S = 51.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3289	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	812	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	129	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3289	812	129	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	894	221	35	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3575	883	140	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1163.76 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2075 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4458	6750	No
v_3 or v_{av34}	1500 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2075 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4458	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.389	
Space mean speed in ramp influence area,	S_R = 49.9	mph
Space mean speed in outer lanes,	S_0 = 51.4	mph
Space mean speed for all vehicles,	S = 50.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2498	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	528	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	159	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2498	528	159	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	679	143	43	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2715	574	173	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1438.07 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1576 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3289	6750	No
v_3 or v_{av34}	1139 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1576 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3289	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.347

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 52.7 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3972	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	117	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	74	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3972	117	74	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1079	32	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4317	127	80	pcph

Estimation of V12 Merge Areas

L_{EQ} = 695.95 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4444	6750	No
v_3 or v_{av34}	1818 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4444	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.371	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 50.3	mph
Space mean speed for all vehicles,	S = 50.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2867	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	145	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	81	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2867	145	81	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	779	39	22	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3116	158	88	pcph

Estimation of V12 Merge Areas

L_{EQ} = 765.55 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1804 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3274	6750	No
v_3 or v_{av34}	1312 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1804 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3274	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.345

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 52.1 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4015	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	317	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	11	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4015	317	11	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1091	86	3	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4364	345	12	pcph

Estimation of V12 Merge Areas

L_{EQ} = 106.88 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2523 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4709	6750	No
v_3 or v_{av34}	1841 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2523 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4709	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.389

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 50.2 mph

Space mean speed for all vehicles, S = 50.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2931	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	344	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	133	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2931	344	133	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	796	93	36	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3186	374	145	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1291.47 (Equation 13-6 or 13-7)

P_{FM} = 0.588 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1872 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3560	6750	No
v_3 or v_{av34}	1314 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1872 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3560	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.357	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 52.1	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4321	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	625	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	11	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4321	625	11	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1174	170	3	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4697	679	12	pcph

Estimation of V12 Merge Areas

L_{EQ} = -445.54 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2719 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5376	6750	No
v_3 or v_{av34}	1978 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2719 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5376	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 31.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.436	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 49.7	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3142	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	471	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	133	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3142	471	133	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	854	128	36	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3415	512	145	pcph

Estimation of V12 Merge Areas

L_{EQ} = -755.62 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1977 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3927	6750	No
v_3 or v_{av34}	1438 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1977 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3927	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.366	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 51.6	mph
Space mean speed for all vehicles,	S = 50.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4800	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	431	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	146	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4800	431	146	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1304	117	40	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5217	468	159	pcph

Estimation of V12 Merge Areas

L_{EQ} = -366.09 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3025 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5685	6750	No
v_3 or v_{av34}	2192 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3025 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5685	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 32.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.447	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 48.9	mph
Space mean speed for all vehicles,	S = 49.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3550	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	336	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	63	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3550	336	63	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	965	91	17	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3859	365	68	pcph

Estimation of V12 Merge Areas

L_{EQ} = -678.74 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2237 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4224	6750	No
v_3 or v_{av34}	1622 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2237 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4224	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.371

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = 51.0 mph

Space mean speed for all vehicles, S = 50.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3483	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	949	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	4147	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3483	949	4147	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	946	258	1127	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3786	1032	4508	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2245 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4818	6750	No
v_3 or v_{av34}	1541 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2245 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4818	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.386	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 51.3	mph
Space mean speed for all vehicles,	S = 50.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2739	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	715	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2889	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2739	715	2889	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	744	194	785	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2977	777	3140	pcph

Estimation of V12 Merge Areas

L_{EQ} = 920.15 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1765 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3754	6750	No
v_3 or v_{av34}	1212 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1765 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3754	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.332	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 52.4	mph
Space mean speed for all vehicles,	S = 51.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4432	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4147	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	949	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4432	4147	949	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1204	1127	258	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4817	4508	1032	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2673 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9325	6750	Yes
v_3 or v_{av34}	2144 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2752 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9325	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 5.553	
Space mean speed in ramp influence area,	S_R = -17.2	mph
Space mean speed in outer lanes,	S_0 = 49.4	mph
Space mean speed for all vehicles,	S =	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3454	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2889	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	715	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3454	2889	715	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	939	785	194	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3754	3140	777	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2083 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6894	6750	Yes
v_3 or v_{av34}	1671 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2145 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6894	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.776

Space mean speed in ramp influence area, S_R = 44.9 mph

Space mean speed in outer lanes, S_0 = 51.0 mph

Space mean speed for all vehicles, S = 46.2 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8525	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	246	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	54	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8525	246	54	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2317	67	15	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9266	267	59	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.184 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1248 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7033	9000	No
v_3 or v_{av34}	2759 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2706 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7033	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.380	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 49.5	mph
Space mean speed for all vehicles,	S = 49.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6286	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	213	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	57	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6286	213	57	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1708	58	15	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6833	232	62	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.189 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 942 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5221	9000	No
v_3 or v_{av34}	2023 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		Yes	

If yes, v_{12A} = 1995 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5221	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.340	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 51.4	mph
Space mean speed for all vehicles,	S = 51.1	mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 2

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6129	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	293	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6129		293			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1665		80			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6662	318	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3084 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6662	9000	No
$v_{FO} = v_F - v_R$	6344	9000	No
v_R	318	1800	No
v_3 or v_{av34}	1789 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3084 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3084	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.717

Space mean speed in ramp influence area, S_R = 45.7 mph

Space mean speed in outer lanes, S_0 = 57.3 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9703	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	295	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	9703		295			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	2637		80			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	10547	321	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4780 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10547	9000	Yes
$v_{FO} = v_F - v_R$	10226	9000	Yes
v_R	321	1800	No
v_3 or v_{av34}	2883 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		Yes	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5147 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5147	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 47.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.717	
Space mean speed in ramp influence area,	S_R = 45.7	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5836	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2371	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	529	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5836		2371		529		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1586		644		144		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6343	2577	575	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4219 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6343	9000	No
$v_{FO} = v_F - v_R$	3766	9000	No
v_R	2577	2000	Yes
v_3 or v_{av34}	1062 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4219 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4219	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.660

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9408	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	3943	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	849	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	9408		3943		849		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2557		1071		231		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10226	4286	923	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5830 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10226	9000	Yes
$v_{FO} = v_F - v_R$	5940	9000	No
v_R	4286	4000	Yes
v_3 or v_{av34}	2198 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 5830 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5830	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.814

Space mean speed in ramp influence area, S_R = 44.4 mph

Space mean speed in outer lanes, S_0 = 56.8 mph

Space mean speed for all vehicles, S = 48.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3465	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	529	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	75	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3465		529		75	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	942		144		20	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3766	575	82	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.639 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2615 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3766	6750	No
$v_{FO} = v_F - v_R$	3191	6750	No
v_R	575	2000	No
v_3 or v_{av34}	1151 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2615 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2615	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.480

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5465	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	849	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	123	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5465		849		123	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1485		231		33	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5940	923	134	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.569 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3778 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5940	6750	No
$v_{FO} = v_F - v_R$	5017	6750	No
v_R	923	2000	No
v_3 or v_{av34}	2162 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3778 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3778	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.511

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 56.5 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4049	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	288	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	87	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4049		288		87		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1100		78		24		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4401	313	95	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.636 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2911 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4401	6750	No
$v_{FO} = v_F - v_R$	4088	6750	No
v_R	313	2000	No
v_3 or v_{av34}	1490 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2911 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2911	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.456

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = 58.4 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6582	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	460	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	285	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6582		460		285		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1789		125		77		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7154	500	310	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.558 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4214 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7154	6750	Yes
$v_{FO} = v_F - v_R$	6654	6750	No
v_R	500	2000	No
v_3 or v_{av34}	2940 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4454 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4454	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 39.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.473

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3848	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	408	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3848		408			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1046		111			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4183	443	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.635 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2818 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4183	6750	No
$v_{FO} = v_F - v_R$	3740	6750	No
v_R	443	2000	No
v_3 or v_{av34}	1365 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2818 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2818	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.468	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 58.9	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6407	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	853	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6407		853			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1741		232			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6964	927	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.543 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4207 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6964	6750	Yes
$v_{FO} = v_F - v_R$	6037	6750	No
v_R	927	2000	No
v_3 or v_{av34}	2757 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4264 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4264	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.511

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3440	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	351	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3440		351			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	935		95			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3739	382	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1187.82 (Equation 13-12 or 13-13)

P_{FD} = 0.649 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2561 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3739	6750	No
$v_{FO} = v_F - v_R$	3357	6750	No
v_R	382	2000	No
v_3 or v_{av34}	1178 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2561 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2561	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 22.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.462	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 59.6	mph
Space mean speed for all vehicles,	S = 51.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5554	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	508	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5554		508			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1509		138			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6037	552	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 917.22 (Equation 13-12 or 13-13)

P_{FD} = 0.584 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3754 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6037	6750	No
$v_{FO} = v_F - v_R$	5485	6750	No
v_R	552	2000	No
v_3 or v_{av34}	2283 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3754 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3754	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 55.3 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3089	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	103	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	180	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3089		103		180		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	839		28		49		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3358	112	196	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.671 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2290 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3358	6750	No
$v_{FO} = v_F - v_R$	3246	6750	No
v_R	112	2000	No
v_3 or v_{av34}	1068 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2290 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2290	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.438	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 60.1	mph
Space mean speed for all vehicles,	S = 52.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5046	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	129	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	272	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5046		129		272		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1371		35		74		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5485	140	296	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.616 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3435 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5485	6750	No
$v_{FO} = v_F - v_R$	5345	6750	No
v_R	140	2000	No
v_3 or v_{av34}	2050 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3435 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3435	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.441

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 56.2 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3166	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	557	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	180	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3166		557		180		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	860		151		49		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3441	605	196	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1881.67 (Equation 13-12 or 13-13)

P_{FD} = 0.646 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2437 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3441	6750	No
$v_{FO} = v_F - v_R$	2836	6750	No
v_R	605	2000	No
v_3 or v_{av34}	1004 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2437 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2437	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.482	
Space mean speed in ramp influence area,	S_R = 48.7	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5189	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	929	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	272	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5189		929		272		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1410		252		74		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5640	1010	296	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2387.87 (Equation 13-12 or 13-13)

P_{FD} = 0.577 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3681 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5640	6750	No
$v_{FO} = v_F - v_R$	4630	6750	No
v_R	1010	2000	No
v_3 or v_{av34}	1959 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3681 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3681	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.519

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 56.6 mph

Space mean speed for all vehicles, S = 50.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2609	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	25	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2609		25			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	709		7			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2836	27	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.688 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1959 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2836	6750	No
$v_{FO} = v_F - v_R$	2809	6750	No
v_R	27	2000	No
v_3 or v_{av34}	877 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1959 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1959	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.430	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 52.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4260	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	94	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4260		94			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1158		26			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4630	102	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.640 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2998 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4630	6750	No
$v_{FO} = v_F - v_R$	4528	6750	No
v_R	102	2000	No
v_3 or v_{av34}	1632 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2998 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2998	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 16.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.437	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 57.9	mph
Space mean speed for all vehicles,	S = 52.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2584	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	694	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2584		694		142		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	702		189		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2809	754	154	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.655 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2100 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2809	6750	No
$v_{FO} = v_F - v_R$	2055	6750	No
v_R	754	2000	No
v_3 or v_{av34}	709 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2100 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2100	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.496

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4166	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1058	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	166	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4166		1058		166		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1132		287		45		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4528	1150	180	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.594 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3156 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4528	6750	No
$v_{FO} = v_F - v_R$	3378	6750	No
v_R	1150	2000	No
v_3 or v_{av34}	1372 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3156 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3156	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.531

Space mean speed in ramp influence area, S_R = 48.1 mph

Space mean speed in outer lanes, S_0 = 58.9 mph

Space mean speed for all vehicles, S = 50.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2032	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	441	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2032		441			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	552		120			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2209	479	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.683 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1660 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2209	6750	No
$v_{FO} = v_F - v_R$	1730	6750	No
v_R	479	2000	No
v_3 or v_{av34}	549 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1660 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1660	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.471

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3274	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	817	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3274		817			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	890		222			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3559	888	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.630 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2571 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3559	6750	No
$v_{FO} = v_F - v_R$	2671	6750	No
v_R	888	2000	No
v_3 or v_{av34}	988 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2571 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2571	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.508

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1433	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	172	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1433		172			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	389		47			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1558	187	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.712 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1164 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1558	6750	No
$v_{FO} = v_F - v_R$	1371	6750	No
v_R	187	2000	No
v_3 or v_{av34}	394 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1164	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 10.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.445	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 51.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1179	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	112	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1179		112			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	320		30			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1282	122	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.722 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 960 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1282	6750	No
$v_{FO} = v_F - v_R$	1160	6750	No
v_R	122	2000	No
v_3 or v_{av34}	322 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 960 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	960	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.439

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2001	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	117	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1175	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2001		117		1175		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	544		32		319		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2175	127	1277	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2175 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2175	4500	No
$v_{FO} = v_F - v_R$	2048	4500	No
v_R	127	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2175 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2175	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.439	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 49.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1700	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	217	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	957	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1700		217		957		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	462		59		260		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1848	236	1040	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1848 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1848	4500	No
$v_{FO} = v_F - v_R$	1612	4500	No
v_R	236	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1848 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1848	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.449

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3059	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	75	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	305	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3059		75		305		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	831		20		83		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3325	82	332	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.673 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2265 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3325	6750	No
$v_{FO} = v_F - v_R$	3243	6750	No
v_R	82	1800	No
v_3 or v_{av34}	1060 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2265 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2265	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.695

Space mean speed in ramp influence area, S_R = 46.0 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2440	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	186	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	244	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2440		186		244		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	663		51		66		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2652	202	265	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.684 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1879 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2652	6750	No
$v_{FO} = v_F - v_R$	2450	6750	No
v_R	202	1800	No
v_3 or v_{av34}	773 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1879 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1879	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.706

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4101	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	129	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	812	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4101		129		812		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1114		35		221		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4458	140	883	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 5420.70 (Equation 13-12 or 13-13)

P_{FD} = 0.751 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3381 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4458	6750	No
$v_{FO} = v_F - v_R$	4318	6750	No
v_R	140	1800	No
v_3 or v_{av34}	1077 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3381 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3381	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.701

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.0 mph

Space mean speed for all vehicles, S = 48.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3026	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	159	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	528	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3026		159		528		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	822		43		143		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3289	173	574	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 4299.66 (Equation 13-12 or 13-13)

P_{FD} = 0.724 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2428 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3289	6750	No
$v_{FO} = v_F - v_R$	3116	6750	No
v_R	173	1800	No
v_3 or v_{av34}	861 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2428 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2428	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.704	
Space mean speed in ramp influence area,	S_R = 45.9	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 48.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4089	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	317	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4089		74		317		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1111		20		86		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4445	80	345	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.645 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2896 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4445	6750	No
$v_{FO} = v_F - v_R$	4365	6750	No
v_R	80	2000	No
v_3 or v_{av34}	1549 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2896 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2896	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.435	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 58.2	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3012	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	81	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	344	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3012		81		344		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	818		22		93		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3274	88	374	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.674 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2236 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3274	6750	No
$v_{FO} = v_F - v_R$	3186	6750	No
v_R	88	2000	No
v_3 or v_{av34}	1038 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2236 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2236	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4332	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	11	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	317	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4332		11		317		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1177		3		86		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4709	12	345	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1933.91 (Equation 13-12 or 13-13)

P_{FD} = 0.746 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3516 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4709	6750	No
$v_{FO} = v_F - v_R$	4697	6750	No
v_R	12	2000	No
v_3 or v_{av34}	1193 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3516 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3516	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 31.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.429	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 59.6	mph
Space mean speed for all vehicles,	S = 51.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3275	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	133	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	344	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3275		133		344		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	890		36		93		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3560	145	374	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.664 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2414 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3560	6750	No
$v_{FO} = v_F - v_R$	3415	6750	No
v_R	145	2000	No
v_3 or v_{av34}	1146 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 2414 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2414	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.441	
Space mean speed in ramp influence area,	S_R = 49.3	mph
Space mean speed in outer lanes,	S_0 = 59.8	mph
Space mean speed for all vehicles,	S = 52.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4946	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	146	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	431	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4946		146		431		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1344		40		117		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5376	159	468	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.618 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3385 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5376	6750	No
$v_{FO} = v_F - v_R$	5217	6750	No
v_R	159	2000	No
v_3 or v_{av34}	1991 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3385 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3385	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 56.5 mph

Space mean speed for all vehicles, S = 51.7 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3613	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	63	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	336	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3613		63		336	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	982		17		91	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3927	68	365	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.659 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2610 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3927	6750	No
$v_{FO} = v_F - v_R$	3859	6750	No
v_R	68	2000	No
v_3 or v_{av34}	1317 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2610 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2610	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.434	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 59.1	mph
Space mean speed for all vehicles,	S = 52.2	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5231	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1544	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	204	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5231		1544		204		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1421		420		55		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5686	1678	222	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3482 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5686	6750	No
$v_{FO} = v_F - v_R$	4008	6750	No
v_R	1678	4000	No
v_3 or v_{av34}	2204 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3482 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3482	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -6.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.579

Space mean speed in ramp influence area, S_R = 47.5 mph

Space mean speed in outer lanes, S_0 = 55.6 mph

Space mean speed for all vehicles, S = 50.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3886	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	994	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	153	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3886		994		153		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1056		270		42		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4224	1080	166	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2495 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4224	6750	No
$v_{FO} = v_F - v_R$	3144	6750	No
v_R	1080	4000	No
v_3 or v_{av34}	1729 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2495 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2495	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -14.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.525	
Space mean speed in ramp influence area,	S_R = 48.2	mph
Space mean speed in outer lanes,	S_0 = 57.5	mph
Space mean speed for all vehicles,	S = 51.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)3498

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3687	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	204	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	949	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3687		204		949		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1002		55		258		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4008	222	1032	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.650 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2681 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4008	6750	No
$v_{FO} = v_F - v_R$	3786	6750	No
v_R	222	2000	No
v_3 or v_{av34}	1327 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2681 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2681	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 20.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 59.1 mph

Space mean speed for all vehicles, S = 52.1 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2892	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	153	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	715	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2892		153		715		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	786		42		194		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3143	166	777	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.674 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2172 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3143	6750	No
$v_{FO} = v_F - v_R$	2977	6750	No
v_R	166	2000	No
v_3 or v_{av34}	971 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2172 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2172	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.443	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 52.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8579	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	54	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	246	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8579		54		246		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2331		15		67		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9325	59	267	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3286 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7460	9000	No
$v_{FO} = v_F - v_R$	7401	9000	No
v_R	59	2000	No
v_3 or v_{av34}	2087 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3286 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3286	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.433

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 52.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (No 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6343	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	57	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	213	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6343		57		213		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1724		15		58		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6895	62	232	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2590 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5861	9000	No
$v_{FO} = v_F - v_R$	5799	9000	No
v_R	62	2000	No
v_3 or v_{av34}	1635 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2590 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2590	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.434	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 57.9	mph
Space mean speed for all vehicles,	S = 53.8	mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

MERGE RAMPS

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2974	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	73	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	985	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2974	73	985	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	808	20	268	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3233	79	1071	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5228.23 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1869 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3312	6750	No
v_3 or v_{av34}	1364 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1869 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3312	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.348

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 51.9 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	San Fernando Rd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4598	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	124	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1750	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4598	124	1750	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1249	34	476	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4998	135	1902	pcph

Estimation of V12 Merge Areas

L_{EQ} = 8461.37 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2890 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5133	6750	No
v_3 or v_{av34}	2108 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2890 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5133	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.401	
Space mean speed in ramp influence area,	S_R = 49.8	mph
Space mean speed in outer lanes,	S_0 = 49.2	mph
Space mean speed for all vehicles,	S = 49.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3047	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	985	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	73	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3047	985	73	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	828	268	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3312	1071	79	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2052 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4383	6750	No
v_3 or v_{av34}	1260 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2052 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4383	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.305	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 52.3	mph
Space mean speed for all vehicles,	S = 51.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5 / Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4722	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1750	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	124	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2050	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4722	1750	124	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1283	476	34	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5133	1902	135	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3180 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7035	6750	Yes
v_3 or v_{av34}	1953 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3180 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7035	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 34.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.844

Space mean speed in ramp influence area, S_R = 44.0 mph

Space mean speed in outer lanes, S_0 = 49.8 mph

Space mean speed for all vehicles, S = 45.5 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3727	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	101	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	305	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3727	101	305	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1013	27	83	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4051	110	332	pcph

Estimation of V12 Merge Areas

L_{EQ} = -705.55 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2345 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4161	6750	No
v_3 or v_{av34}	1706 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2345 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4161	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 50.7	mph
Space mean speed for all vehicles,	S = 50.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6035	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	254	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	437	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6035	254	437	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1640	69	119	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6560	276	475	pcph

Estimation of V12 Merge Areas

L_{EQ} = -133.10 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3798 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6836	6750	Yes
v_3 or v_{av34}	2762 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3860 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6836	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.563	
Space mean speed in ramp influence area,	S_R = 47.7	mph
Space mean speed in outer lanes,	S_0 = 46.1	mph
Space mean speed for all vehicles,	S = 47.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2955	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	130	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	539	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2955	130	539	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	803	35	146	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3212	141	586	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5097.87 (Equation 13-6 or 13-7)

P_{FM} = 0.617 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1983 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3353	6750	No
v_3 or v_{av34}	1229 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1983 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3353	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.352	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 52.4	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4861	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	207	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	912	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4861	207	912	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1321	56	248	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5284	225	991	pcph

Estimation of V12 Merge Areas

L_{EQ} = 8621.14 (Equation 13-6 or 13-7)

P_{FM} = 0.665 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3514 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5509	6750	No
v_3 or v_{av34}	1770 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3514 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5509	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 34.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.484	
Space mean speed in ramp influence area,	S_R = 48.7	mph
Space mean speed in outer lanes,	S_0 = 50.4	mph
Space mean speed for all vehicles,	S = 49.3	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1851	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	157	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	546	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1851	157	546	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	503	43	148	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2012	171	593	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5158.76 (Equation 13-6 or 13-7)

P_{FM} = 0.611 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1230 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2183	6750	No
v_3 or v_{av34}	782 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1230 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2183	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.335	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 54.0	mph
Space mean speed for all vehicles,	S = 51.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3047	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	134	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1027	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2490	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3047	134	1027	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	828	36	279	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3312	146	1116	pcph

Estimation of V12 Merge Areas

L_{EQ} = 9708.57 (Equation 13-6 or 13-7)

P_{FM} = 0.666 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2207 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3458	6750	No
v_3 or v_{av34}	1105 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2207 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3458	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.361

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 52.8 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1072	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	831	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1072	831		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	291	226		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1165	903	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1165 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2068	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1165 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2068	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.310	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	988	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	692	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	988	692		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	268	188		v
Trucks and buses	0	0		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, f_{HV}	1.000	1.000	
Driver population factor, f_P	1.00	1.00	
Flow rate, v_p	1074	752	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1074 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1826	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1074 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1826	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 15.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.303	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1810	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1181	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	93	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1810	1181	93	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	492	321	25	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1967	1284	101	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1967 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3251	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1967 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3251	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.368	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1472	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	998	vph
Length of first accel/decel lane	760	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	208	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1472	998	208	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	400	271	57	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1600	1085	226	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1600 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2685	4500	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1600 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2685	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.325

Space mean speed in ramp influence area, S_R = 50.8 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2913	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	231	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	759	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2913	231	759	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	792	63	206	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3166	251	825	pcph

Estimation of V12 Merge Areas

L_{EQ} = 871.12 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1835 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3417	6750	No
v_3 or v_{av34}	1331 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1835 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3417	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.350	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 52.0	mph
Space mean speed for all vehicles,	S = 51.0	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2302	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	212	vph
Length of first accel/decel lane	70	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	474	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1840	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2302	212	474	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	626	58	129	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2502	230	515	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1725.17 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1450 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2732	6750	No
v_3 or v_{av34}	1052 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1450 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2732	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.340	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 53.0	mph
Space mean speed for all vehicles,	S = 51.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3144	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	759	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	102	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3144	759	102	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	854	206	28	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3417	825	111	pcph

Estimation of V12 Merge Areas

L_{EQ} = 922.69 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1983 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4242	6750	No
v_3 or v_{av34}	1434 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1983 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4242	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 26.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.379	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 51.6	mph
Space mean speed for all vehicles,	S = 50.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2514	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	474	vph
Length of first accel/decel lane	100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	116	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2514	474	116	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	683	129	32	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2733	515	126	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1047.38 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1586 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3248	6750	No
v_3 or v_{av34}	1147 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1586 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3248	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.346	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = 52.7	mph
Space mean speed for all vehicles,	S = 51.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3801	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	103	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	74	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3801	103	74	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1033	28	20	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4132	112	80	pcph

Estimation of V12 Merge Areas

L_{EQ} = 695.95 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2392 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4244	6750	No
v_3 or v_{av34}	1740 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2392 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4244	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 50.4	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2872	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	143	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	89	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2872	143	89	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	780	39	24	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3122	155	97	pcph

Estimation of V12 Merge Areas

L_{EQ} = 843.85 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1807 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3277	6750	No
v_3 or v_{av34}	1315 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1807 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3277	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.345

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 52.1 mph

Space mean speed for all vehicles, S = 51.1 mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3830	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	321	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3830	321	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1041	87		v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4163	349	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = 44.53 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2407 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4512	6750	No
v_3 or v_{av34}	1756 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2407 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4512	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.382	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 50.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2926	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	372	vph
Length of first accel/decel lane	25	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	146	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2926	372	146	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	795	101	40	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3180	404	159	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1416.17 (Equation 13-6 or 13-7)

P_{FM} = 0.591 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 1880 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3584	6750	No
v_3 or v_{av34}	1300 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1880 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3584	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 22.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.359	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 52.1	mph
Space mean speed for all vehicles,	S = 51.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4146	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	631	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	5	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4146	631	5	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1127	171		v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4507	686	5	pcph

Estimation of V12 Merge Areas

L_{EQ} = -484.70 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2609 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5193	6750	No
v_3 or v_{av34}	1898 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2609 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5193	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 30.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.425	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = 50.0	mph
Space mean speed for all vehicles,	S = 49.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3152	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	476	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	146	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	520	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3152	476	146	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	857	129	40	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3426	517	159	pcph

Estimation of V12 Merge Areas

L_{EQ} = -752.20 (Equation 13-6 or 13-7)

P_{FM} = 0.579 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1983 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3943	6750	No
v_3 or v_{av34}	1443 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1983 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3943	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.367	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 51.6	mph
Space mean speed for all vehicles,	S = 50.7	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4622	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	434	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	155	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4622	434	155	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1256	118	42	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5024	472	168	pcph

Estimation of V12 Merge Areas

L_{EQ} = -406.54 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2913 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5496	6750	No
v_3 or v_{av34}	2111 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2913 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5496	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734\, v_R + 0.0078\, v_{R12} - 0.00627\, L_A$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.434	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 49.2	mph
Space mean speed for all vehicles,	S = 49.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3590	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	15.0	mph
Volume on ramp	343	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	38	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3590	343	38	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	976	93	10	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3902	373	41	pcph

Estimation of V12 Merge Areas

L_{EQ} = -667.83 (Equation 13-6 or 13-7)

P_{FM} = 0.580 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2262 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4275	6750	No
v_3 or v_{av34}	1640 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2262 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4275	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.373	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 50.9	mph
Space mean speed for all vehicles,	S = 50.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3391	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	951	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	4175	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3391	951	4175	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	921	258	1135	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3686	1034	4538	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2185 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4720	6750	No
v_3 or v_{av34}	1501 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2185 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4720	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.380	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 51.4	mph
Space mean speed for all vehicles,	S = 50.5	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2780	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	718	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2871	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2780	718	2871	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	755	195	780	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3022	780	3121	pcph

Estimation of V12 Merge Areas

L_{EQ} = 908.28 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1792 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3802	6750	No
v_3 or v_{av34}	1230 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1792 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3802	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.334	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 52.4	mph
Space mean speed for all vehicles,	S = 51.2	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4342	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	4175	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	951	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4342	4175	951	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1180	1135	258	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4720	4538	1034	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2620 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9258	6750	Yes
v_3 or v_{av34}	2100 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2697 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9258	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 5.416

Space mean speed in ramp influence area, S_R = -15.4 mph

Space mean speed in outer lanes, S_0 = 49.5 mph

Space mean speed for all vehicles, S = mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3498	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	35.0	mph
Volume on ramp	2871	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	718	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1880	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3498	2871	718	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	951	780	195	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3802	3121	780	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2110 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6923	6750	Yes
v_3 or v_{av34}	1692 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2172 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6923	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.782	
Space mean speed in ramp influence area,	S_R = 44.8	mph
Space mean speed in outer lanes,	S_0 = 50.9	mph
Space mean speed for all vehicles,	S = 46.1	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8503	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	189	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	14	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8503	189	14	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2311	51	4	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9242	205	15	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.192 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 1296 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6947	9000	No
v_3 or v_{av34}	2723 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2696 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6947	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 26.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.374	
Space mean speed in ramp influence area,	S_R = 50.1	mph
Space mean speed in outer lanes,	S_0 = 49.5	mph
Space mean speed for all vehicles,	S = 49.8	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/6/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Amador Place
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6308	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	172	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	61	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	480	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6308	172	61	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1714	47	17	v
Trucks and buses	0	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6857	187	66	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.194 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 973 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5193	9000	No
v_3 or v_{av34}	2016 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 Yes

If yes, v_{12A} = 2002 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5193	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 20.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.338

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 51.4 mph

Space mean speed for all vehicles, S = 51.1 mph

APPENDIX E

HCS ANALYSIS - RAMPS

CONCEPT 2
(SR-710 SENSITIVITY ANALYSIS)

DIVERGE RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6154	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	242	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6154		242			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1672		66			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6689	263	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3065 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6689	9000	No
$v_{FO} = v_F - v_R$	6426	9000	No
v_R	263	1800	No
v_3 or v_{av34}	1812 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3065 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3065	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.712

Space mean speed in ramp influence area, S_R = 45.7 mph

Space mean speed in outer lanes, S_0 = 57.2 mph

Space mean speed for all vehicles, S = 51.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Solano Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9731	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	292	vph
Length of first accel/decel lane	160	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	9731		292			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	2644		79			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	10577	317	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4790 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10577	9000	Yes
$v_{FO} = v_F - v_R$	10260	9000	Yes
v_R	317	1800	No
v_3 or v_{av34}	2893 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 5177 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5177	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 47.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.717	
Space mean speed in ramp influence area,	S_R = 45.7	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5912	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2398	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	540	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5912		2398		540		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1607		652		147		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6426	2607	587	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4272 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6426	9000	No
$v_{FO} = v_F - v_R$	3819	9000	No
v_R	2607	2000	Yes
v_3 or v_{av34}	1077 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 4272 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4272	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.663

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	9439	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	4008	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	833	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	9439		4008		833	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	2565		1089		226	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10260	4357	905	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6931 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10260	9000	Yes
$v_{FO} = v_F - v_R$	5903	9000	No
v_R	4357	2000	Yes
v_3 or v_{av34}	1664 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 6931 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	6931	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 56.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.820

Space mean speed in ramp influence area, S_R = 44.3 mph

Space mean speed in outer lanes, S_0 = 59.1 mph

Space mean speed for all vehicles, S = 47.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3514	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	540	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	73	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3514		540		73		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	955		147		20		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3820	587	79	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.637 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2648 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3820	6750	No
$v_{FO} = v_F - v_R$	3233	6750	No
v_R	587	2000	No
v_3 or v_{av34}	1172 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2648 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2648	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 51.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Figueroa St
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5431	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	833	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	124	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	160	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5431		833		124	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1476		226		34	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5903	905	135	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.571 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3758 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5903	6750	No
$v_{FO} = v_F - v_R$	4998	6750	No
v_R	905	2000	No
v_3 or v_{av34}	2145 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3758 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3758	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.509

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 56.6 mph

Space mean speed for all vehicles, S = 50.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4032	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	305	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	101	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4032		305		101		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1096		83		27		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4383	332	110	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.635 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2905 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4383	6750	No
$v_{FO} = v_F - v_R$	4051	6750	No
v_R	332	2000	No
v_3 or v_{av34}	1478 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2905 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2905	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.458	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 58.5	mph
Space mean speed for all vehicles,	S = 51.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6472	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	437	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	254	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6472		437		254	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1759		119		69	v
Trucks and buses	0		0		0	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7035	475	276	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.562 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4164 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7035	6750	Yes
$v_{FO} = v_F - v_R$	6560	6750	No
v_R	475	2000	No
v_3 or v_{av34}	2871 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4335 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4335	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.471

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 53.7 mph

Space mean speed for all vehicles, S = 50.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3828	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	411	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3828		411			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1040		112			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4161	447	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.635 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2807 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4161	6750	No
$v_{FO} = v_F - v_R$	3714	6750	No
v_R	447	2000	No
v_3 or v_{av34}	1354 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2807 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2807	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.468

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 59.0 mph

Space mean speed for all vehicles, S = 51.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6289	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	840	vph
Length of first accel/decel lane	325	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	6289		840			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1709		228			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6836	913	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.547 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4153 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6836	6750	Yes
$v_{FO} = v_F - v_R$	5923	6750	No
v_R	913	2000	No
v_3 or v_{av34}	2683 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4153 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4153	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 37.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.510

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = 53.8 mph

Space mean speed for all vehicles, S = 50.4 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3417	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	356	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3417		356			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	929		97			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3714	387	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1291.24 (Equation 13-12 or 13-13)

P_{FD} = 0.649 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2547 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3714	6750	No
$v_{FO} = v_F - v_R$	3327	6750	No
v_R	387	2000	No
v_3 or v_{av34}	1167 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2547 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2547	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.463	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 59.7	mph
Space mean speed for all vehicles,	S = 51.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5449	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	486	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5449		486			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1481		132			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5923	528	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 777.97 (Equation 13-12 or 13-13)

P_{FD} = 0.588 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3698 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5923	6750	No
$v_{FO} = v_F - v_R$	5395	6750	No
v_R	528	2000	No
v_3 or v_{av34}	2225 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3698 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3698	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 32.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.476

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 55.6 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3061	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	106	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	130	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3061		106		130		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	832		29		35		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3327	115	141	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.672 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2272 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3327	6750	No
$v_{FO} = v_F - v_R$	3212	6750	No
v_R	115	2000	No
v_3 or v_{av34}	1055 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2272 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2272	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.438

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4963	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	102	vph
Length of first accel/decel lane	730	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	207	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	50	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4963		102		207		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1349		28		56		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5395	111	225	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.620 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3387 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5395	6750	No
$v_{FO} = v_F - v_R$	5284	6750	No
v_R	111	2000	No
v_3 or v_{av34}	2008 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3387 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3387	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.438

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 56.4 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3085	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	539	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	130	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3085		539		130		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	838		146		35		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3353	586	141	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1361.23 (Equation 13-12 or 13-13)

P_{FD} = 0.649 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2382 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3353	6750	No
$v_{FO} = v_F - v_R$	2767	6750	No
v_R	586	2000	No
v_3 or v_{av34}	971 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2382 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2382	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.6 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Avenue 64
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5068	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	912	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	207	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5068		912		207		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1377		248		56		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5509	991	225	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1838.37 (Equation 13-12 or 13-13)

P_{FD} = 0.577 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3596 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5509	6750	No
$v_{FO} = v_F - v_R$	4518	6750	No
v_R	991	2000	No
v_3 or v_{av34}	1913 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3596 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3596	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.517	
Space mean speed in ramp influence area,	S_R = 48.3	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2546	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	13	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2546		13			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	692		4			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2767	14	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.690 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1914 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2767	6750	No
$v_{FO} = v_F - v_R$	2753	6750	No
v_R	14	2000	No
v_3 or v_{av34}	853 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1914 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1914	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.429	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 52.3	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Bridewell
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4156	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	60	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4156		60			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	1129		16			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4517	65	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.644 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2932 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4517	6750	No
$v_{FO} = v_F - v_R$	4452	6750	No
v_R	65	2000	No
v_3 or v_{av34}	1585 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2932 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2932	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.434

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 58.1 mph

Space mean speed for all vehicles, S = 52.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2533	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	682	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	157	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2533		682		157		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	688		185		43		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2753	741	171	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.657 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2063 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2753	6750	No
$v_{FO} = v_F - v_R$	2012	6750	No
v_R	741	2000	No
v_3 or v_{av34}	690 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2063 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2063	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.495

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4096	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1049	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	134	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	650	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4096		1049		134		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1113		285		36		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4452	1140	146	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.596 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3115 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4452	6750	No
$v_{FO} = v_F - v_R$	3312	6750	No
v_R	1140	2000	No
v_3 or v_{av34}	1337 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3115 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3115	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.531	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 59.0	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2008	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	546	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	2008		546			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	546		148			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2183	593	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.678 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1671 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2183	6750	No
$v_{FO} = v_F - v_R$	1590	6750	No
v_R	593	2000	No
v_3 or v_{av34}	512 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1671 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1671	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 14.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / NB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3181	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1027	vph
Length of first accel/decel lane	430	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	3181		1027			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	864		279			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3458	1116	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.622 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2573 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3458	6750	No
$v_{FO} = v_F - v_R$	2342	6750	No
v_R	1116	2000	No
v_3 or v_{av34}	885 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2573 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2573	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.528	
Space mean speed in ramp influence area,	S_R = 48.1	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1157	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	85	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1157		85			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	314		23			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1258	92	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.724 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 937 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1258	6750	No
$v_{FO} = v_F - v_R$	1166	6750	No
v_R	92	2000	No
v_3 or v_{av34}	321 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 937 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	937	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 8.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.436

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Fair Oaks Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1017	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	29	vph
Length of first accel/decel lane	425	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1017		29			vph
Peak-hour factor, PHF	0.92		0.92			
Peak 15-min volume, v15	276		8			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1105	32	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.731 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 816 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1105	6750	No
$v_{FO} = v_F - v_R$	1073	6750	No
v_R	32	2000	No
v_3 or v_{av34}	289 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 816 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	816	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 7.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.431

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 51.9 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1903	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	93	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1181	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1903		93		1181		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	517		25		321		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2068	101	1284	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2068 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2068	4500	No
$v_{FO} = v_F - v_R$	1967	4500	No
v_R	101	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2068 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2068	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 14.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.437

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Orange Grove Ave
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1680	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	208	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	998	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	1680		208		998		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	457		57		271		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1826	226	1085	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1826 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1826	4500	No
$v_{FO} = v_F - v_R$	1600	4500	No
v_R	226	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1826 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1826	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 12.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.448

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2991	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	78	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	231	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2991		78		231		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	813		21		63		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3251	85	251	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.675 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2221 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3251	6750	No
$v_{FO} = v_F - v_R$	3166	6750	No
v_R	85	1800	No
v_3 or v_{av34}	1030 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2221 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2221	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.696

Space mean speed in ramp influence area, S_R = 46.0 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	York Blvd
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2470	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	168	vph
Length of first accel/decel lane	80	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	212	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	60	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2470		168		212		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	671		46		58		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2685	183	230	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.684 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1896 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2685	6750	No
$v_{FO} = v_F - v_R$	2502	6750	No
v_R	183	1800	No
v_3 or v_{av34}	789 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 1896 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1896	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.704

Space mean speed in ramp influence area, S_R = 45.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3903	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	102	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	759	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3903		102		759		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1061		28		206		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4242	111	825	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 5152.06 (Equation 13-12 or 13-13)

P_{FD} = 0.745 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3190 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4242	6750	No
$v_{FO} = v_F - v_R$	4131	6750	No
v_R	111	1800	No
v_3 or v_{av34}	1052 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3190 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3190	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.698

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.1 mph

Space mean speed for all vehicles, S = 48.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 60
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2988	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	15.0	mph
Volume on ramp	116	vph
Length of first accel/decel lane	50	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	474	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2988		116		474		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	812		32		129		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3248	126	515	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3783.20 (Equation 13-12 or 13-13)

P_{FD} = 0.711 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2347 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3248	6750	No
$v_{FO} = v_F - v_R$	3122	6750	No
v_R	126	1800	No
v_3 or v_{av34}	901 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2347 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2347	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 24.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.699

Space mean speed in ramp influence area, S_R = 45.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3904	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	74	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	103	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3904		74		103		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1061		20		28		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4243	80	112	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 689.19 (Equation 13-12 or 13-13)

P_{FD} = 0.650 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2787 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4243	6750	No
$v_{FO} = v_F - v_R$	4163	6750	No
v_R	80	2000	No
v_3 or v_{av34}	1456 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2787 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2787	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.435

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 58.6 mph

Space mean speed for all vehicles, S = 52.2 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 57
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3015	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	89	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	143	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2080	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3015		89		143		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	819		24		39		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3277	97	155	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1115.12 (Equation 13-12 or 13-13)

P_{FD} = 0.674 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2239 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3277	6750	No
$v_{FO} = v_F - v_R$	3180	6750	No
v_R	97	2000	No
v_3 or v_{av34}	1038 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2239 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2239	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 21.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.437

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 52.3 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4151	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	5	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	321	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4151		5		321		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1128				87		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4512	5	349	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2001.19 (Equation 13-12 or 13-13)

P_{FD} = 0.756 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3413 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4512	6750	No
$v_{FO} = v_F - v_R$	4507	6750	No
v_R	5	2000	No
v_3 or v_{av34}	1099 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3413 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3413	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 30.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.428

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 59.9 mph

Space mean speed for all vehicles, S = 51.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 52
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3298	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	146	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	372	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	980	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3298		146		372		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	896		40		101		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3585	159	404	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2857.73 (Equation 13-12 or 13-13)

P_{FD} = 0.826 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2989 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3585	6750	No
$v_{FO} = v_F - v_R$	3426	6750	No
v_R	159	2000	No
v_3 or v_{av34}	596 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2989 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2989	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.442

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 50.8 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4777	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	155	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	434	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	4777		155		434		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1298		42		118		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5192	168	472	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.622 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3295 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5192	6750	No
$v_{FO} = v_F - v_R$	5024	6750	No
v_R	168	2000	No
v_3 or v_{av34}	1897 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 3295 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3295	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 56.8 mph

Space mean speed for all vehicles, S = 51.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 43
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3628	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	38	vph
Length of first accel/decel lane	380	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	343	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	110	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3628		38		343		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	986		10		93		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3943	41	373	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.660 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2615 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3943	6750	No
$v_{FO} = v_F - v_R$	3902	6750	No
v_R	41	2000	No
v_3 or v_{av34}	1328 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2615 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2615	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.432

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 59.1 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5056	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1460	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	205	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	5056		1460		205		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1374		397		56		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5496	1587	223	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3346 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5496	6750	No
$v_{FO} = v_F - v_R$	3909	6750	No
v_R	1587	4000	No
v_3 or v_{av34}	2150 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 3346 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3346	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -7.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.571

Space mean speed in ramp influence area, S_R = 47.6 mph

Space mean speed in outer lanes, S_0 = 55.8 mph

Space mean speed for all vehicles, S = 50.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	I-5
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3933	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1000	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	153	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1070	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3933		1000		153		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1069		272		42		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4275	1087	166	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2522 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4275	6750	No
$v_{FO} = v_F - v_R$	3188	6750	No
v_R	1087	4000	No
v_3 or v_{av34}	1753 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2522 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2522	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = -14.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.526	
Space mean speed in ramp influence area,	S_R = 48.2	mph
Space mean speed in outer lanes,	S_0 = 57.4	mph
Space mean speed for all vehicles,	S = 51.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3596	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	205	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	951	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	3596		205		951		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	977		56		258		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3909	223	1034	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.652 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2626 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3909	6750	No
$v_{FO} = v_F - v_R$	3686	6750	No
v_R	223	2000	No
v_3 or v_{av34}	1283 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2626 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2626	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.448	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 59.2	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Avenue 26
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2933	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	153	vph
Length of first accel/decel lane	800	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	718	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1350	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	2933		153		718		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	797		42		195		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3188	166	780	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.673 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2199 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3188	6750	No
$v_{FO} = v_F - v_R$	3022	6750	No
v_R	166	2000	No
v_3 or v_{av34}	989 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2199 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2199	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	AM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	8517	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	14	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	4175	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	8517		14		4175		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	2314		4		1135		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9258	15	4538	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3238 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7407	9000	No
$v_{FO} = v_F - v_R$	7392	9000	No
v_R	15	2000	No
v_3 or v_{av34}	2084 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3238 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3238	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 29.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.429

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 53.0 mph

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date performed:	5/10/2012
Analysis time period:	PM Peak
Freeway/Dir of Travel:	Arroyo Seco Parkway / SB
Junction:	Academy Road
Jurisdiction:	Caltrans District 7
Analysis Year:	2035
Description:	Alternative 2 (With 710)

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6369	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	61	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	2871	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1460	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp		
Volume, V (vph)	6369		61		2871		vph
Peak-hour factor, PHF	0.92		0.92		0.92		
Peak 15-min volume, v15	1731		17		780		v
Trucks and buses	0		0		0		%
Recreational vehicles	0		0		0		%
Terrain type:	Level		Level		Level		
Grade	0.00	%	0.00	%	0.00	%	
Length	0.00	mi	0.00	mi	0.00	mi	
Trucks and buses PCE, ET	1.5		1.5		1.5		
Recreational vehicle PCE, ER	1.2		1.2		1.2		

Heavy vehicle adjustment, fHV	1.000	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6923	66	3121	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2603 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5885	9000	No
$v_{FO} = v_F - v_R$	5819	9000	No
v_R	66	2000	No
v_3 or v_{av34}	1641 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12}/2		No	

If yes, v_{12A} = 2603 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2603	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 23.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.434	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 57.8	mph
Space mean speed for all vehicles,	S = 53.8	mph

APPENDIX F

HCS ANALYSIS – WEAVING ANALYSIS

APPENDIX F

HCS ANALYSIS - WEAVING

CONCEPT 1

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 52 and Ave 57
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1180	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2912	126	403	14	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	791	34	110	4	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3165	137	438	15	pc/h

Volume ratio, VR 0.153

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	575	lc/h
Weaving lane changes, LCW	872	lc/h
Non-weaving vehicle index, INW	1013	
Non-weaving lane change, LCNW	717	lc/h
Total lane changes, LCALL	1589	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.286

Average weaving speed, SW	38.3	mi/h
Average non-weaving speed, SNW	34.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	35.3	mi/h
Weaving segment density, D	35.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.696	
Weaving segment flow rate, v	3755	pc/h
Weaving segment capacity, cW	5397	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	2497	1180	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1799	c
		Maximum	Analyzed	
v/c ratio		1.00	0.696	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 52 and Ave 57
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1180	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4587	128	543	14	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	1246	35	148	4	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4986	139	590	15	pc/h

Volume ratio, VR 0.127

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW	1593	
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.050	
Weaving segment flow rate, v	5730	pc/h
Weaving segment capacity, cW	5457	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	2240	1180	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1819	c
		Maximum	Analyzed	
v/c ratio		1.00	1.050	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 57 and Ave 60
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2080	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2949	58	96	7	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	801	16	26	2	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3205	63	104	8	pc/h

Volume ratio, VR 0.049

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	167	lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS		
Weaving segment v/c ratio		
Weaving segment flow rate, v	3380	pc/h
Weaving segment capacity, cW		veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1489	2080	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*		c
		Maximum	Analyzed	
v/c ratio		1.00		d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

_____

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 57 and Ave 60
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2080	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4598	58	124	7	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	1249	16	34	2	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4998	63	135	8	pc/h

Volume ratio, VR 0.038

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	198	lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS		
Weaving segment v/c ratio		
Weaving segment flow rate, v	5204	pc/h
Weaving segment capacity, cW		veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1383	2080	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*		c
		Maximum	Analyzed	
v/c ratio		1.00		d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

_____

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Orange Grove Av to Fair Oaks
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2490	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1432	129	641	14	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	389	35	174	4	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1557	140	697	15	pc/h

Volume ratio, VR 0.347

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	837	lc/h
Weaving lane changes, LCW	1305	lc/h
Non-weaving vehicle index, INW	1057	
Non-weaving lane change, LCNW	1096	lc/h
Total lane changes, LCALL	2401	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.220

Average weaving speed, SW	39.6	mi/h
Average non-weaving speed, SNW	35.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	36.6	mi/h
Weaving segment density, D	22.0	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.460	
Weaving segment flow rate, v	2409	pc/h
Weaving segment capacity, cW	5232	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4532	2490	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1744	c
		Maximum	Analyzed	
v/c ratio		1.00	0.460	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Orange Grove Av to Fair Oaks
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2490	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2166	175	641	19	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	589	48	174	5	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2354	190	697	21	pc/h

Volume ratio, VR 0.272

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	887	lc/h
Weaving lane changes, LCW	1355	lc/h
Non-weaving vehicle index, INW	1597	
Non-weaving lane change, LCNW	1698	lc/h
Total lane changes, LCALL	3053	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.265

Average weaving speed, SW	38.7	mi/h
Average non-weaving speed, SNW	33.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	34.7	mi/h
Weaving segment density, D	31.3	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.602	
Weaving segment flow rate, v	3262	pc/h
Weaving segment capacity, cW	5418	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	3719	2490	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1806	c
		Maximum	Analyzed	
v/c ratio		1.00	0.602	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/SB
Weaving Location:	Between Ave 60 and Ave 57
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2080	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3586	83	65	9	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	974	23	18	2	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3898	90	71	10	pc/h

Volume ratio, VR 0.040

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	161	lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS		
Weaving segment v/c ratio		
Weaving segment flow rate, v	4069	pc/h
Weaving segment capacity, cW		veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1397	2080	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*		c
		Maximum	Analyzed	
v/c ratio		1.00		d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/SB
Weaving Location:	Between Ave 57 and Ave 52
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	980	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3649	305	24	5	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	992	83	7	1	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3966	332	26	5	pc/h

Volume ratio, VR 0.083

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.80	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	358	lc/h
Weaving lane changes, LCW	624	lc/h
Non-weaving vehicle index, INW	1090	
Non-weaving lane change, LCNW	771	lc/h
Total lane changes, LCALL	1395	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.299

Average weaving speed, SW	38.1	mi/h
Average non-weaving speed, SNW	35.5	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	35.7	mi/h
Weaving segment density, D	40.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.786	
Weaving segment flow rate, v	4329	pc/h
Weaving segment capacity, cW	5511	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1807	980	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1837	c
		Maximum	Analyzed	
v/c ratio		1.00	0.786	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/SB
Weaving Location:	Between Ave 57 and Ave 52
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	980	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2531	365	180	20	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	688	99	49	5	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2751	397	196	22	pc/h

Volume ratio, VR 0.176

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.80	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	593	lc/h
Weaving lane changes, LCW	859	lc/h
Non-weaving vehicle index, INW	761	
Non-weaving lane change, LCNW	525	lc/h
Total lane changes, LCALL	1384	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.297

Average weaving speed, SW	38.1	mi/h
Average non-weaving speed, SNW	35.3	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	35.8	mi/h
Weaving segment density, D	31.3	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.635	
Weaving segment flow rate, v	3366	pc/h
Weaving segment capacity, cW	5298	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	2728	980	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1766	c
		Maximum	Analyzed	
v/c ratio		1.00	0.635	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

APPENDIX F

HCS ANALYSIS - WEAVING

CONCEPT 1
(SR-710 SENSITIVITY ANALYSIS)

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 52 and Ave 57
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1180	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2875	136	402	15	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	781	37	109	4	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3125	148	437	16	pc/h

Volume ratio, VR 0.157

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	585	lc/h
Weaving lane changes, LCW	882	lc/h
Non-weaving vehicle index, INW	1001	
Non-weaving lane change, LCNW	709	lc/h
Total lane changes, LCALL	1591	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.286

Average weaving speed, SW	38.3	mi/h
Average non-weaving speed, SNW	34.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	35.3	mi/h
Weaving segment density, D	35.2	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.692	
Weaving segment flow rate, v	3726	pc/h
Weaving segment capacity, cW	5388	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	2535	1180	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1796	c
		Maximum	Analyzed	
v/c ratio		1.00	0.692	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 52 and Ave 57
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1180	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4544	108	531	12	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	1235	29	144	3	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4939	117	577	13	pc/h

Volume ratio, VR 0.123

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.033	
Weaving segment flow rate, v	5646	pc/h
Weaving segment capacity, cW	5466	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	2197	1180	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1822	c
		Maximum	Analyzed	
v/c ratio		1.00	1.033	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 57 and Ave 60
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2080	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2919	71	99	8	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	793	19	27	2	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3173	77	108	9	pc/h

Volume ratio, VR 0.055

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	185	lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS		
Weaving segment v/c ratio		
Weaving segment flow rate, v	3367	pc/h
Weaving segment capacity, cW		veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1542	2080	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*		c
		Maximum	Analyzed	
v/c ratio		1.00		d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Between Ave 57 and Ave 60
Analysis Year:	2035
Description:	Alternative 1 (No I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2080	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4551	60	106	7	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	1237	16	29	2	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4947	65	115	8	pc/h

Volume ratio, VR 0.035

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	180	lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS		
Weaving segment v/c ratio		
Weaving segment flow rate, v	5135	pc/h
Weaving segment capacity, cW		veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1355	2080	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*		c
		Maximum	Analyzed	
v/c ratio		1.00		d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

_____

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Orange Grove Av to Fair Oaks
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2490	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1302	137	518	15	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	354	37	141	4	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1415	149	563	16	pc/h

Volume ratio, VR 0.332

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	712	lc/h
Weaving lane changes, LCW	1180	lc/h
Non-weaving vehicle index, INW	962	
Non-weaving lane change, LCNW	1067	lc/h
Total lane changes, LCALL	2247	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.208

Average weaving speed, SW	39.8	mi/h
Average non-weaving speed, SNW	36.4	mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S	37.5	mi/h
Weaving segment density, D	19.0	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.407	
Weaving segment flow rate, v	2143	pc/h
Weaving segment capacity, cW	5268	veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4366	2490	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1756	c
		Maximum	Analyzed	
v/c ratio		1.00	0.407	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

_____

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/NB
Weaving Location:	Orange Grove Av to Fair Oaks
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2490	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1954	117	821	13	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	531	32	223	4	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2124	127	892	14	pc/h

Volume ratio, VR 0.323

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	1019	lc/h
Weaving lane changes, LCW	1487	lc/h
Non-weaving vehicle index, INW	1437	
Non-weaving lane change, LCNW	1414	lc/h
Total lane changes, LCALL	2901	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.255

Average weaving speed, SW	38.9	mi/h
Average non-weaving speed, SNW	32.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	34.4	mi/h
Weaving segment density, D	30.6	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.597	
Weaving segment flow rate, v	3157	pc/h
Weaving segment capacity, cW	5292	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4263	2490	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1764	c
		Maximum	Analyzed	
v/c ratio		1.00	0.597	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/SB
Weaving Location:	Between Ave 60 and Ave 57
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2080	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3440	100	63	11	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	935	27	17	3	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3739	109	68	12	pc/h

Volume ratio, VR 0.045

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	177	lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS		
Weaving segment v/c ratio		
Weaving segment flow rate, v	3928	pc/h
Weaving segment capacity, cW		veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1449	2080	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*		c
		Maximum	Analyzed	
v/c ratio		1.00		d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	AM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/SB
Weaving Location:	Between Ave 57 and Ave 52
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	980	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3546	279	5	5	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	964	76	1	1	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3854	303	5	5	pc/h

Volume ratio, VR 0.074

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.70	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	308	lc/h
Weaving lane changes, LCW	569	lc/h
Non-weaving vehicle index, INW	1021	
Non-weaving lane change, LCNW	748	lc/h
Total lane changes, LCALL	1317	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.285

Average weaving speed, SW	38.3	mi/h
Average non-weaving speed, SNW	36.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	36.3	mi/h
Weaving segment density, D	38.3	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.754	
Weaving segment flow rate, v	4167	pc/h
Weaving segment capacity, cW	5529	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	1722	980	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1843	c
		Maximum	Analyzed	
v/c ratio		1.00	0.754	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	L. La Point
Agency/Co.:	IBI Group
Date Performed:	4/26/2012
Analysis Time Period:	PM Peak Hour
Freeway/Dir of Travel:	Arroyo Seco Pkwy/SB
Weaving Location:	Between Ave 57 and Ave 52
Analysis Year:	2035
Description:	Alternative 1 (With I-710)

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	980	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	1900*	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2529	401	163	18	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	687	109	44	5	
Trucks and buses	0	0	0	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	1.000	1.000	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2749	436	177	20	pc/h

Volume ratio, VR 0.181

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	2.80	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	613	lc/h
Weaving lane changes, LCW	879	lc/h
Non-weaving vehicle index, INW	760	
Non-weaving lane change, LCNW	524	lc/h
Total lane changes, LCALL	1403	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.300

Average weaving speed, SW	38.1	mi/h
Average non-weaving speed, SNW	35.2	mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S	35.7	mi/h
Weaving segment density, D	31.6	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.640	
Weaving segment flow rate, v	3382	pc/h
Weaving segment capacity, cW	5286	veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	2779	980	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		1900*	1762	c
		Maximum	Analyzed	
v/c ratio		1.00	0.640	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

_____

Southern California Association of Governments

ARROYO SECO PARKWAY CORRIDOR MANAGEMENT PLAN LICENSE PLATE SURVEY

DRAFT

APRIL 30, 2012

DOCUMENT CONTROL

Client:	Southern California Association of Governments
Project Name:	
Report Title:	Arroyo Seco Parkway Corridor Management Plan License Plate Survey
IBI Reference:	31097
Version:	Draft #1

TABLE OF CONTENTS

1. INTRODUCTION 3
1.1 Objective 3
1.2 Study Area 3
1.3 Methodology 3
2. NORTHBOUND 9
2.1 Hill Street 10
2.2 Solano Avenue-Casanova 11
2.3 San Fernando 12
2.4 Avenue 26 13
2.5 Avenue 43 – Homer Street 14
2.6 Avenue 52 15
2.7 Via Marisol 16
2.8 Avenue 60 17
2.9 Orange Grove 18
3. SOUTHBOUND 19
3.1 Glenarm Street 20
3.2 Fair Oaks Avenue 21
3.3 Orange Grove Avenue 22
3.4 Salonica – Bridewell 23
3.5 La Riba – Avenue 66 24
3.6 Shults – Arroyo 25
3.7 Avenue 57 26
3.8 Avenue 52 27
3.9 Avenue 43 28
3.10 Figueroa 29
3.11 Amador 30
4. SUMMARY OF FINDINGS 31
APPENDICES 32

LIST OF FIGURES

Figure 1.1: Origin Destination Survey 5

LIST OF TABLES

Table 1-1: Northbound On Ramp Distribution – AM Peak Hour 7
Table 1-2: Northbound On Ramp Distribution – PM Peak Hour 7
Table 1-3: Southbound On Ramp Distribution – AM Peak Hour 8
Table 1-4: Southbound On Ramp Distribution – PM Peak Hour 8
Table 2-1: Northbound On Ramp Distribution 9
Table 2-2: Hill Street Ramp Distribution – AM Peak Hour 10
Table 2-3: Hill Street Ramp Distribution – PM Peak Hour 10
Table 2-4: Solana-Casanova Ramp Distribution – AM Peak Hour 11
Table 2-5: Solana-Casanova Ramp Distribution – PM Peak Hour 11
Table 2-6: San Fernando Ramp Distribution – AM Peak Hour 12
Table 2-7: San Fernando Ramp Distribution – PM Peak Hour 12
Table 2-8: Avenue 26 Ramp Distribution – AM Peak Hour 13
Table 2-9: Avenue 26 Ramp Distribution – PM Peak Hour 13
Table 2-10: Avenue 43 Ramp Distribution – AM Peak Hour 14
Table 2-11: Avenue 43 Ramp Distribution – PM Peak Hour 14
Table 2-12: Avenue 52 Ramp Distribution – AM Peak Hour 15
Table 2-13: Avenue 52 Ramp Distribution – PM Peak Hour 15
Table 2-14: Via Marisol Ramp Distribution – AM Peak Hour 16
Table 2-15: Via Marisol Ramp Distribution – PM Peak Hour 16
Table 2-16: Avenue 60 Ramp Distribution – AM Peak Hour 17
Table 2-17: Avenue 60 Ramp Distribution – PM Peak Hour 17
Table 2-18: Orange Grove Ramp Distribution – AM Peak Hour 18
Table 2-19: Orange Grove Ramp Distribution – PM Peak Hour 18
Table 3-1: Southbound On Ramp Distribution 19
Table 3-2: Glenarm Street Ramp Distribution – AM Peak Hour 20
Table 3-3: Glenarm Street Ramp Distribution – PM Peak Hour 20
Table 3-4: Fair Oaks Avenue Ramp Distribution – AM Peak Hour 21
Table 3-5: Fair Oaks Avenue Ramp Distribution – PM Peak Hour 21
Table 3-6: Orange Grove Avenue Ramp Distribution – AM Peak Hour 22
Table 3-7: Orange Grove Avenue Ramp Distribution – PM Peak Hour 22
Table 3-8: Salonica - Bridewell Ramp Distribution – AM Peak Hour 23
Table 3-9: Salonica - Bridewell Ramp Distribution – PM Peak Hour 23
Table 3-10: La Riba – Avenue 66 Ramp Distribution – AM Peak Hour 24
Table 3-11: La Riba – Avenue 66 Ramp Distribution – PM Peak Hour 24
Table 3-12: Shults - Arroyo Ramp Distribution – AM Peak Hour 25
Table 3-13: Shults - Arroyo Ramp Distribution – PM Peak Hour 25
Table 3-14: Avenue 57 Ramp Distribution – AM Peak Hour 26
Table 3-15: Avenue 57 Ramp Distribution – PM Peak Hour 26
Table 3-16: Avenue 52 Ramp Distribution – AM Peak Hour 27
Table 3-17: Avenue 52 Ramp Distribution – PM Peak Hour 27
Table 3-18: Avenue 43 Ramp Distribution – AM Peak Hour 28
Table 3-19: Avenue 43 Ramp Distribution – PM Peak Hour 28
Table 3-20: Figueroa Ramp Distribution – AM Peak Hour 29
Table 3-21: Figueroa Ramp Distribution – PM Peak Hour 29
Table 3-22: Amador Ramp Distribution – AM Peak Hour 30
Table 3-23: Amador Ramp Distribution – PM Peak Hour 30

1. INTRODUCTION

The Arroyo Seco Parkway Corridor Management Plan is a comprehensive study to finalize the draft corridor management plan (CMP) for the Arroyo Seco Parkway and identify opportunities to promote the transportation experience within the corridor. The Arroyo Seco Parkway is a critical transportation corridor in Los Angeles County, linking Downtown Los Angeles and Pasadena. The parkway has served as a critical link since its construction and is a designated National Scenic Byway (NSB). As part of this study, a multi-modal analysis, which includes regional travel demand modeling, traffic impact analyses, and microsimulation of traffic conditions, is being conducted to evaluate potential traffic operation and safety improvements.

1.1 OBJECTIVE

The purpose of the License Plate Survey is to learn more about how people travel along the Arroyo Seco Parkway (State Route 110) corridor, with an emphasis on which ramps travelers use to get on and off the corridor. This technical memorandum documents the input obtained through the survey and provides a summary and analysis of the survey results.

1.2 STUDY AREA

The Study Area for this project encompasses the segment of the SR-110 north of Stadium Way and Hill Street in Los Angeles, until the northern terminus of the parkway, at Glenarm Street in Pasadena, as well as all the ramps that connect to the facility and ramp termini. The corridor s approximately 7 miles long and has about 30 access points.

1.3 METHODOLOGY

The license plate survey was conducted by Pacific Traffic Data Services for a two-hour period during the morning and evening peak hours (6:45AM to 8:45AM and 4:30PM to 6:30PM) on Thursday, February 2, 2012. Twenty locations were selected for surveying. The following on and off-ramps surveyed for this study includes:

1. Glenarm Street (on and off ramps)
2. State Street
3. Fair Oaks Avenue
4. Orange Grove Avenue
5. Bridewell Street
6. Marmion Way
7. La Riba Way
8. Shults Street
9. Avenue 60
10. Via Marisol
11. Avenue 57
12. Avenue 52
13. Avenue 43
14. Avenue 26
15. Avenue 26
16. Figueroa Street
17. Solano Avenue

18. Academy Road
19. Amador Street
20. Hill Street

Figure 1.1 shows the locations of the surveyed ramps.

Figure 1.1: Origin Destination Survey

Surveyors were stationed at each ramp and were responsible for recording the last four digits of the license plate entering or exiting the ramp. Data was recorded at five-minute intervals and coordinated by on-site field managers. The raw data collected was recorded and the license plate numbers were "matched" at each on and off-ramp based on the last four digits of the license plate. In some instances, not all vehicles were able to be recorded due to uncontrollable factors in the field, which are common in these types of surveys. These factors include:

- Multiple vehicles traveling at a high rate of speed, possibly grouped closely together
- Newly registered vehicles
- Dirty license plate

The cumulative impact of these factors is that some matching vehicles may have been missed and are not represented in the license plate survey. The overall impact of these factors and their effect on the data is relatively insignificant.

In addition, due to safety and high volumes, the on and off-ramps to the I-5 freeway were not recorded, as well as the on and off-ramps south of the study area at Hill Street. These unaccounted trips are assumed to either end their trips in Downtown Los Angeles or continue their trip on the I-5 freeway.

1.3.1 Corridor Travel Time

Travel times along the corridor were collected by driving the corridor's extent 6 times in each direction during the AM peak period, and 5 times in the northbound direction and 6 times in the southbound direction in the PM peak period. On average, travel times during AM peak period were 7.94 minutes in the northbound direction, and 16.52 minutes in the southbound direction. In the PM peak period, times are more balanced, with the northbound average travel time increasing slightly to 9.85 minutes, and southbound times decreasing to 8.18 minutes. The number of runs ensures that the mean travel time falls in the desired 95-percent confidence interval.

A summary of the matches for the license plate survey are presented in Tables 1 through 4. More detailed analysis and descriptions of each location is provided in the following sections.

Table 1-1: Northbound On Ramp Distribution – AM Peak Hour

	Northbound Off Ramps (Destination)												
Northbound On Ramps (Origin)	**Solano**	**I-5 Interchange**	**Figueroa**	**Avenue 43**	**Avenue 52**	**Via Marisol**	**Avenue 60**	**Marmion Way**	**Bridewell**	**Orange Grove**	**Fair Oaks**	**Glenarm**	**Total - AM Peak**
Hill	9	139	4	11	4	9	2	13	2	14	14	255	476
Solano		27	6	-	-	-	-	2	1	4	3	34	77
San Fernando			-	5	2	2	2	4	3	4	4	214	240
Avenue 26				7	7	26	5	19	3	22	25	175	289
Avenue 43 - Homer					12	18	6	26	4	46	25	169	306
Avenue 52						8	2	11	-	4	14	323	362
Via Marisol							2	19	3	25	24	117	190
Avenue 60								32	5	53	22	274	386
Orange Grove											50	135	185

Table 1-2: Northbound On Ramp Distribution – PM Peak Hour

	Northbound Off Ramps (Destination)												
Northbound On Ramps (Origin)	**Solano**	**I-5 Interchange**	**Figueroa**	**Avenue 43**	**Avenue 52**	**Via Marisol**	**Avenue 60**	**Marmion Way**	**Bridewell**	**Orange Grove**	**Fair Oaks**	**Glenarm**	**Total - PM Peak**
Hill	4	1,514	13	33	10	26	5	15	6	49	14	752	2,441
Solano		42	4	2	-	1	-	7	1	4	2	125	188
San Fernando			-	8	3	-	4	3	-	3	9	186	216
Avenue 26				21	23	16	5	17	5	18	17	326	448
Avenue 43 - Homer					16	19	7	18	4	27	21	161	273
Avenue 52						23	4	27	2	36	27	192	311
Via Marisol							3	22	4	16	24	72	141
Avenue 60								38	5	37	21	173	274
Orange Grove											43	128	171

Table 1-3: Southbound On Ramp Distribution – AM Peak Hour

	Southbound Off Ramps (Destination)											
Southbound On Ramps (Origin)	**State**	**Orange Grove**	**Salonica**	**Shults**	**Avenue 57**	**Avenue 52**	**Avenue 43**	**Avenue 26**	**Academy**	**Hill**	**Unaccounted Trips**	**Total - AM Peak**
Glenarm	157	131	74	126	99	165	360	514	35	529	632	2,822
Fair Oaks		6	12	13	3	18	7	6	1	10	873	949
Orange Grove			5	4	4	27	13	17	2	28	2,254	2,354
Salonica - Bridewell				2	1	17	5	5	-	4	423	457
La Riba - Avenue 66				5	2	6	6	6	2	11	839	877
Shults					-	14	13	13	-	3	370	413
Avenue 57						6	9	7	-	16	550	588
Avenue 52							9	16	1	6	706	738
Avenue 43								12	2	21	479	514
Figueroa									-	9	1,362	1,371
Amador										4	491	495

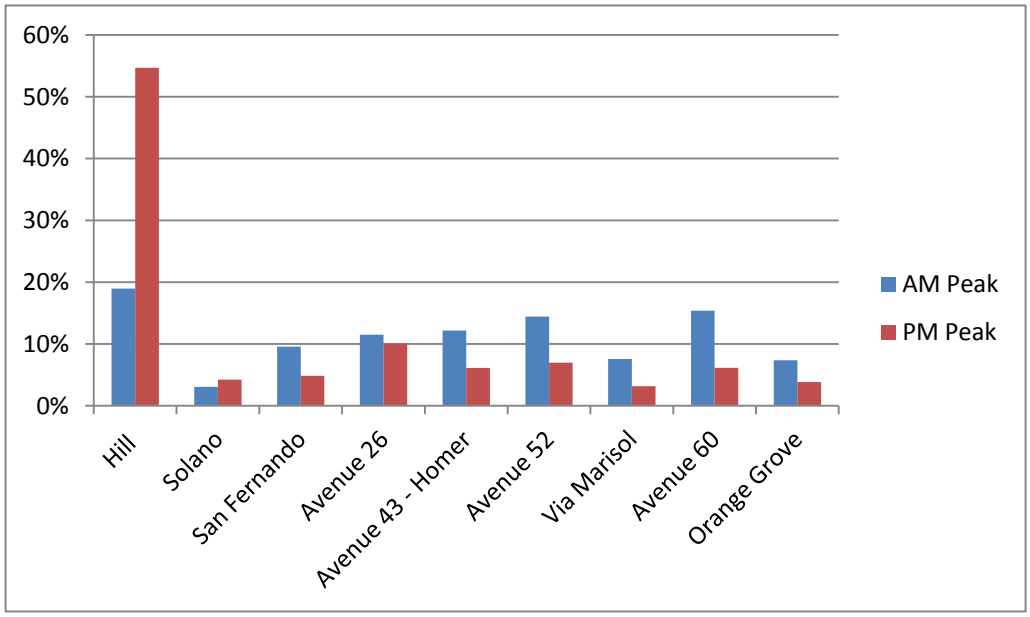
Table 1-4: Southbound On Ramp Distribution – PM Peak Hour

	Southbound Off Ramps (Destination)											
Southbound On Ramps (Origin)	**State**	**Orange Grove**	**Salonica**	**Shults**	**Avenue 57**	**Avenue 52**	**Avenue 43**	**Avenue 26**	**Academy**	**Hill**	**Unaccounted Trips**	**Total - PM Peak**
Glenarm	394	308	271	240	373	262	195	324	65	341	683	3,456
Fair Oaks		8	17	4	3	14	17	8	3	18	612	704
Orange Grove			13	5	5	22	39	14	3	18	1,108	1,227
Salonica - Bridewell				1	1	3	9	5	-	4	237	260
La Riba - Avenue 66				-	1	11	24	10	-	17	752	815
Shults					1	6	15	13	-	5	220	260
Avenue 57						7	7	5	-	13	270	302
Avenue 52							14	15	2	7	483	521
Avenue 43								12	5	15	300	332
Figueroa									-	7	706	713
Amador										11	150	161

2. NORTHBOUND

The Arroyo Parkway corridor consists of nine on-ramps in the northbound direction within the study area, beginning at Hill Street. A total of 2,511 vehicles entered one of the nine on-ramps in the AM peak period and 4,463 vehicles in the PM peak period. During the AM peak period, the on-ramps at Hill Street recorded the most vehicles entering the corridor, followed by Avenue 60 and Avenue 52. During the PM peak hour, the on-ramps at Hill Street recorded the most vehicles entering the corridor, followed by Avenue 26 and Avenue 52. A distribution of the vehicles entering each study on-ramp in the northbound direction is presented in Table 2-1.

Table 2-1: Northbound On Ramp Distribution



There are a total of 12 off-ramps in the northbound direction, with the last off-ramp ending at Glenarm Street in Pasadena. While surveyors were not stationed at the I-5 interchange, it was assumed that the unaccounted vehicles that did not exit one of the 11 off-ramps exited at the I-5 interchange and headed either northbound or southbound. This assumption is safe to assume because all vehicles entering the corridor were accounted for at one of the 11 off-ramps, leaving the I-5 interchange as the only other off-ramp along the corridor in the northbound direction. The distribution and travel patterns at each off-ramp in the northbound direction are provided in greater detail in the following sections.

2.1 HILL STREET

Hill Street is the first on-ramp in the northbound direction within the study area and recorded the most vehicles entering in the AM and PM peak periods. A total of 476 vehicles entered during the AM peak hour. Fifty-four percent (54%) of the vehicles entering at this on-ramp exited at Glenarm Street in Pasadena and twenty-nine percent (29%) exited at the I-5 interchange. During the PM peak period, a significantly higher amount of vehicles entered the Hill Street on-ramp at 2,441 vehicles. Unlike the AM peak period, the majority of vehicles exited at the I-5 interchange (62%), followed by thirty-one percent (31%) exiting at the Glenarm Street off-ramp. Tables 2-2 and 2-3 illustrate the off-ramp distribution from vehicles entering at the Hill Street on-ramp during the AM and PM peak periods.

Table 2-2: Hill Street Ramp Distribution – AM Peak Hour

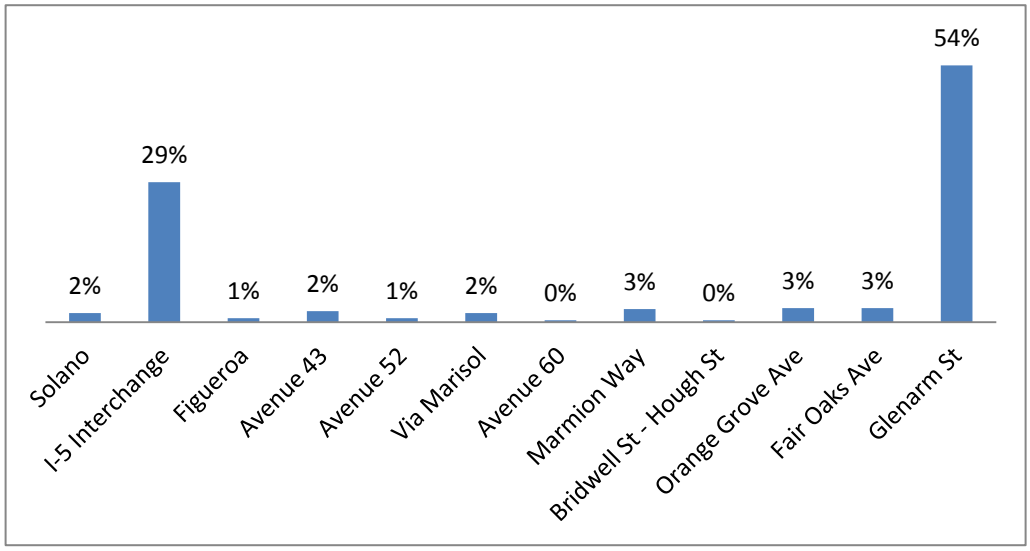
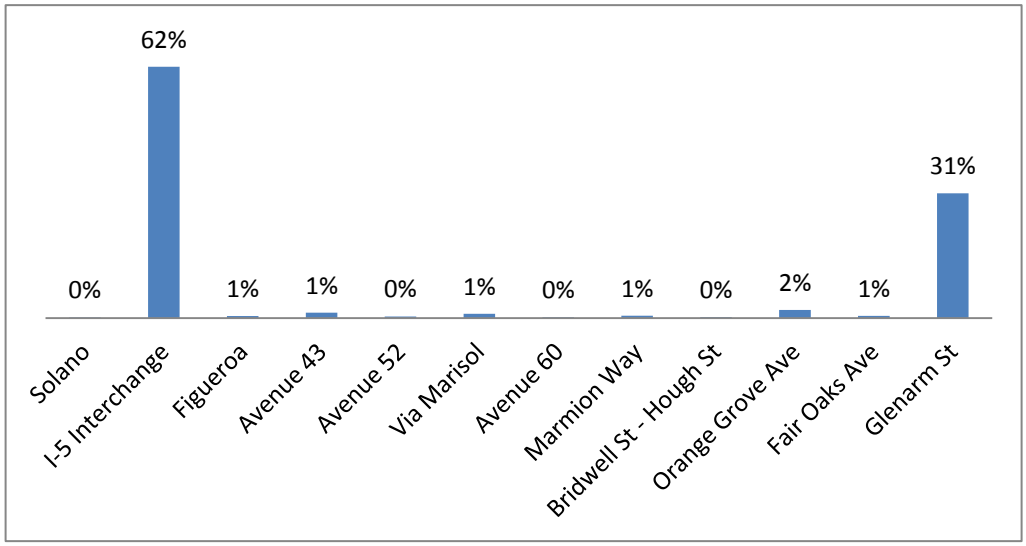


Table 2-3: Hill Street Ramp Distribution – PM Peak Hour



2.2 SOLANO AVENUE-CASANOVA

The Solano Avenue-Casanova Street on-ramp is located just north of the Hill Street on-ramp and before the I-5 interchange. Seventy-seven vehicles were recorded entering this on-ramp during the AM peak period and 188 were recorded during the PM peak period. Forty-four (44%) of the vehicles entering at this on-ramp exited at Glenarm Street in Pasadena and thirty-five percent (35%) exited at the I-5 interchange during the AM peak period. During the PM peak period, sixty-six percent (66%) of the vehicles exited at Glenarm Street in Pasadena and twenty-two percent (22%) exited at the I-5 interchange. Tables 2-4 and 2-5 illustrate the off-ramp distribution from vehicles entering at the Solano Avenue-Casanova Street on-ramp during the AM and PM peak periods.

Table 2-4: Solana-Casanova Ramp Distribution – AM Peak Hour

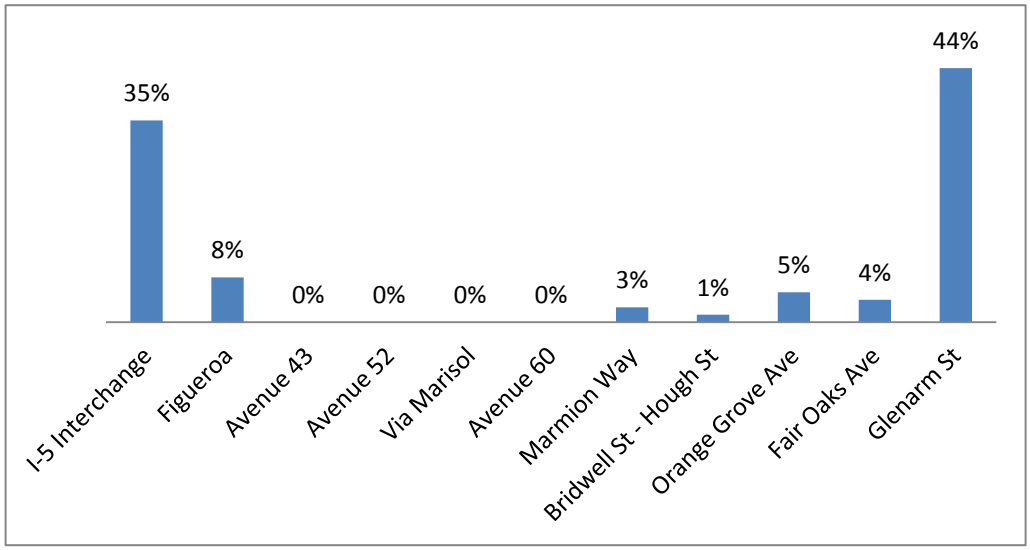
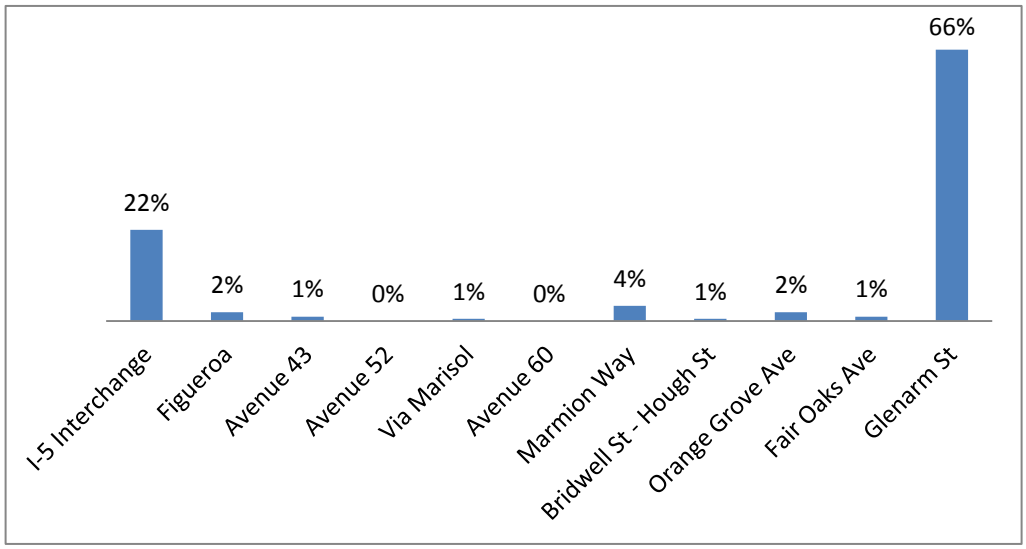


Table 2-5: Solana-Casanova Ramp Distribution – PM Peak Hour



2.3 SAN FERNANDO

The San Fernando Road on-ramp is located right before the I-5 interchange and recorded 240 vehicles entering during the AM peak period and 216 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited at the Glenarm Street off-ramp in Pasadena. Eighty-nine percent (89%) of the vehicles entering at this on-ramp during the AM peak period and eighty-six percent (86%) during the PM peak period exited at Glenarm Street. Tables 2-5 and 2-7 illustrate the off-ramp distribution from vehicles entering at the San Fernando Road on-ramp during the AM and PM peak periods.

Table 2-6: San Fernando Ramp Distribution – AM Peak Hour

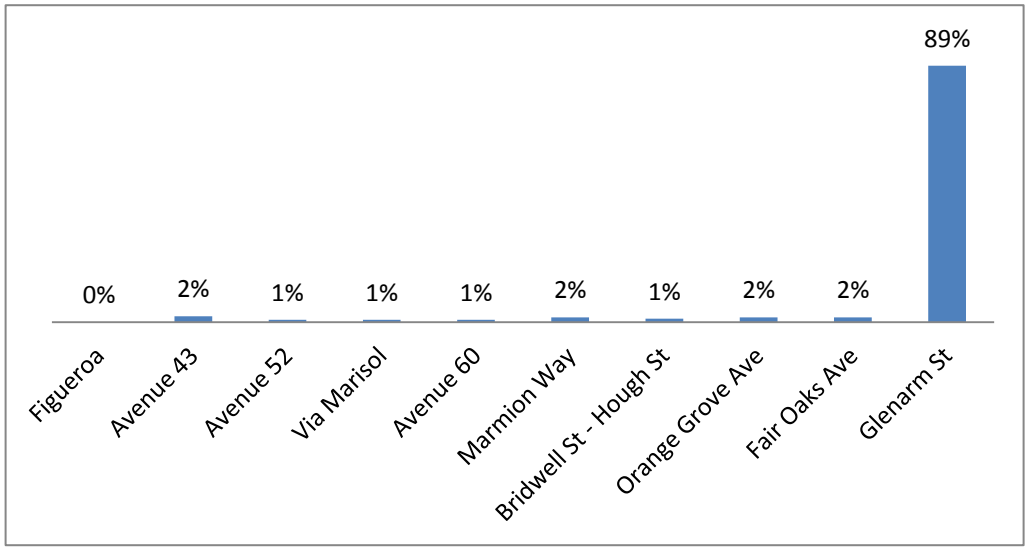
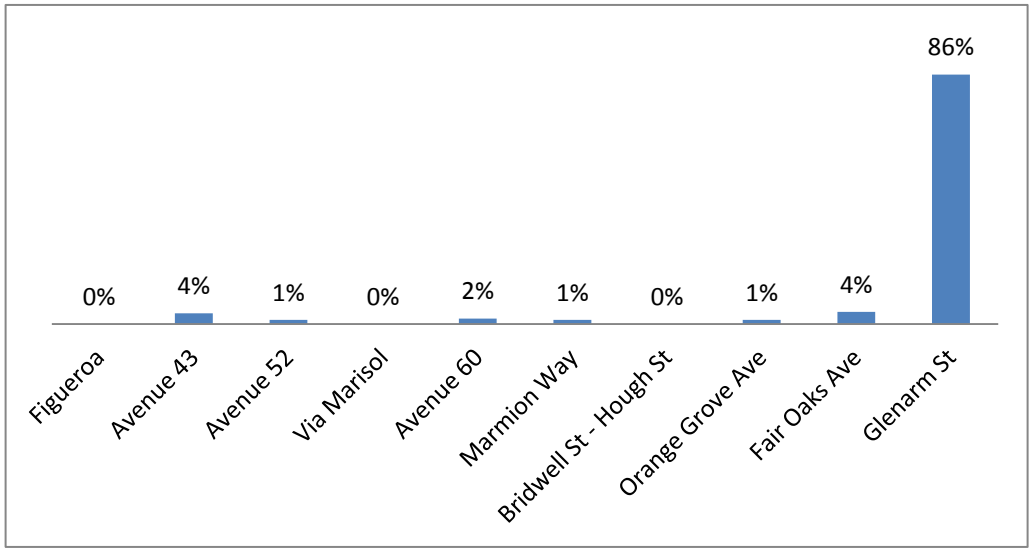


Table 2-7: San Fernando Ramp Distribution – PM Peak Hour



2.4 AVENUE 26

The on-ramp at Avenue 26 is located just north of the I-5 interchange and recorded 289 vehicles entering during the AM peak period and 448 vehicles entering during the PM peak period. The majority of vehicles entering at this on-ramp exited at the Glenarm Street off-ramp in Pasadena. Sixty-one percent (61%) of the vehicles entering at this on-ramp during the AM peak period and seventy-three percent (73%) during the PM peak period exited at Glenarm Street. Tables 2-8 and 2-9 illustrate the off-ramp distribution from vehicles entering at the Avenue 26 on-ramp during the AM and PM peak periods.

Table 2-8: Avenue 26 Ramp Distribution – AM Peak Hour

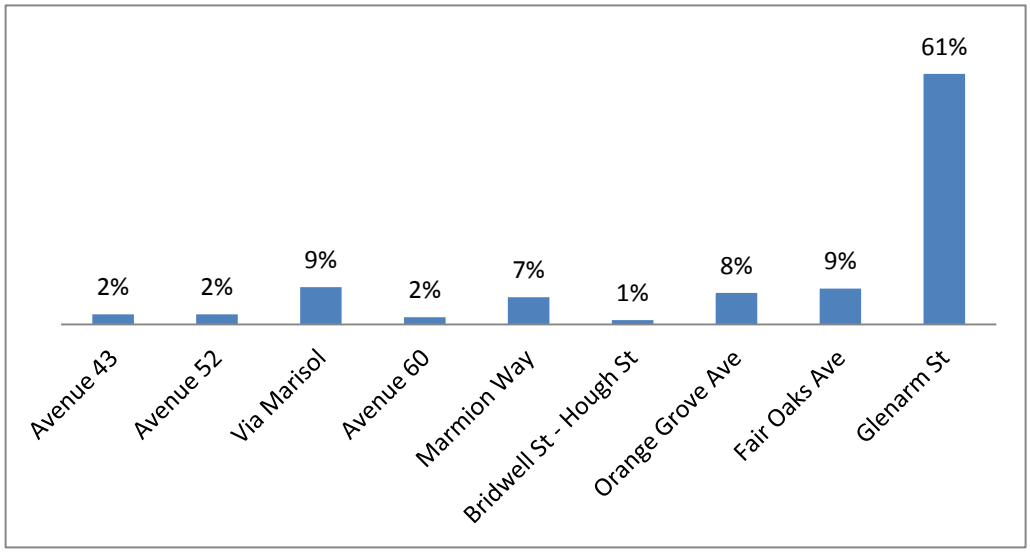
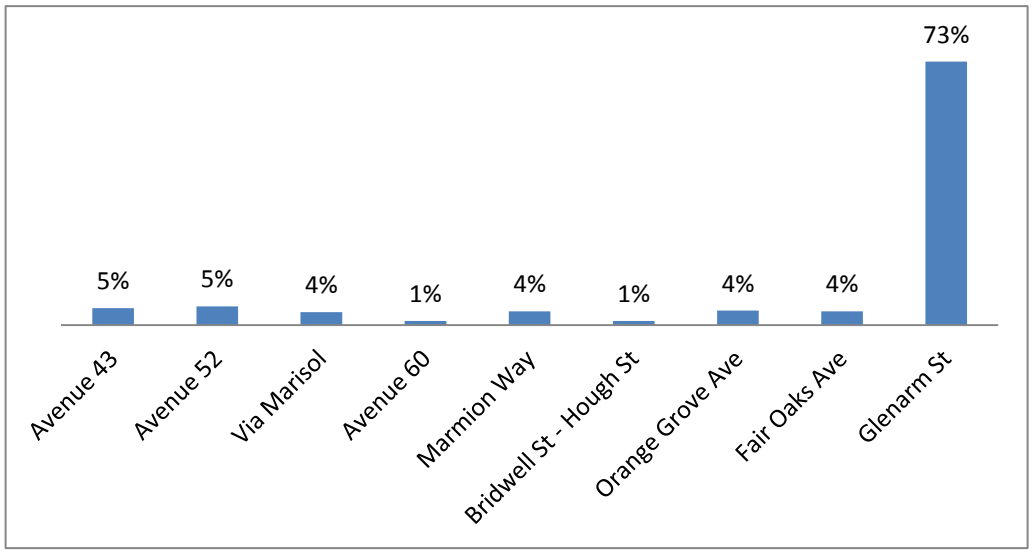


Table 2-9: Avenue 26 Ramp Distribution – PM Peak Hour



2.5 AVENUE 43 – HOMER STREET

The Avenue 43-Homer Street on-ramp is located north of the I-5 interchange and surrounded primarily by residential neighborhoods. A total of 306 vehicles were recorded entering during the AM peak period and 273 vehicles were recorded during the PM peak period. The majority of vehicles entering at this on-ramp exited at the Glenarm Street off-ramp in Pasadena. Fifty-five percent (55%) of the vehicles entering at this on-ramp during the AM peak period and fifty-nine percent (59%) during the PM peak period exited at Glenarm Street. The distribution at the other off-ramps were slightly higher and range up to fifteen percent (15%) at Orange Grove Avenue in the AM peak period and ten percent (10%) also at Orange Grove Avenue in the PM peak period. Tables 2-10 and 2-11 illustrate the off-ramp distribution from vehicles entering at the Avenue 43-Homer Street on-ramp during the AM and PM peak periods.

Table 2-10: Avenue 43 Ramp Distribution – AM Peak Hour

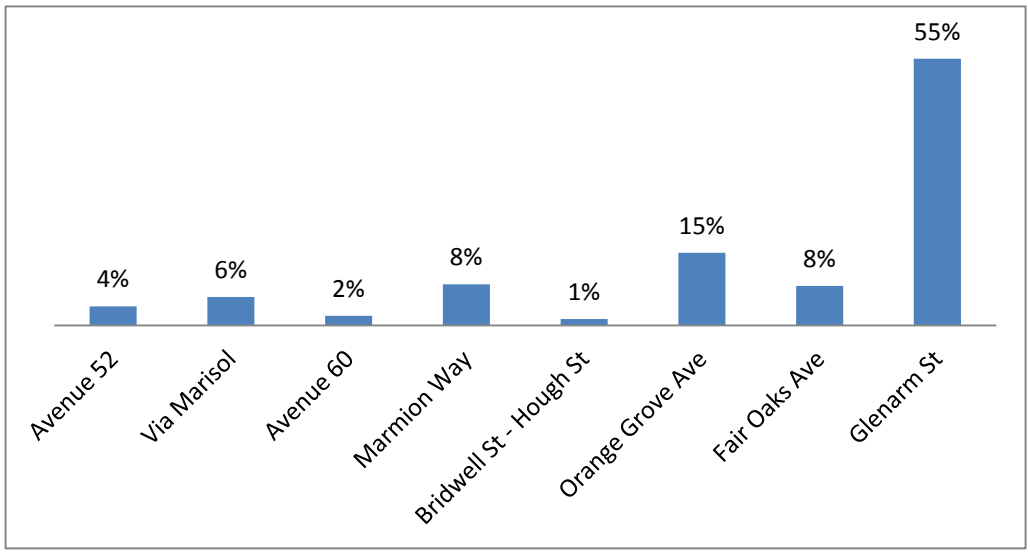
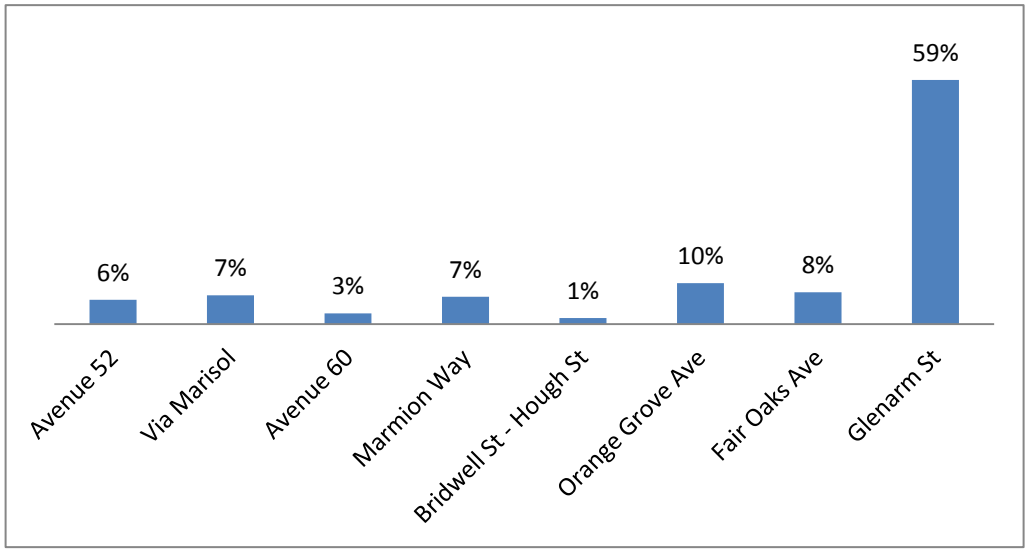


Table 2-11: Avenue 43 Ramp Distribution – PM Peak Hour



2.6 AVENUE 52

The Avenue 52 on-ramp is located near the midpoint of the study corridor and recorded 362 vehicles entering during the AM peak period and 311 vehicles entering during the PM peak period. Following a similar trend with the other on-ramps, the majority of vehicles entering at this on-ramp exited at the Glenarm Street off-ramp in Pasadena. Eighty-nine percent (89%) of the vehicles entering at this on-ramp during the AM peak period and sixty-two percent (62%) during the PM peak period exited at Glenarm Street. The distribution at the other off-ramps were slightly higher during the PM peak period, ranging up to nine percent (9%) at the Marmion Way and Fair Oaks Avenue off-ramps and twelve percent (12%) at the Orange Grove Avenue off-ramp. Tables 2-12 and 2-13 illustrate the off-ramp distribution from vehicles entering at the Avenue 52 on-ramp during the AM and PM peak periods.

Table 2-12: Avenue 52 Ramp Distribution – AM Peak Hour

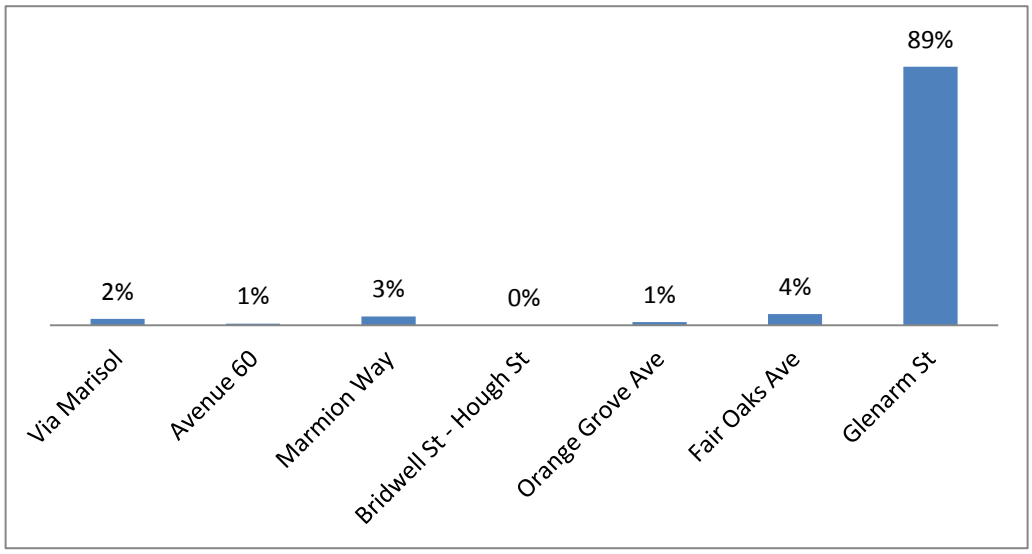
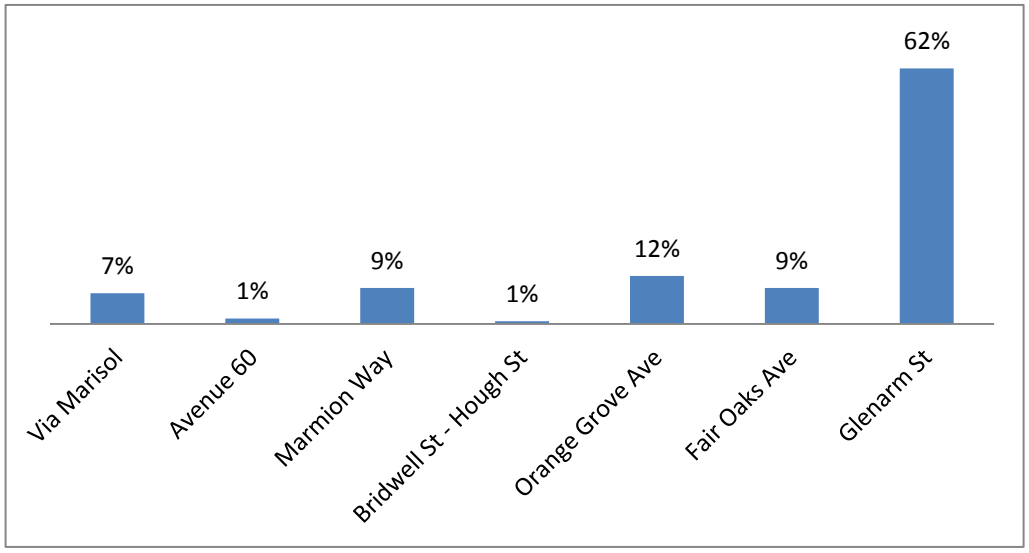


Table 2-13: Avenue 52 Ramp Distribution – PM Peak Hour



2.7 VIA MARISOL

The Via Marisol on-ramp is located just north of Avenue 52 and recorded 190 vehicles entering during the AM peak period and 141 vehicles entering during the PM peak period. The majority of vehicles entering at this on-ramp exited at the Glenarm Street off-ramp in Pasadena. Sixty-two percent (62%) of the vehicles entering at this on-ramp during the AM peak period and fifty-one percent (51%) during the PM peak period exited at Glenarm Street. The distribution at the other off-ramps were slightly higher ranging up to thirteen percent (13%) at the Orange Grove and Fair Oaks Avenue off-ramps during the AM peak period. During the PM peak period, up to sixteen percent (16%) exited at Marmion Way and seventeen percent (17%) at Orange Grove Avenue. Tables 2-14 and 2-15 illustrate the off-ramp distribution from vehicles entering at the Via Marisol on-ramp during the AM and PM peak periods.

Table 2-14: Via Marisol Ramp Distribution – AM Peak Hour

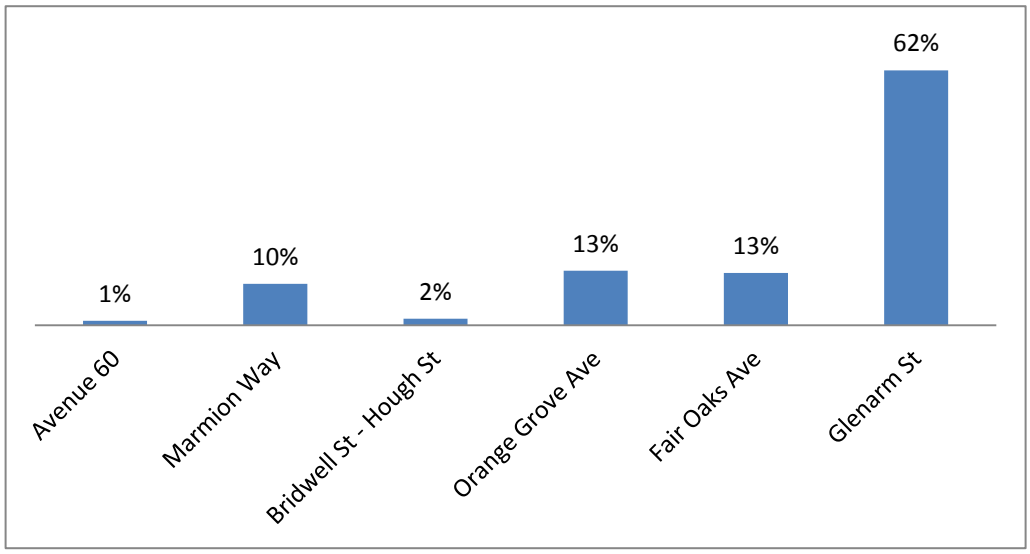
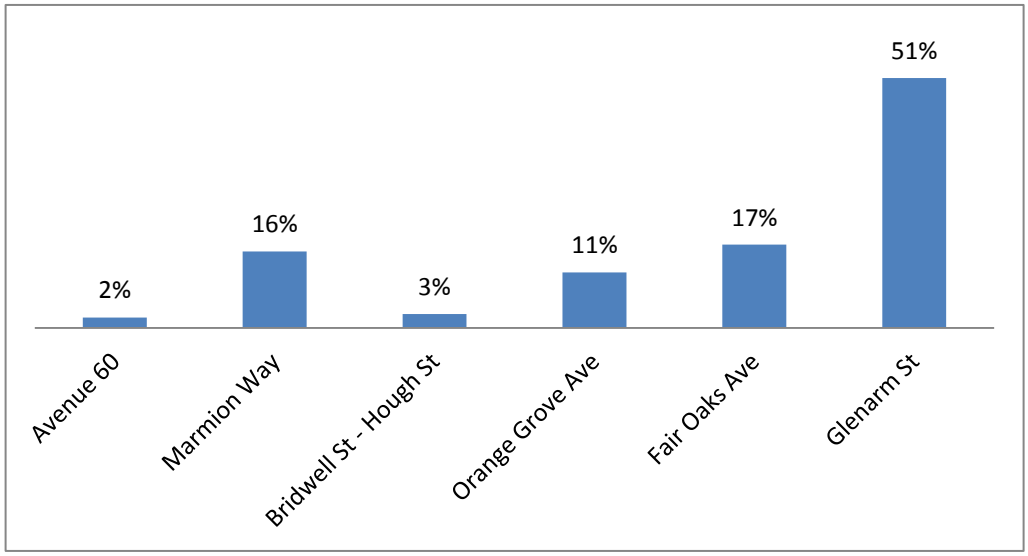


Table 2-15: Via Marisol Ramp Distribution – PM Peak Hour



2.8 AVENUE 60

The on-ramp at Avenue 60 recorded 386 vehicles entering during the AM peak period and 274 vehicles entering during the PM peak period. The majority of vehicles entering at this on-ramp exited at the Glenarm Street off-ramp in Pasadena. Seventy-one percent (71%) of the vehicles entering at this on-ramp during the AM peak period and sixty-three percent (63%) during the PM peak period exited at Glenarm Street. The distribution at the other off-ramps was slightly higher, ranging from eight percent (8%) at Marmion Way to fourteen percent (14%) at Orange Grove Avenue during the AM peak period. During the PM peak period, eight percent (8%) exited at Fair Oaks Avenue and fourteen percent (14%) exited at Marmion Way and Orange Grove Avenue. Tables 2-16 and 2-17 illustrate the off-ramp distribution from vehicles entering at the Avenue 60 on-ramp during the AM and PM peak periods.

Table 2-16: Avenue 60 Ramp Distribution – AM Peak Hour

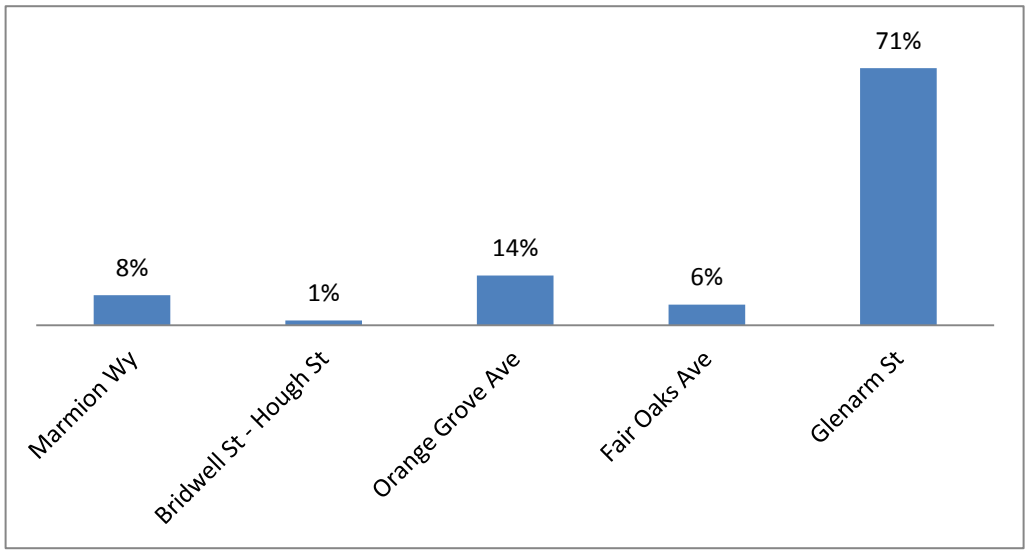
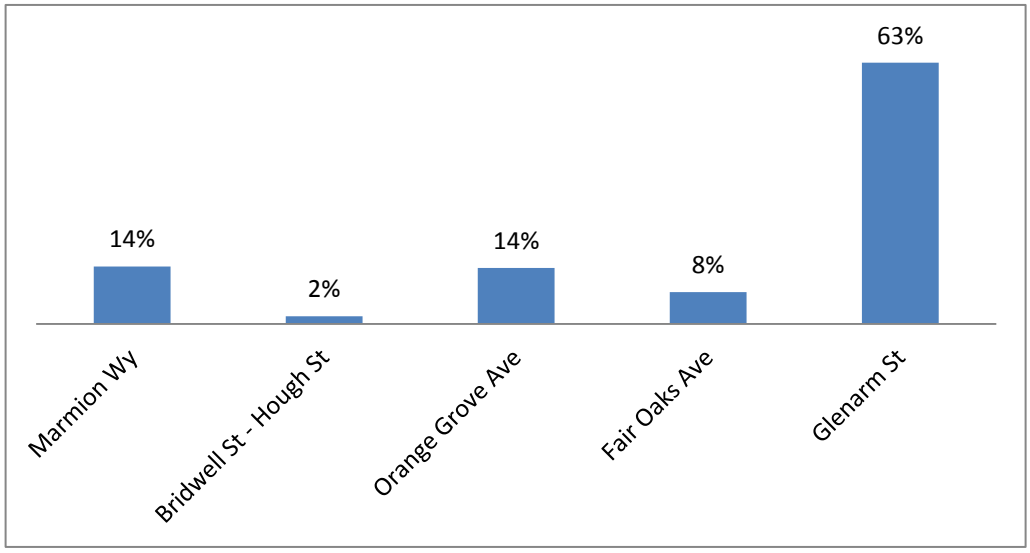


Table 2-17: Avenue 60 Ramp Distribution – PM Peak Hour



2.9 ORANGE GROVE AVENUE

The on-ramp at Orange Grove Avenue is the last on-ramp in the northbound direction and is located in South Pasadena. The Orange Grove Avenue on-ramp recorded 185 vehicles entering during the AM peak period and 171 vehicles entering during the PM peak period. Approximately three-quarters of the trips exited at Glenarm Street during both peak periods. Seventy-three percent (73%) of the vehicles entering at this on-ramp during the AM peak period and seventy-five percent (75%) during the PM peak period exited at Glenarm Street. The remaining twenty-seven (27%) in the AM peak period and twenty-five percent (25%) in the PM peak period exited at Fair Oaks Avenue. Tables 2-18 and 2-19 illustrate the off-ramp distribution from vehicles entering at the Avenue 60 on-ramp during the AM and PM peak periods.

Table 2-18: Orange Grove Ramp Distribution – AM Peak Hour

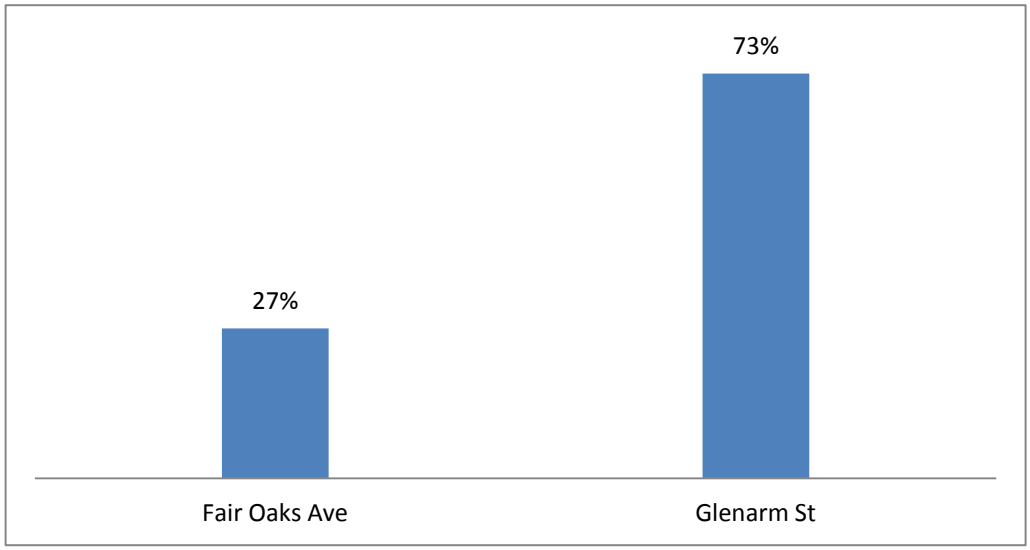
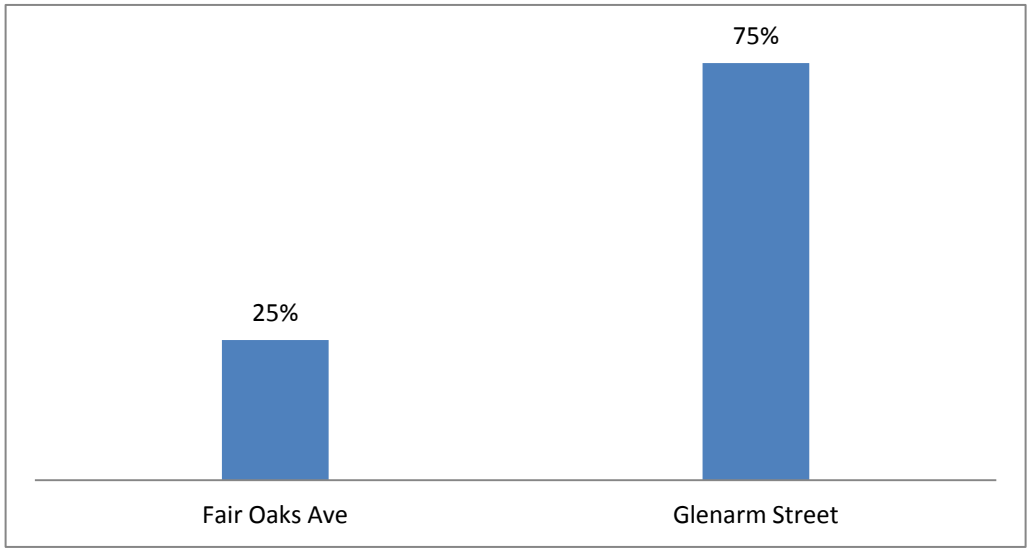


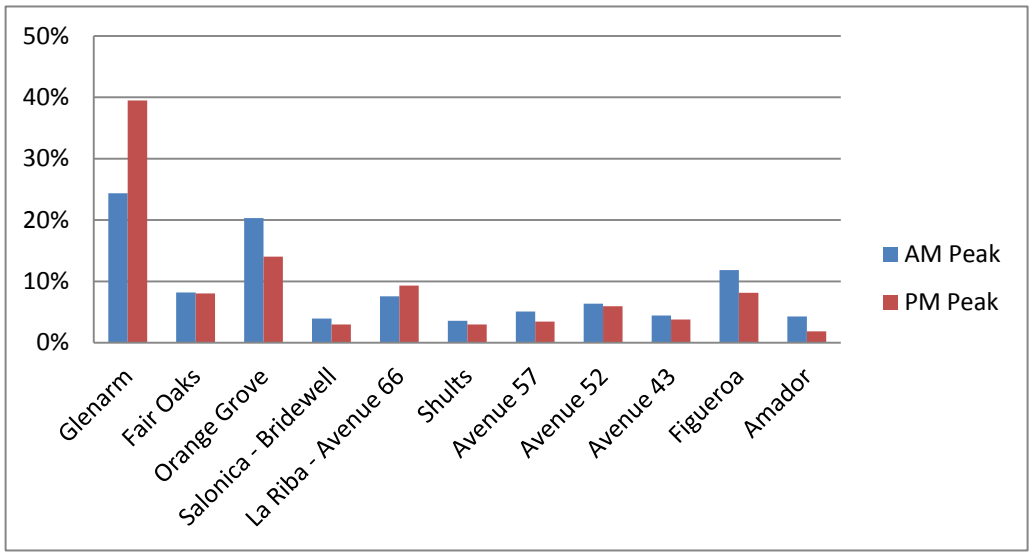
Table 2-19: Orange Grove Ramp Distribution – PM Peak Hour



3. SOUTHBOUND

In the southbound direction, the Arroyo Parkway corridor consists of 11 on-ramps within the study area, beginning at Glenarm Street. A total of 11,578 vehicles entered one of the 11 on-ramps in the AM peak period and 8,751 vehicles in the PM peak period. During the AM peak period, the on-ramps at Glenarm Street recorded the most vehicles entering the corridor, followed by Orange Grove Avenue and Figueroa. During the PM peak hour, the on-ramps at Hill Street recorded the most vehicles entering the corridor, followed by Orange Grove Avenue and La Riba Way – Avenue 66. A distribution of the vehicles entering each study on-ramp in the northbound direction is presented in Table 3-1.

Table 3-1: Southbound On Ramp Distribution



In addition to the 11 on-ramps, there were a total of 10 off-ramps that were surveyed in the southbound direction. All trips entering in the southbound direction were recorded and matched to one of the 10 off-ramps within the study corridor. The unaccounted trips in the southbound direction were assumed to either exit at the I-5 interchange or at one of the off-ramps located south of Hill Street and outside of the study area. The distribution and travel patterns at each off-ramp in the southbound direction are provided in greater detail in the following sections.

3.1 GLENARM STREET

Glenarm Street is the first on-ramp in the southbound direction within the study area and recorded the most vehicles entering in the AM and PM peak periods. A total of 2,822 vehicles entered during the AM peak hour and 3,456 entered in the PM peak period. Tables 3-2 and 3-3 illustrate the off-ramp distribution from vehicles entering at the Glenarm Street on-ramp during the AM and PM peak periods.

Table 3-2: Glenarm Street Ramp Distribution – AM Peak Hour

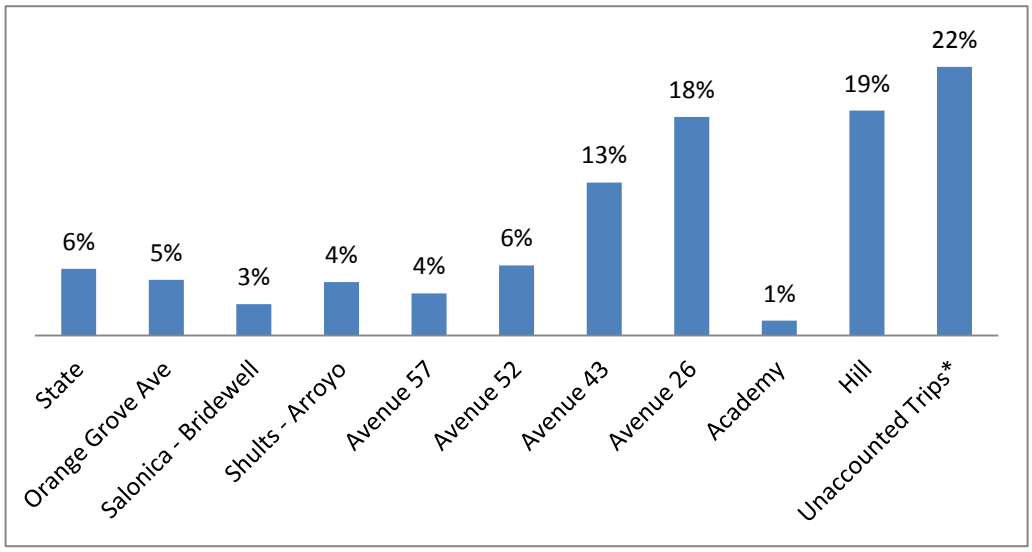
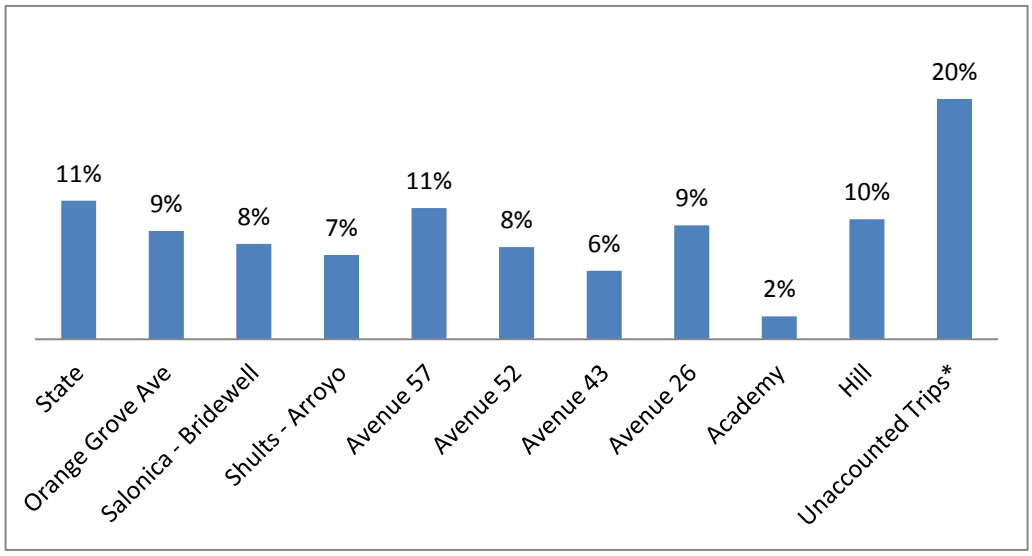


Table 3-3: Glenarm Street Ramp Distribution – PM Peak Hour



3.2 FAIR OAKS AVENUE

The on-ramp at Fair Oaks Avenue recorded 949 vehicles entering during the AM peak period and 704 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-two percent (92%) of the vehicles entering at this on-ramp during the AM peak period and eight-seven percent (87%) during the PM peak period were unaccounted trips. Tables 3-4 and 3-5 illustrate the off-ramp distribution from vehicles entering at the Fair Oaks Avenue on-ramp during the AM and PM peak periods.

Table 3-4: Fair Oaks Avenue Ramp Distribution – AM Peak Hour

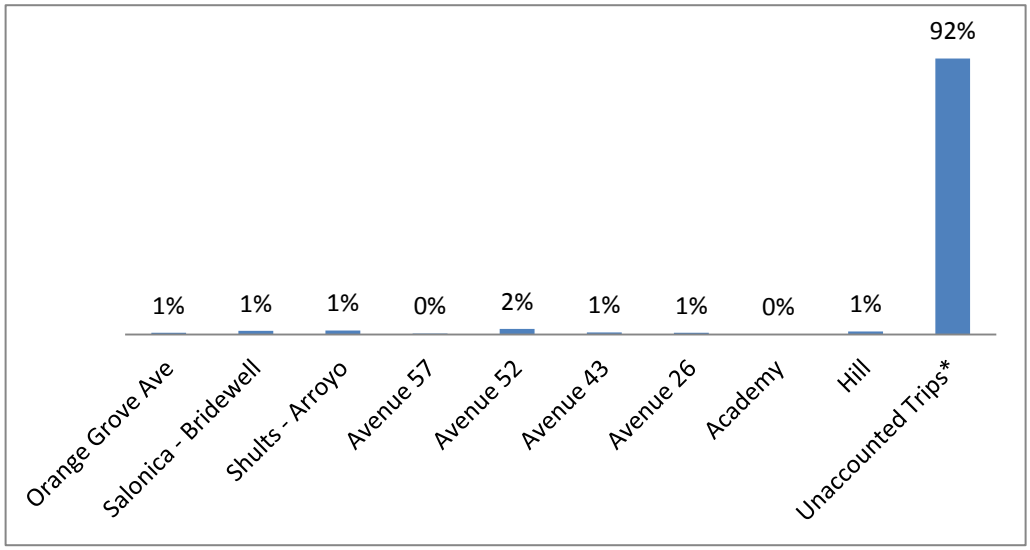
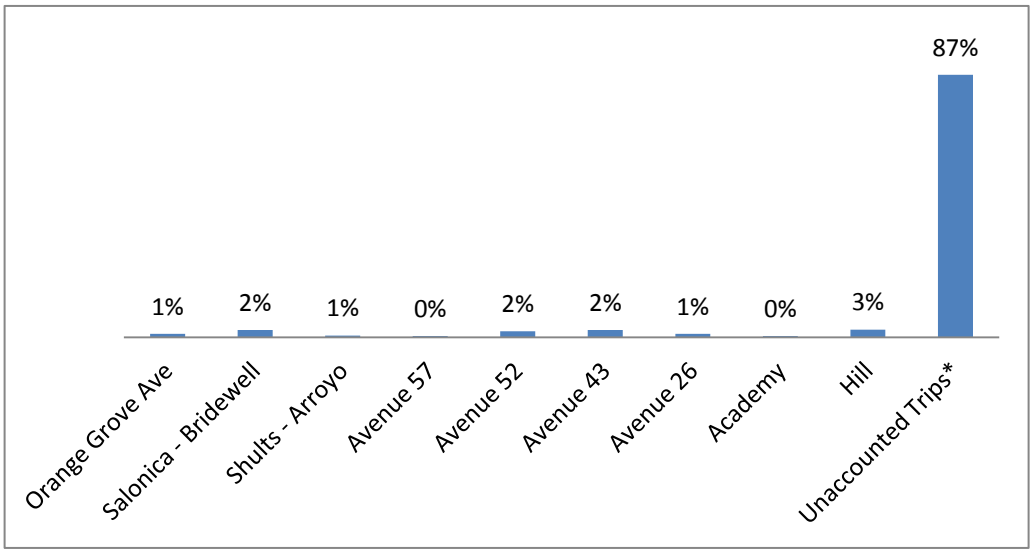


Table 3-5: Fair Oaks Avenue Ramp Distribution – PM Peak Hour



3.3 ORANGE GROVE AVENUE

The on-ramp at Orange Grove Avenue recorded 2,354 vehicles entering during the AM peak period and 1,227 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-six percent (96%) of the vehicles entering at this on-ramp during the AM peak period and ninety percent (90%) during the PM peak period were unaccounted trips. Tables 3-6 and 3-7 illustrate the off-ramp distribution from vehicles entering at the Orange Grove Avenue on-ramp during the AM and PM peak periods.

Table 3-6: Orange Grove Avenue Ramp Distribution – AM Peak Hour

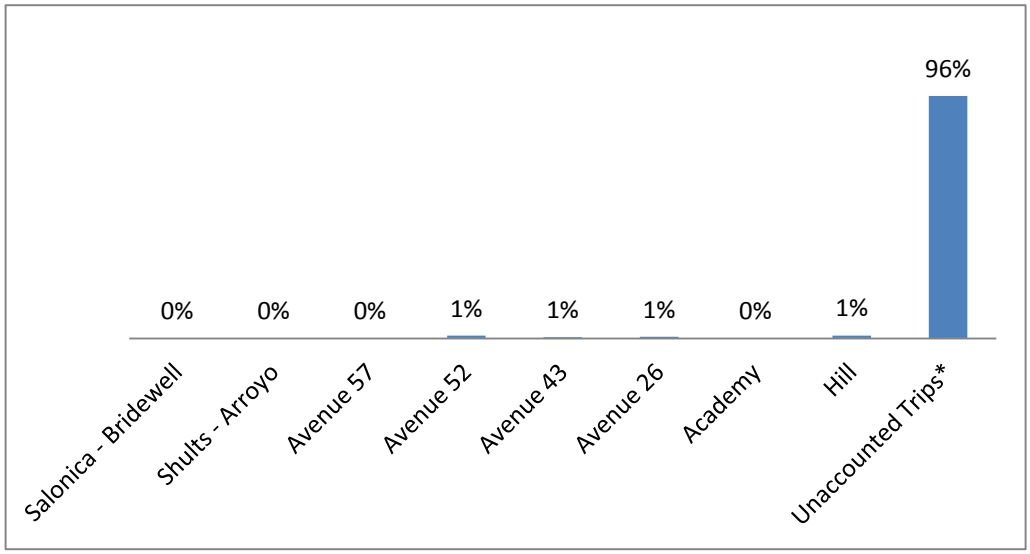
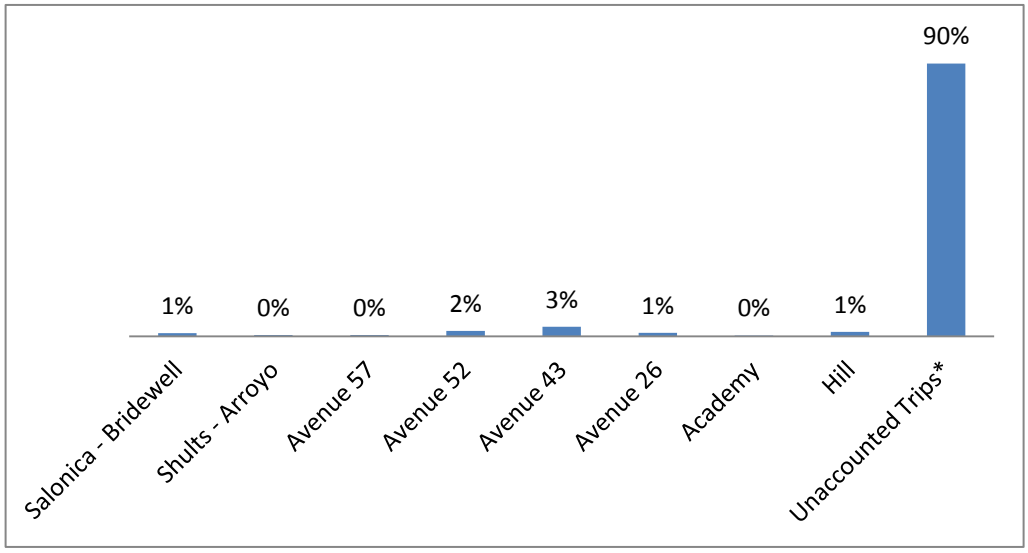


Table 3-7: Orange Grove Avenue Ramp Distribution – PM Peak Hour



3.4 SALONICA – BRIDEWELL

The on-ramp at Salonica-Bridewell recorded 457 vehicles entering during the AM peak period and 260 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-three percent (93%) of the vehicles entering at this on-ramp during the AM peak period and ninety-one percent (91%) during the PM peak period were unaccounted trips. Tables 3-8 and 3-9 illustrate the off-ramp distribution from vehicles entering at the Salonica-Bridewell on-ramp during the AM and PM peak periods.

Table 3-8: Salonica - Bridewell Ramp Distribution – AM Peak Hour

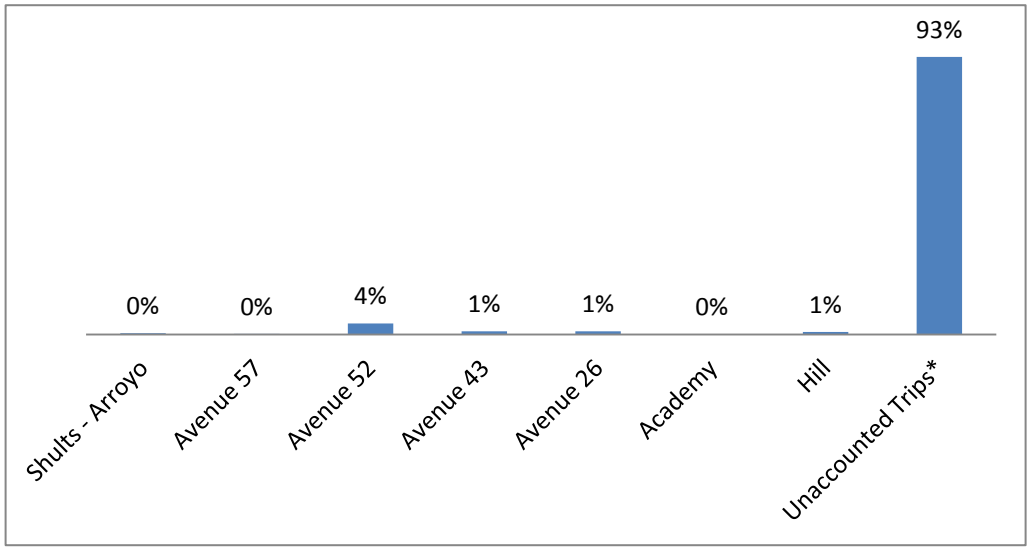
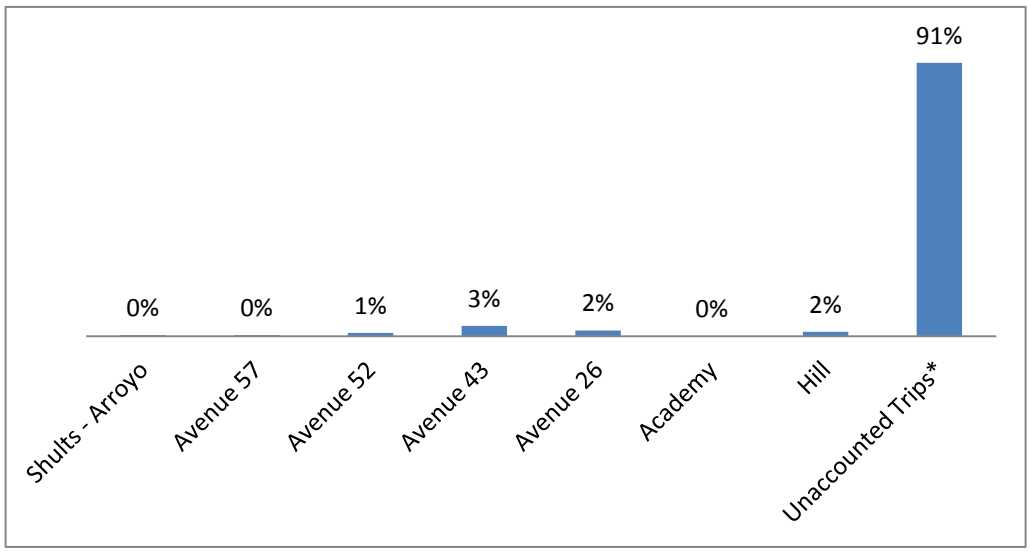


Table 3-9: Salonica - Bridewell Ramp Distribution – PM Peak Hour



3.5 LA RIBA – AVENUE 66

The on-ramp at La Riba Way-Avenue 66 recorded 877 vehicles entering during the AM peak period and 815 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-six percent (96%) of the vehicles entering at this on-ramp during the AM peak period and ninety-two percent (92%) during the PM peak period were unaccounted trips. Tables 3-10 and 3-11 illustrate the off-ramp distribution from vehicles entering at the La Riba Way-Avenue 66 on-ramp during the AM and PM peak periods.

Table 3-10: La Riba – Avenue 66 Ramp Distribution – AM Peak Hour

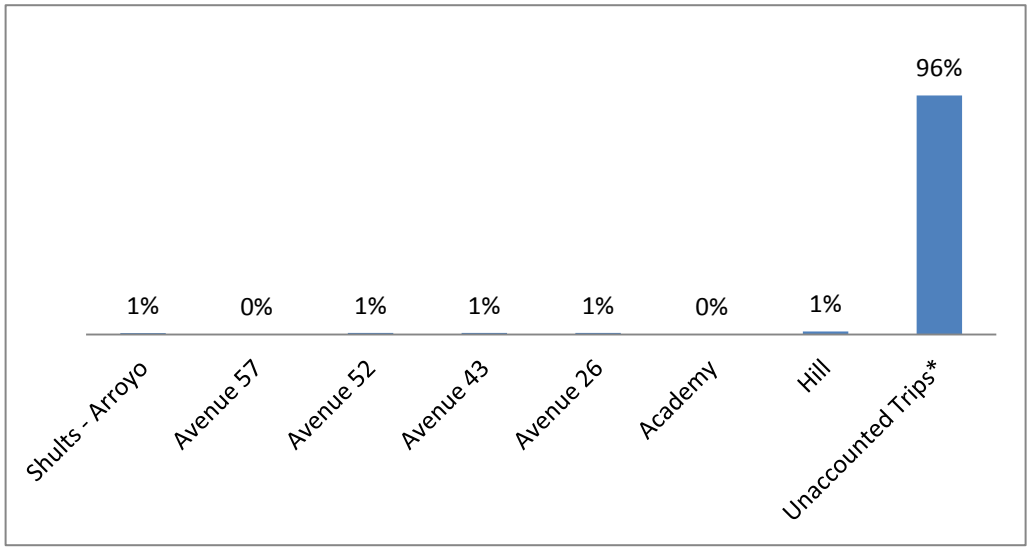
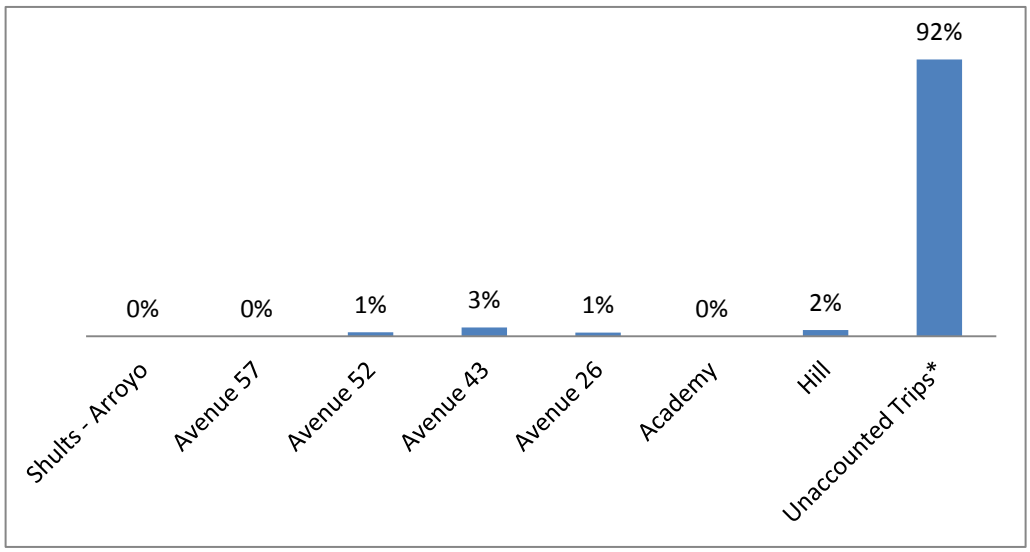


Table 3-11: La Riba – Avenue 66 Ramp Distribution – PM Peak Hour



3.6 SHULTS – ARROYO

The on-ramp at Shults-Arroyo recorded 413 vehicles entering during the AM peak period and 260 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety percent (90%) of the vehicles entering at this on-ramp during the AM peak period and eight-five percent (85%) during the PM peak period were unaccounted trips. Tables 3-12 and 3-13 illustrate the off-ramp distribution from vehicles entering at the Shults-Arroyo on-ramp during the AM and PM peak periods.

Table 3-12: Shults - Arroyo Ramp Distribution – AM Peak Hour

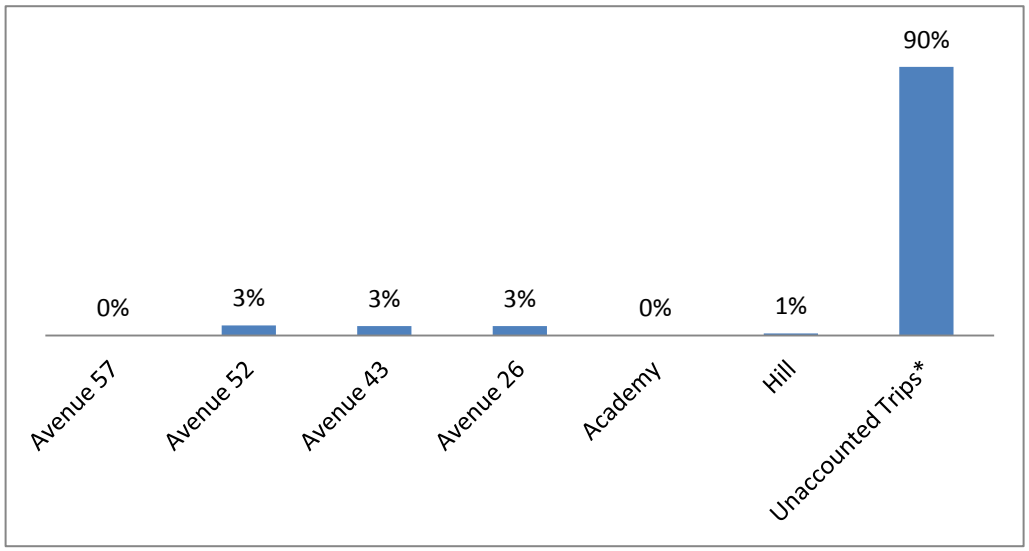
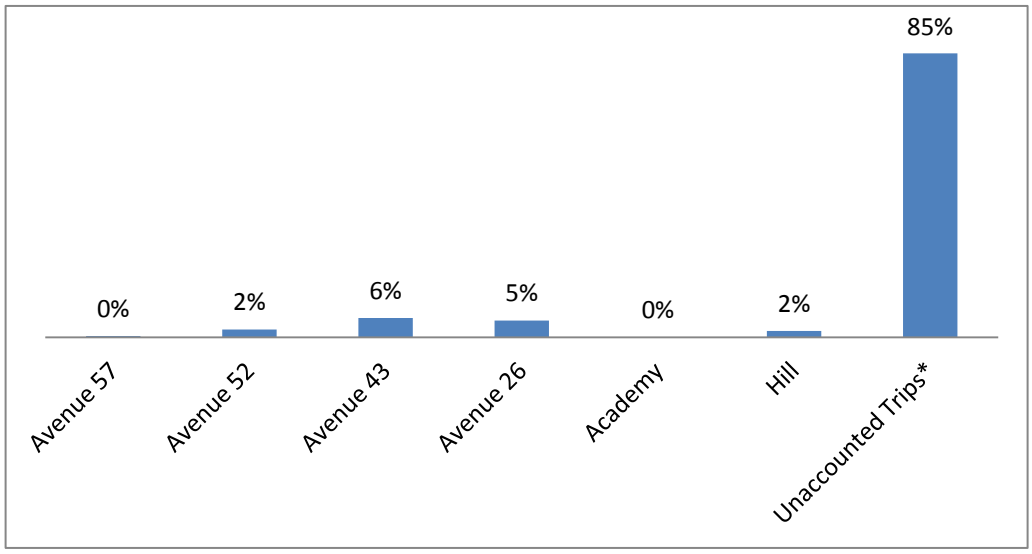


Table 3-13: Shults - Arroyo Ramp Distribution – PM Peak Hour



3.7 AVENUE 57

The on-ramp at Avenue 57 recorded 588 vehicles entering during the AM peak period and 302 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-four percent (94%) of the vehicles entering at this on-ramp during the AM peak period and eight-nine percent (89%) during the PM peak period were unaccounted trips. Tables 3-14 and 3-15 illustrate the off-ramp distribution from vehicles entering at the Avenue 57 on-ramp during the AM and PM peak periods.

Table 3-14: Avenue 57 Ramp Distribution – AM Peak Hour

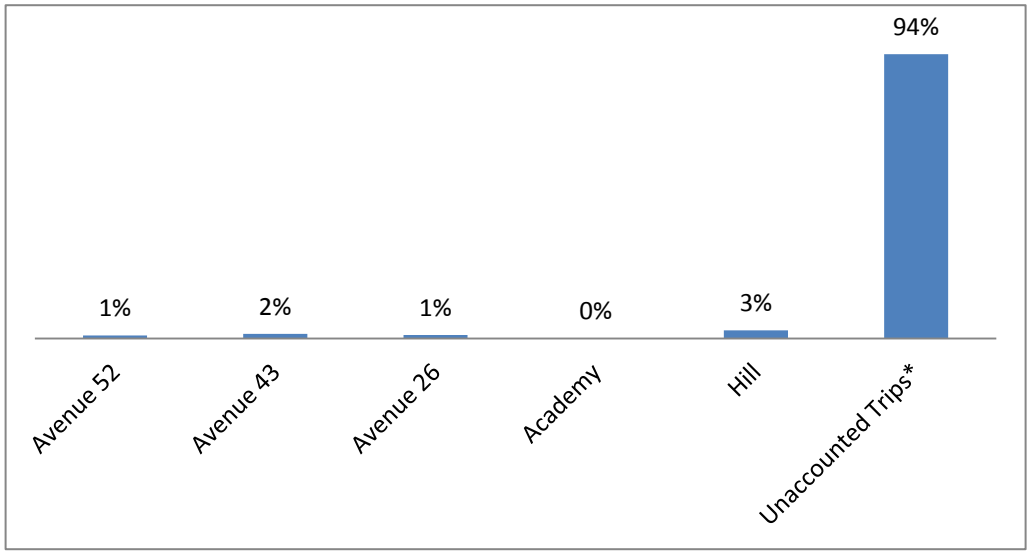
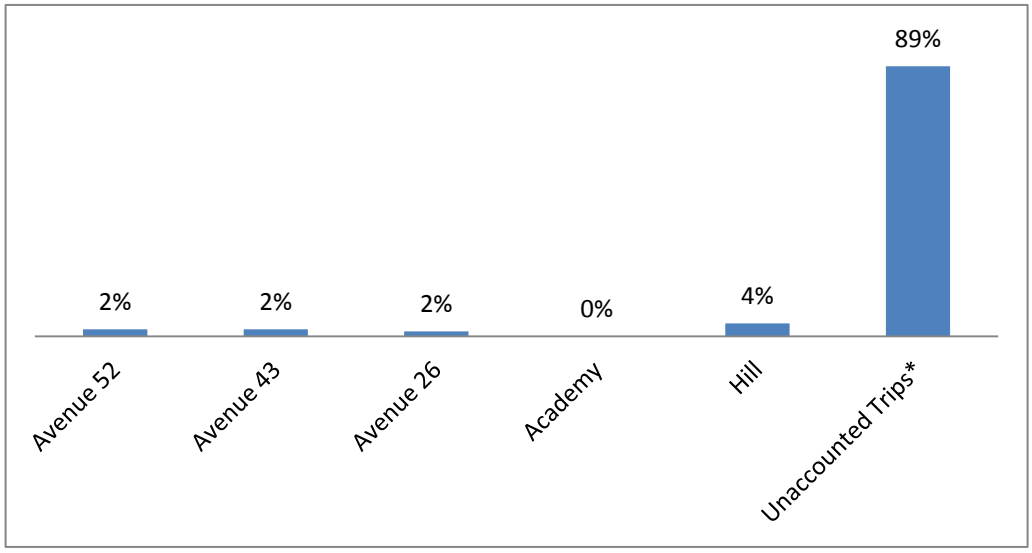


Table 3-15: Avenue 57 Ramp Distribution – PM Peak Hour



3.8 AVENUE 52

The on-ramp at Avenue 52 recorded 738 vehicles entering during the AM peak period and 521 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-six percent (96%) of the vehicles entering at this on-ramp during the AM peak period and ninety-three percent (93%) during the PM peak period were unaccounted trips. Tables 3-16 and 3-17 illustrate the off-ramp distribution from vehicles entering at the Avenue 52 on-ramp during the AM and PM peak periods.

Table 3-16: Avenue 52 Ramp Distribution – AM Peak Hour

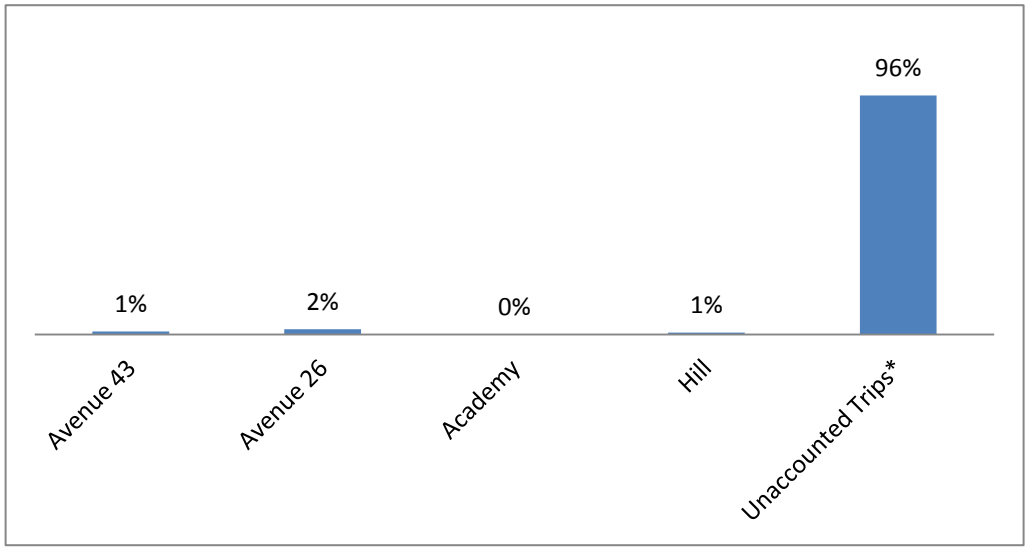
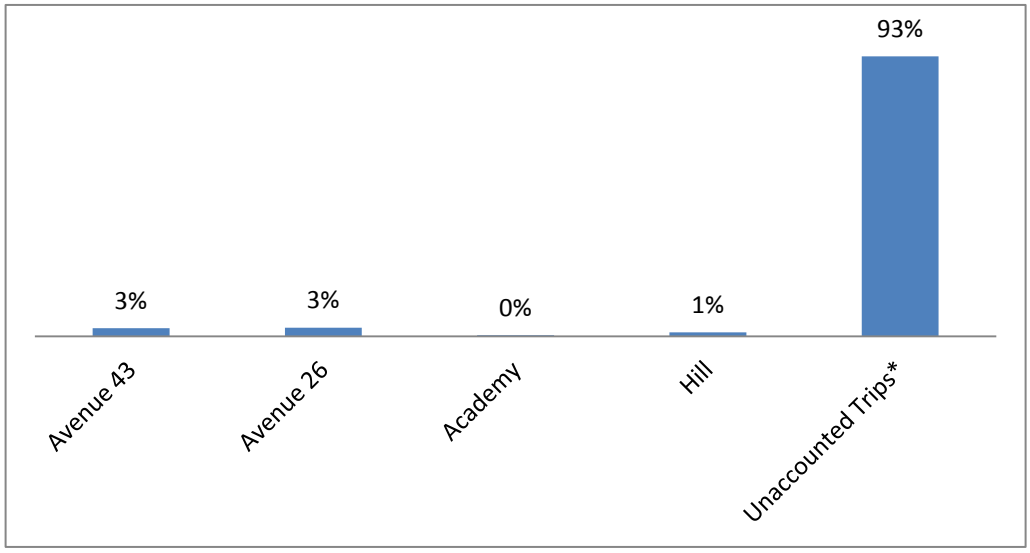


Table 3-17: Avenue 52 Ramp Distribution – PM Peak Hour



3.9 AVENUE 43

The on-ramp at Avenue 43 recorded 514 vehicles entering during the AM peak period and 332 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-three percent (93%) of the vehicles entering at this on-ramp during the AM peak period and ninety percent (90%) during the PM peak period were unaccounted trips. Tables 3-18 and 3-19 illustrate the off-ramp distribution from vehicles entering at the Avenue 43 on-ramp during the AM and PM peak periods.

Table 3-18: Avenue 43 Ramp Distribution – AM Peak Hour

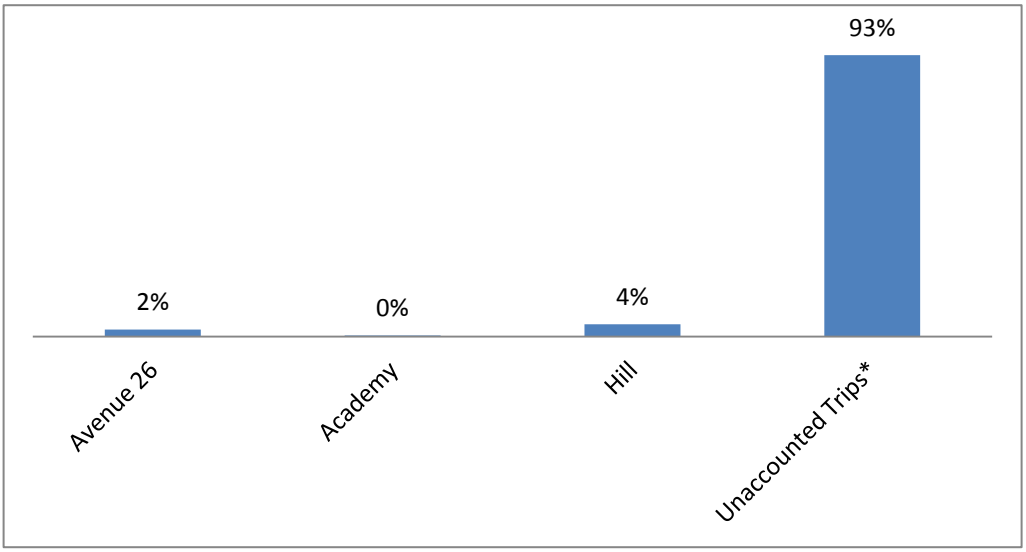
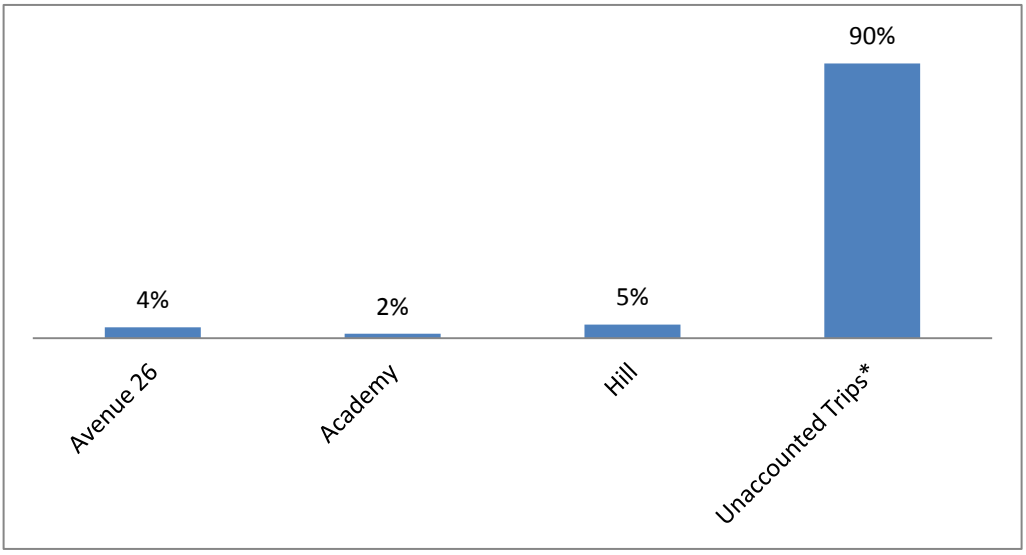


Table 3-19: Avenue 43 Ramp Distribution – PM Peak Hour



3.10 FIGUEROA

The on-ramp at Figueroa recorded 1,371 vehicles entering during the AM peak period and 713 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-nine percent (99%) of the vehicles entering at this on-ramp during the AM peak period and ninety-nine percent (99%) during the PM peak period were unaccounted trips. Tables 3-20 and 3-21 illustrate the off-ramp distribution from vehicles entering at the Figueroa on-ramp during the AM and PM peak periods.

Table 3-20: Figueroa Ramp Distribution – AM Peak Hour

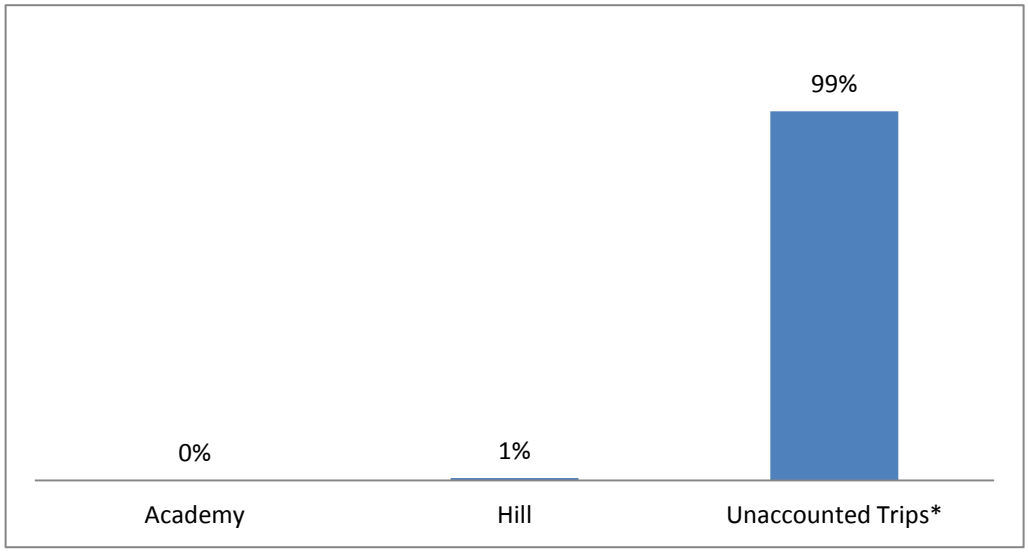
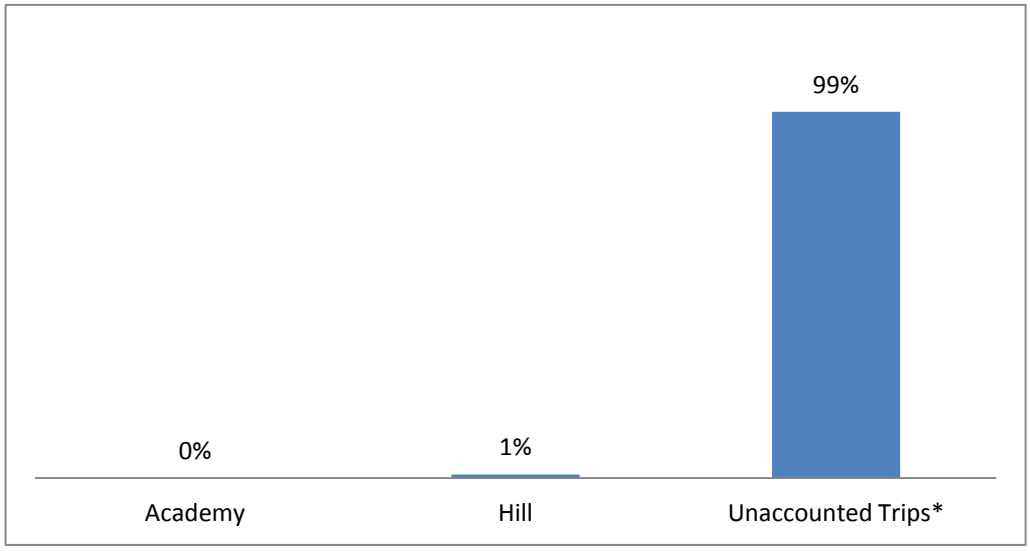


Table 3-21: Figueroa Ramp Distribution – PM Peak Hour



3.11 AMADOR

The on-ramp at Amador recorded 495 vehicles entering during the AM peak period and 161 vehicles entering during the PM peak period. Nearly all vehicles entering at this on-ramp exited the corridor at either the I-5 interchange or south of the study area. Ninety-nine percent (99%) of the vehicles entering at this on-ramp during the AM peak period and ninety-three percent (93%) during the PM peak period were unaccounted trips. Tables 3-22 and 3-23 illustrate the off-ramp distribution from vehicles entering at the Amador on-ramp during the AM and PM peak periods.

Table 3-22: Amador Ramp Distribution – AM Peak Hour

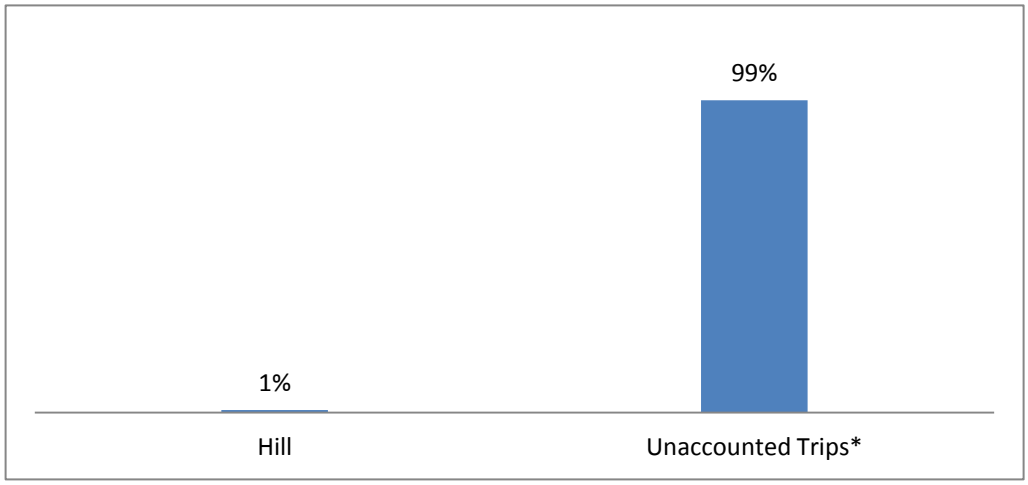
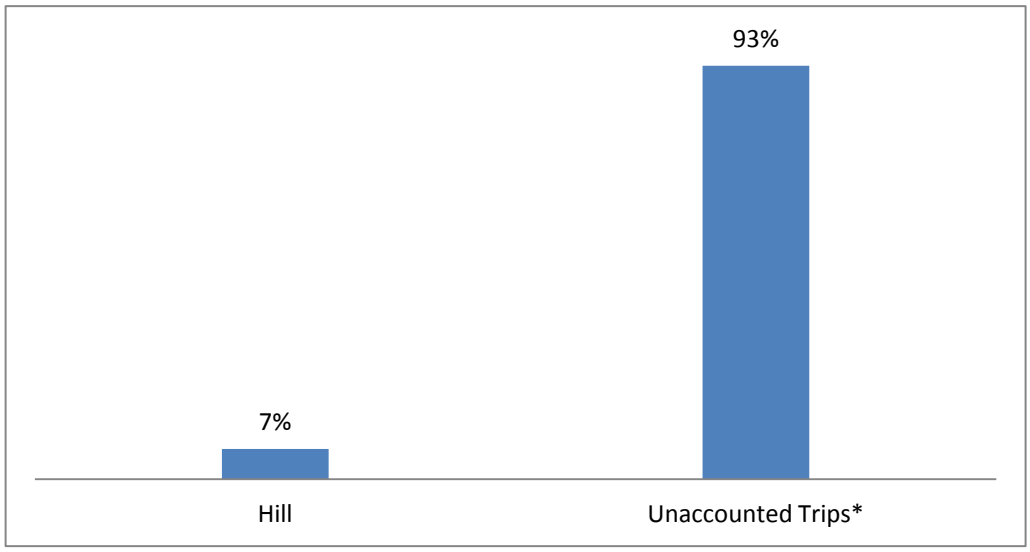


Table 3-23: Amador Ramp Distribution – PM Peak Hour



4. SUMMARY OF FINDINGS

- Corridor utilized as a thoroughfare, with most vehicles entering the corridor in Pasadena and exiting in Downtown Los Angeles in the southbound direction; and entering the corridor in Downtown Los Angeles and exiting in Pasadena in the northbound direction.

- Overall, vehicles entering in the southbound direction were significantly higher than vehicles entering in the northbound direction (4 times higher in the AM peak period and two times higher in the PM peak period).

- The thoroughfare is heavily used by commuters traveling from Pasadena to Downtown Los Angeles during the AM peak period and traveling from Downtown Los Angeles back to Pasadena in the PM peak period. Trips are higher during the PM peak period in the northbound direction, while AM peak hour trips are higher than the PM peak period in the southbound direction.

APPENDICES

California Department of Transportation (Caltrans), District 7

ARROYO SECO PARKWAY CORRIDOR PARTNERSHIP PLAN - MICROSIMULATION CALIBRATION MEMORANDUM

REVISED TECHNICAL MEMORANDUM

SEPTEMBER 14, 2012

IBI GROUP

DOCUMENT CONTROL

Client:	California Department of Transportation (Caltrans), District 7
Project Name:	Arroyo Seco Parkway Corridor Partnership Plan
Report Title:	Arroyo Seco Parkway Corridor Partnership Plan - Microsimulation Calibration Memorandum
IBI Reference:	
Version:	
Digital Master:	[File Location]
Originator:	[Name]
Reviewer:	[Name]
Authorization:	[Name]
Circulation List:	
History:	

Table of Contents

EXECUTIVE SUMMARY **1**

1. INTRODUCTION **3**

2. PROJECT DESCRIPTION **3**

3. DATA COLLECTION **3**

3.1 Geometric Data 3

3.2 Control Data 3

3.2.1 Demand Data 5

3.3 Calibration Data 6

3.3.1 Field Review 6

3.3.2 Travel Time Data 6

3.3.3 Data Preparation/Quality Assurance 6

3.3.4 Reconciliation of Traffic Counts 6

4. MODEL DEVELOPMENT **7**

4.1 Overview 7

4.2 Coding of Network Geometry 7

4.3 Traffic Control at Intersections and Junctions 7

4.4 Coding of Traffic Operations and Management Data 7

4.5 Coding of Traffic Demand 7

4.6 Driver Behavior Data 7

4.7 Simulation Run Control Data 7

4.8 QA/QC Plan 8

5. CALIBRATION **9**

5.1 Goals 9

5.2 Approach 9

5.2.1 Capacity 9

5.2.2 System Performance 9

5.3 Conclusion 12

APPENDIX A – CALCULATION OF NUMBER OF CAR RUNS TO ESTIMATE TRAVEL TIME DATA **13**

APPENDIX B – COUNT SPREADSHEETS **15**

APPENDIX C – SPEED PLOTS **16**

APPENDIX D – VOLUME COMPARISON **21**

TABLE OF CONTENTS (CONT'D)

Figures

Figure 1. Project Study Area 4

EXECUTIVE SUMMARY

This technical memorandum has been prepared to present the results of the calibration of the VISSIM microsimulation model developed for the Arroyo Seco Parkway. The model is calibrated to the extent possible, and satisfies 19 of the 20 FHWA calibration measures. The results are illustrated in Table ES-1.

Table ES-1 – Calibration Results

Measurement	Description	AM Peak Hour	Status	PM Peak Hour	Status
Individual Link Flows (Flow < 700)	Number of locations	110		113	
	Number of locations within threshold	98		100	
	% of locations within threshold	89%	pass	88%	pass
Individual Link Flows (700 < Flow < 2700)	Number of locations	38		36	
	Number of locations within threshold	37		36	
	% of locations within threshold	97%	pass	100%	pass
Individual Link Flows (Flow > 2700)	Number of locations	35		34	
	Number of locations within Threshold	31		34	
	% of locations within threshold	89%	pass	100%	pass
Total Link Flows - Screenlines	Number of locations	109		109	
	Difference (%)	-2%	pass	-1%	pass
Individual Link Flows GEH Statistic	Number of locations	183		183	
	Number of locations within threshold	177		182	
	% of locations within threshold	97%	pass	99%	pass
Total Link Flows GEH Statistic - Screenlines	Number of locations	109		109	
	GEH	6.13	fail	2.21	pass
Journey Times, Network (Model / Count)	Northbound	8 min / 8 min	Pass (within 15%)	9 min / 10 min	Pass (within 15%)
	Southbound	14 min / 16.5 min	Pass (within 15%)	8 min / 8 min	Pass (within 15%)
Speed Flow Relationship Visual Audits	User satisfaction		pass		pass
Bottleneck Visual Audit	User satisfaction		pass		pass

The measure that did not pass is the GEH for the sum of links in the AM peak. It is understandable that this measure did not pass due to the nature of unstable flow at the convergence point between Interstate 5 and the State Route 110 in the morning peak.

This condition is not anticipated to substantially impact the analysis. The purpose of the microsimulation model is to provide elements for a comparison of traffic conditions on the Arroyo Seco Parkway due to the implementation of the alternatives proposed in the Corridor Partnership Plan, and the changes introduced by the future alternatives will be measured comparatively. Additionally, the primary modifications to the corridor are proposed in sections north of Interstate 5, which is beyond the southern extent of the corridor noted above. As the travel times and link volumes are within the acceptable margin of error, we have high confidence in the model and anticipate that it will provide for reasonable forecast of traffic conditions on the Arroyo Seco Parkway and the analysis of the alternatives proposed in the Corridor Partnership Plan.

1. INTRODUCTION

This memo documents the calibration and validation of the microsimulation model developed for the Arroyo Seco Parkway Corridor Partnership Plan (CPP). This model was developed as technical support for the development of the CPP, with the purpose to assess the potential traffic operational impacts of changes to the current geometric and access conditions within the corridor.

2. PROJECT DESCRIPTION

The Study Area for this project encompasses the segment of the SR-110 north of Stadium Way and Hill Street in Los Angeles, until the northern terminus of the parkway, at Glenarm Street in Pasadena, as well as all the ramps that connect to the facility and ramp termini. The corridor modeled is approximately 7 miles long and has about 30 access points. Figure 1 illustrates the Study Area.

3. DATA COLLECTION

The data collection effort focused on the elements and inputs needed for the VISSIM modeling effort. The basic components collected include geometric data, control data, and calibration data; which are outlined in the following paragraphs.

3.1 Geometric Data

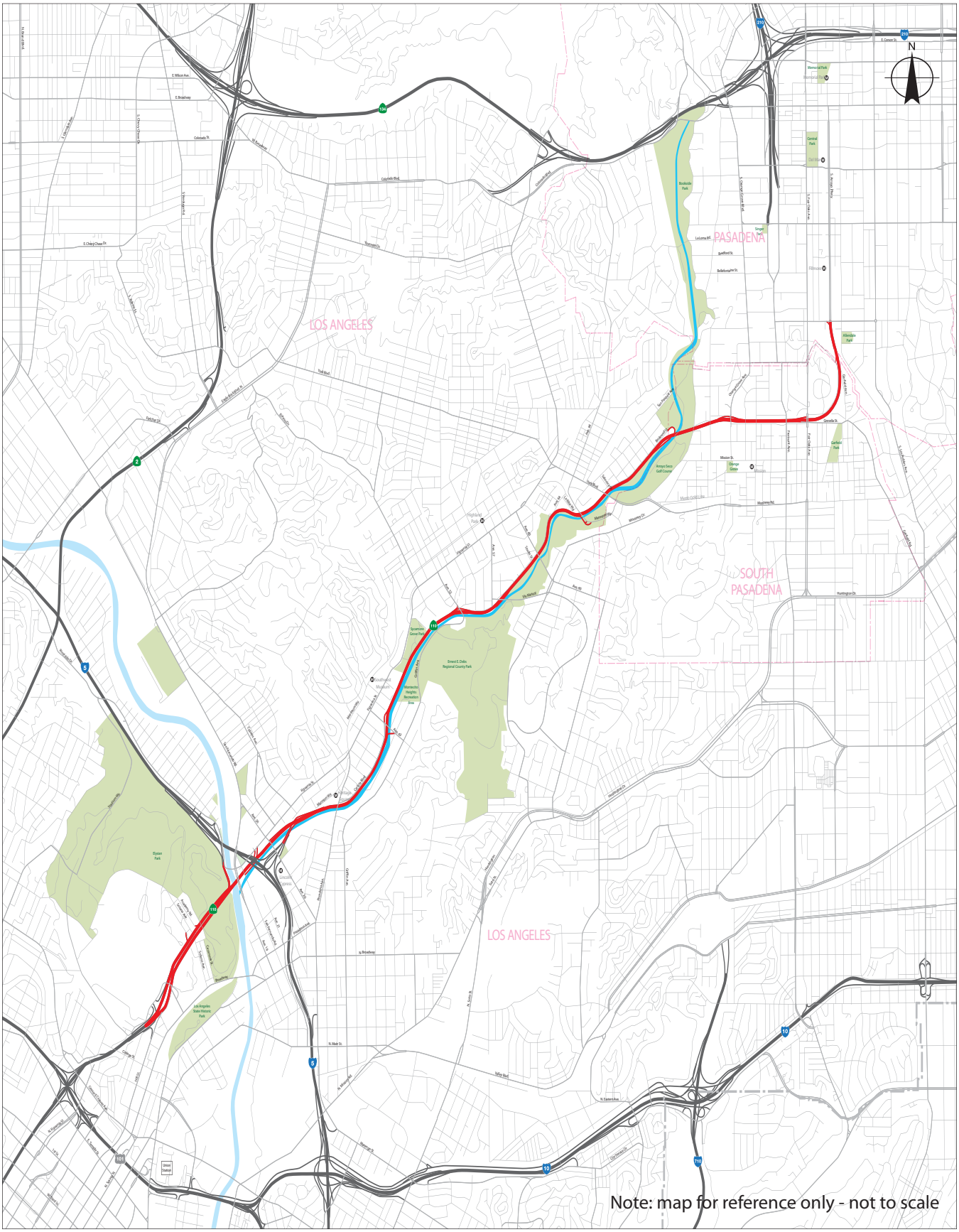
The basic geometric data required for the model development can be broken down into two parts: links and intersections. For links, the data necessary consists of the number of lanes, length, and free-flow speed; and for intersections, also includes designated turn lanes and vehicle storage lengths.

This data was obtained using a mix of aerial photographs, Google Street View and field verifications.

3.2 Control Data

Local jurisdictions were contacted in order to obtain control data for the signalized intersections included in the model. For the non-signalized intersections, control data was obtained through aerial photographs/Google Street View, and confirmed through field verification.

Figure 1 - Project Study Area



3.2.1 DEMAND DATA

Demand data was obtained from the 2010 Caltrans Traffic Volumes publication, consistent with direction provided by Caltrans. One limitation with this approach is that Annual Average Daily Traffic (AADT) does not exist for all the segments of the corridor. In segments where AADT information was not available for the mainline, ramp AADT was used to balance and obtain an estimated volume for these segments. This estimate was done considering the ramp and mainline postmile, and provided traffic forecasts for the five segments of SR-110 where AADT data was not available from Caltrans.

The directional volumes were converted to peak hour volumes using the factors for the segment south of York Boulevard. These factors are 0.0761 for the AM peak hour and 0.0813 for the PM peak hour.

3.2.1.1 Count Locations and Duration

Turning movement counts were conducted at all of the ramp termini locations on December 6, 2011. Data was collected by Pacific Traffic & Transit Data Services (PTDS) for a 3-hour period: morning (6AM-9AM) and afternoon (3PM-6PM). The locations are listed below:

- Arroyo Pkwy/Glenarm St
- Arroyo Seco Pkwy off-ramp/State St
- Fair Oaks Ave/Arroyo Seco Pkway SB on-ramp/State St
- Fair Oaks Ave/Arroyo Seco Pkway NB off-ramp/Grevelia
- Orange Grove Blvd/Arroyo Seco Pkway SB ramps
- Orange Grove Blvd/Arroyo Seco Pkway NB ramps
- Arroyo Seco Pkway NB off-ramp/Bridewell St (continuation) / Hough St
- Salonica St / Bridewell/Arroyo Seco Pkway SB ramps
- Arroyo Seco Pkway NB off-ramp/Marmion Way WB
- Arroyo Seco Pkway NB off-ramp/Marmion Way EB
- Ave 66/ La Riba Way/Arroyo Seco Pkway SB on-ramp
- Arroyo Seco Pkway NB ramps/Ave 60
- Shults St / Ave 60/Arroyo Seco Pkway SB ramps
- Arroyo Seco Pkway NB ramps/Via Marisol
- Ave 57/Arroyo Seco Pkway SB ramps
- Arroyo Seco Pkway SB ramps/Ave 52
- Arroyo Seco Pkway NB ramps/Ave 52
- Arroyo Seco Pkway SB ramps/Ave 43
- Arroyo Seco Pkway NB ramps/Ave 43- no Homer
- Arroyo Seco Pkway SB off-ramp/Ave 26
- Arroyo Seco Pkway NB on-ramp/Ave 26
- Arroyo Seco Pkway NB off-ramp/Figueroa St (close to I-5)
- Arroyo Seco Pkway SB on-ramp/Figueroa St (close to I-5)
- Arroyo Seco Pkway NB on-ramp/San Fernando Rd
- Arroyo Seco Pkway SB off-ramp/Academy Rd
- Arroyo Seco Pkway NB ramps/Solano Ave
- Arroyo Seco Pkway SB on-ramp/Amador St

Data was collected in periods of 15 minutes, and peak hours were identified for each location. Count spreadsheets are included in the Appendix of the Microsimulation Report for reference. There was some variation among the various locations and the peak hour considered for the model was defined to be the peak hour of the system. The AM peak hour was identified to begin at 7:15AM. The PM peak hour begins at 5:00PM).

A license plate origin-destination survey was also commissioned in order to provide information on the driving patterns along the corridor and between ramps to be considered in the model. This

survey was conducted on February 2, 2012, for a 2-hour period for both peak periods (6:45AM to 8:45AM, and 4:30PM to 6:30PM).

3.2.1.2 Traffic Flows / OD Tables

Traffic flows used in the model are comprised of the mainline peak hour volumes, broken down according to the patterns observed in the license plate survey and by the turning movements at the intersections.

3.2.1.3 Vehicle Characteristics

Software default vehicle characteristics were used in the model, with the exception of the vehicle mix, which was assumed to be 100% passenger car due to the prohibition of truck traffic on this portion of the SR-110.

3.3 Calibration Data

This section describes the data collected and the assumptions regarding the data used as the calibration reference for the model.

3.3.1 FIELD REVIEW

Field reviews were conducted on January 25, 2012 and March 27, 2012 to collect travel time data and to assess visually the behavior of traffic during peak periods.

3.3.2 TRAVEL TIME DATA

Travel times along the corridor were collected by driving the corridor's extent 6 times in each direction during the AM peak period, and 5 times in the northbound direction and 6 times in the southbound direction in the PM peak period. On average, travel times during AM peak period were 7.94 minutes in the northbound direction, and 16.52 minutes in the southbound direction. In the PM peak period, times are more balanced, with the northbound average travel time increasing slightly to 9.85 minutes, and southbound times decreasing to 8.18 minutes. The number of runs ensures that the mean travel time falls in the desired 95-percent confidence interval, and the calculation of minimum number of runs is included in Appendix A.

In the AM peak period, southbound traffic was observed to slow down south of Ave 52, while northbound traffic was able to drive at close to free-flow conditions. In the PM peak period, northbound traffic is very heavy (and slow) up to the interchange with I-5, but speeds picked up after this exit and vehicles traveled at speeds of at least 50 mph in most segments until the northern terminus of the corridor, with the exception of the segment approaching Glenarm St, where speeds were observed to drop once again.

3.3.3 DATA PREPARATION/QUALITY ASSURANCE

The data collected was reviewed for inconsistencies and potential errors. This effort was concentrated on ensuring that the lane geometry and data collected for neighboring/adjacent counts were consistent.

3.3.4 RECONCILIATION OF TRAFFIC COUNTS

Ramp approach and departure volumes obtained from the peak hour counts were balanced according to methodology contained in Chapter 4 of the Federal Highway Administration's Traffic Monitoring Guide of 2001. The turning movement counts at ramp termini intersections were adjusted to reflect the balanced ramp volumes.

4. MODEL DEVELOPMENT

4.1 Overview

The model was coded in VISSIM version 5.30 using all the data compiled in the data collection phase.

4.2 Coding of Network Geometry

The network was coded on top of aerial photographs scaled in VISSIM. The following geometric information was coded:

- Number of lanes
- Lane width
- Segment length (background images were imported and scaled in VISSIM and the network was drawn on top of these images, with associated values for segment length)
- Crosswalks

4.3 Traffic Control at Intersections and Junctions

Traffic control information was coded in the model for all ramp termini intersections:

- Stop signs (where physically present and to represent right-turn-on-red)
- Signal Groups and Signals

There is no ramp metering in the study area.

4.4 Coding of Traffic Operations and Management Data

Speed limits and reduced speeds associated to exits and curves were coded into the network.

4.5 Coding of Traffic Demand

Traffic demand was coded as vehicle input at the start and end points of the network and also as static route decisions relative to ramp to ramp volumes and intersection turning movements.

4.6 Driver Behavior Data

Default driver behavior data was initially used in the model, and adjusted during calibration to reflect observed driver behavior.

4.7 Simulation Run Control Data

The simulation parameters were set to run for 4,500 simulation seconds, with the compilation of results starting after the initial warm up period of 900 seconds. The simulation was set to run in multirun mode with 10 runs.

The system performance was assessed against observed travel times along the corridor.

4.8 QA/QC Plan

The model was reviewed and checked for errors and inconsistencies by another member of the team.

The network was checked for the following errors, and corrected as appropriate:

- Connectivity
- Link geometry (lanes, speeds, restrictions, etc)
- Intersection control and if intersection operates as expected
- Restrictions (turning movement prohibitions, priorities, etc)

Items reviewed for error checking regarding demand:

- Vehicle mix – 100% passenger car
- Traffic volumes
- Route decisions

Once the input was reviewed, test model runs were performed and the animated output was recorded to allow for the visualization of the vehicle behavior and the assessment of the reasonableness of the model. This allowed for the identification, exploration and correction of unrealistic vehicle behaviors.

5. CALIBRATION

Calibration of the model initiated once the model was considered to produce reasonable results.

5.1 Goals

The main goal of the calibration phase is to adjust model parameters to more accurately replicate the local traffic conditions.

5.2 Approach

5.2.1 CAPACITY

Capacity was adjusted by changing the driver behavior parameters to better reflect traffic conditions.

5.2.2 SYSTEM PERFORMANCE

Travel times are used as the measure of system performance, and are compared to the average travel times measured in the field.

The calibration targets follow, where applicable, the parameters set forth in Table 4 of the Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software (FHWA Publication No. FHWA-HRT-04-040) published in July 2004, illustrated in Table 1.

Table 1 – Calibration Targets

Criteria and Measures	Calibration Acceptance Targets
Hourly Flows, Model versus Observed	
Individual Link Flows	
Within 15% for 700 vph< Flow <2700 vph	> 85% of cases
Within 100 vph for Flow < 700 vph	> 85% of cases
Within 400 vph for Flow > 2700 vph	> 85% of cases
Total Link Flows	
Within 5%	Within 5% of sum of all link counts*
GEH Statistic < 5 for individual Link Flows	> 85% of cases
GEH Statistic for Sum of All Link Flows	GEH < 4 for sum of all link counts*
Travel Times, Modeled versus Observed	
Journey Times, Network within 15% (or 1 minute, if higher)	> 85% of cases
Visual Audits	
Individual Link Speeds	
Visually Acceptable Speed-Flow Relationship	To analyst's satisfaction
Bottlenecks	
Visually Acceptable Queuing	To analyst's satisfaction

GEH Statistic is computed as:

$$GEH = ((E-V)^2/((E+V)/2))^{0.5}$$

Where **E** is the estimated model volume and **V** is the observed volume.

The system's performance is shown in Table 2 below.

Table 2 – System Performance – Calibration[1]

Measurement	Description	AM Peak Hour	Status	PM Peak Hour	Status
Individual Link Flows (Flow < 700)	Number of locations	110		113	
	Number of locations within Threshold	98		100	
	% of locations within threshold	89%	pass	88%	pass
Individual Link Flows (700 < Flow < 2700)	Number of locations	38		36	
	Number of locations within Threshold	37		36	
	% of locations within threshold	97%	pass	100%	pass
Individual Link Flows (Flow > 2700)	Number of locations	35		34	
	Number of locations within Threshold	31		34	
	% of locations within threshold	89%	pass	100%	pass
Total Link Flows - Screenlines	Number of locations	109		109	
	Difference (%)	-2%	pass	-1%	pass
Individual Link Flows GEH Statistic	Number of locations	183		183	
	Number of locations within Threshold	177		182	
	% of locations within threshold	97%	pass	99%	pass
Total Link Flows GEH Statistic - Screenlines	Number of locations	109		109	
	GEH	6.13	fail	2.21	pass
Journey Times, Network (Model / Count)	Northbound	8 min / 8 min	pass	9 min / 10 min	pass
	Southbound	14 min / 16.5 min	pass	8 min / 8 min	pass
Speed Flow Relationship Visual Audits	User satisfaction		pass		pass
Bottleneck Visual Audit	User satisfaction		pass		pass

[1] Speed plots and comparison of existing to modeled volumes are provided in Appendices C and D

5.3 Conclusion

The results achieved through the calibration process meet all but one of the criteria established in the FHWA guidelines. The exception is the GEH for the screenlines in the AM peak hour. This occurs because the volume exiting the southern portion of the study area is very high, and is not completely compatible with the time taken to traverse these segments.

This condition is not anticipated to substantially impact the analysis. The purpose of the microsimulation model is to provide elements for a comparison of traffic conditions on the Arroyo Seco Parkway due to the implementation of the alternatives proposed in the Corridor Partnership Plan, and the changes introduced by the future alternatives will be measured comparatively. Additionally, the primary modifications to the corridor are proposed in sections north of Interstate 5, which is beyond the southern extent of the corridor noted above. As the travel times and link volumes are within the acceptable margin of error, it is anticipated that the model will provide for reasonable forecast of traffic conditions on the Arroyo Seco Parkway and the analysis of the alternatives proposed in the Corridor Partnership Plan.

APPENDIX A – CALCULATION OF NUMBER OF CAR RUNS TO ESTIMATE TRAVEL TIME DATA

Equation of necessary car runs: $N = \left(2 * t_{0.025,N-1} \frac{sR}{}\right)^2$

Where:

R = 95-percent confidence interval for the true mean (+/-10%)

$t_{0.025,N-1}$ = Student's t-statistic for two-sided error of 2.5 percent (totals 5 percent) with N-1 degrees of freedom (for four runs, t = 3.2; for six runs, t = 2.6; for 10 runs, t = 2.3)

s = standard deviation of the floating car runs

N = number of required floating car runs

Dir.	Peak Period	Run 1 (min.)	Run 2 (min.)	Run 3 (min.)	Run 4 (min.)	Run 5 (min.)	Run 6 (min.)	Mean	Std. Dev.	R (min.)	t	Runs Required*
NB	AM	7.75	8.52	7.95	8.55	7.67	7.22	7.94	0.52	1.59	2.571	3
	PM	9.00	9.17	10.42	10.57	10.08		9.85	0.72	1.97	2.776	5
SB	AM	19.58	21.42	19.20	10.45	12.05	16.43	16.52	1.18	3.3	2.571	4
	PM	8.00	7.60	8.40	8.30	8.17	8.58	8.18	0.34	1.64	2.571	2

* rounded up to the next integer

APPENDIX B – COUNT SPREADSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

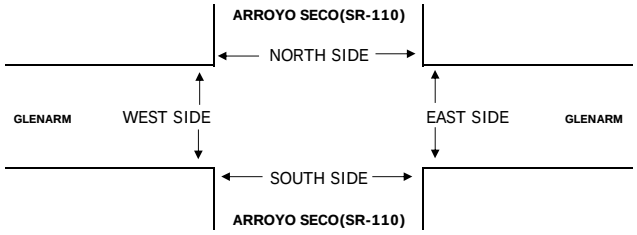
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110)	LOCATION #:	1
TUESDAY	EAST & WEST:	GLENARM	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110)			SOUTHBOUND ARROYO SECO(SR-110)			EASTBOUND GLENARM			WESTBOUND GLENARM				U-TURNS				
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	8	118	7	1	130	7	5	3	5	54	12	1	351					0
	6:15 AM	10	138	15	0	151	4	4	12	9	71	17	1	432					0
	6:30 AM	9	160	25	3	195	11	9	10	8	86	19	5	540					0
	6:45 AM	8	201	44	5	227	14	4	20	16	106	45	2	692					0
	7:00 AM	13	175	37	7	269	19	10	23	14	103	40	6	716					0
	7:15 AM	11	259	41	14	210	26	19	65	17	89	68	8	827					0
	7:30 AM	21	275	56	16	211	41	15	93	18	68	106	8	928					0
	7:45 AM	14	358	50	16	247	21	18	77	18	79	103	11	1,012					0
	8:00 AM	18	316	45	8	263	33	31	63	28	121	83	15	1,024					0
	8:15 AM	13	287	31	11	231	34	24	50	16	114	81	16	908					0
	8:30 AM	22	338	40	19	249	34	26	38	20	82	63	7	938					0
	8:45 AM	18	319	41	13	221	22	27	53	16	99	94	7	930					0
	VOLUMES	165	2,944	432	113	2,604	266	192	507	185	1,072	731	87	9,298	0	0	0	0	0
	APPROACH %	5%	83%	12%	4%	87%	9%	22%	57%	21%	57%	39%	5%						
	APP/DEPART	3,541	/	3,223	2,983	/	3,861	884	/	1,052	1,890	/	1,162	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	67	1,299	166	54	990	122	99	228	82	396	330	49	3,882					
	APPROACH %	4%	85%	11%	5%	85%	10%	24%	56%	20%	51%	43%	6%						
	PEAK HR FACTOR		0.908			0.959			0.838			0.885		0.948					
	APP/DEPART	1,532	/	1,447	1,166	/	1,468	409	/	448	775	/	519	0					
PM	3:00 PM	15	275	88	31	205	26	28	77	39	61	66	13	924					0
	3:15 PM	14	244	72	28	272	49	29	83	38	64	56	16	965					0
	3:30 PM	24	264	67	33	241	27	25	72	31	70	67	14	935					0
	3:45 PM	16	282	96	24	253	38	24	76	27	60	59	15	970					0
	4:00 PM	25	248	83	21	268	32	31	110	47	74	58	17	1,014					0
	4:15 PM	18	258	100	25	298	26	24	91	32	67	63	18	1,020					0
	4:30 PM	14	343	122	27	290	38	25	77	39	45	47	13	1,080					0
	4:45 PM	13	286	99	24	285	31	29	98	60	99	50	11	1,085					0
	5:00 PM	14	319	130	31	315	44	31	85	70	75	62	15	1,191					0
	5:15 PM	11	296	115	33	332	23	34	102	63	93	51	22	1,175					0
	5:30 PM	16	330	107	30	335	36	21	96	44	74	41	15	1,145					0
	5:45 PM	10	292	90	33	303	32	28	109	63	74	59	20	1,113					0
	VOLUMES	190	3,437	1,169	340	3,397	402	329	1,076	553	856	679	189	12,617	0	0	0	0	0
	APPROACH %	4%	72%	24%	8%	82%	10%	17%	55%	28%	50%	39%	11%						
	APP/DEPART	4,796	/	3,955	4,139	/	4,806	1,958	/	2,585	1,724	/	1,271	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	51	1,237	442	127	1,285	135	114	392	240	316	213	72	4,624					
	APPROACH %	3%	72%	26%	8%	83%	9%	15%	53%	32%	53%	35%	12%						
	PEAK HR FACTOR		0.934			0.964			0.933			0.905		0.971					
	APP/DEPART	1,730	/	1,423	1,547	/	1,841	746	/	961	601	/	399	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	6:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:30 AM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	6:45 AM	2	0	0	0	2	0	3	0	0	3	2	3	0	0	5
	7:00 AM	19	0	0	1	20	0	0	0	0	0	19	0	0	1	20
	7:15 AM	39	0	0	1	40	0	0	0	0	0	39	0	0	1	40
	7:30 AM	51	0	0	4	55	0	0	0	0	0	51	0	0	4	55
	7:45 AM	8	0	0	0	8	1	0	0	0	1	9	0	0	0	9
	8:00 AM	22	0	0	0	22	1	0	0	0	1	23	0	0	0	23
	8:15 AM	3	0	0	0	3	0	1	0	0	1	3	1	0	0	4
	8:30 AM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	8:45 AM	5	0	0	0	5	0	0	0	0	0	5	0	0	0	5
	TOTAL	157	0	1	6	164	2	4	0	0	6	159	4	1	6	170
PM	3:00 PM	56	0	0	0	56	1	1	0	0	2	57	1	0	0	58
	3:15 PM	54	0	0	0	54	0	1	0	0	1	54	1	0	0	55
	3:30 PM	15	0	0	0	15	1	1	0	0	2	16	1	0	0	17
	3:45 PM	27	0	0	0	27	0	1	0	0	1	27	1	0	0	28
	4:00 PM	15	0	0	0	15	0	0	0	0	0	15	0	0	0	15
	4:15 PM	19	0	2	0	21	0	0	0	1	1	19	0	2	1	22
	4:30 PM	3	0	0	1	4	0	0	0	0	0	3	0	0	1	4
	4:45 PM	8	0	0	1	9	1	0	0	0	1	9	0	0	1	10
	5:00 PM	11	0	0	1	12	0	0	0	0	0	11	0	0	1	12
	5:15 PM	8	0	0	0	8	0	0	0	0	0	8	0	0	0	8
	5:30 PM	10	0	2	3	15	0	0	0	0	0	10	0	2	3	15
	5:45 PM	4	0	0	1	5	2	0	0	0	2	6	0	0	1	7
	TOTAL	230	0	4	7	241	5	4	0	1	10	235	4	4	8	251

INTERSECTION TURNING MOVEMENT COUNTS

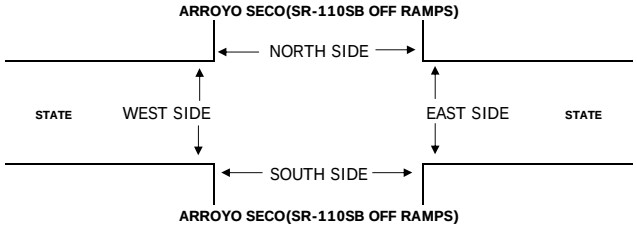
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMPS)	LOCATION #:	2
TUESDAY	EAST & WEST:	STATE	CONTROL:	1-WAY STOP: SB

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMPS)			EASTBOUND STATE			WESTBOUND STATE				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST X	SR 0.5	EL X	ET 1	ER X	WL X	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				6		0		2			1		9					0
	6:15 AM				10		0		3			1		14					0
	6:30 AM				10		1		4			2		17					0
	6:45 AM				13		0		6			1		20					0
	7:00 AM				15		0		3			1		19					0
	7:15 AM				13		1		6			2		22					0
	7:30 AM				19		0		4			1		24					0
	7:45 AM				15		0		7			2		24					0
	8:00 AM				26		0		4			0		30					0
	8:15 AM				24		2		4			1		31					0
	8:30 AM				24		5		2			2		33					0
	8:45 AM				23		1		7			4		35					0
	VOLUMES	0	0	0	198	0	10	0	52	0	0	18	0	278	0	0	0	0	0
	APPROACH %	0%	0%	0%	95%	0%	5%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	208	/	0	52	/	250	18	/	28	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	97	0	8	0	17	0	0	7	0	129					
	APPROACH %	0%	0%	0%	92%	0%	8%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.905			0.607			0.438		0.921					
	APP/DEPART	0	/	0	105	/	0	17	/	114	7	/	15	0					
PM	3:00 PM				27		0		2			2		31					0
	3:15 PM				30		0		2			2		34					0
	3:30 PM				44		1		3			0		48					0
	3:45 PM				45		0		7			2		54					0
	4:00 PM				42		1		4			4		51					0
	4:15 PM				47		2		4			4		57					0
	4:30 PM				39		0		0			0		39					0
	4:45 PM				45		0		3			0		48					0
	5:00 PM				55		1		3			3		62					0
	5:15 PM				60		3		1			0		64					0
	5:30 PM				49		1		2			6		58					0
	5:45 PM				54		3		7			1		65					0
	VOLUMES	0	0	0	537	0	12	0	38	0	0	24	0	611	0	0	0	0	0
	APPROACH %	0%	0%	0%	98%	0%	2%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	549	/	0	38	/	575	24	/	36	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	218	0	8	0	13	0	0	10	0	249					
	APPROACH %	0%	0%	0%	96%	0%	4%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.897			0.464			0.417		0.958					
	APP/DEPART	0	/	0	226	/	0	13	/	231	10	/	18	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:30 PM	0		0	0	0	1		0	0	1	1	0	0	0	1
	4:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:00 PM	0		0	1	1	0		0	0	0	0	0	0	1	1
	5:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	1	0	0	0	1	1	0	0	1	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

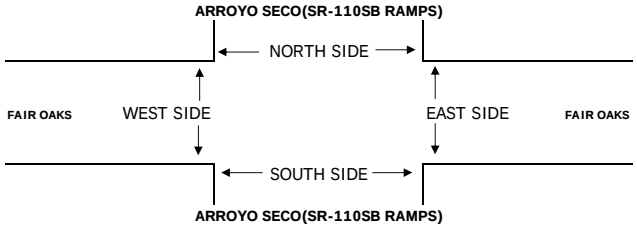
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	3
TUESDAY	EAST & WEST:	FAIR OAKS	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND FAIR OAKS			WESTBOUND FAIR OAKS				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1.5	ST 0.5	SR 1	EL 1	ET 1	ER 0	WL 2	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				8	7	5	0	77	32	98	116	10	353					0
	6:15 AM				14	12	9	0	66	22	89	165	9	386					0
	6:30 AM				18	17	4	0	78	38	112	168	10	445					0
	6:45 AM				18	19	10	0	92	50	117	183	28	517					0
	7:00 AM				36	21	14	1	126	39	117	210	27	591					0
	7:15 AM				43	20	3	2	147	34	100	243	24	616					0
	7:30 AM				73	18	10	0	181	38	86	300	7	713					0
	7:45 AM				63	26	9	1	184	38	78	373	12	784					0
	8:00 AM				64	23	17	0	169	39	94	315	31	752					0
	8:15 AM				46	13	8	0	171	39	89	324	12	702					0
	8:30 AM				42	10	13	0	157	36	100	291	8	657					0
	8:45 AM				63	11	9	2	136	21	92	305	10	649					0
	VOLUMES	0	0	0	488	197	111	6	1,584	426	1,172	2,993	188	7,165	0	0	0	0	0
	APPROACH %	0%	0%	0%	61%	25%	14%	0%	79%	21%	27%	69%	4%						
	APP/DEPART	0	/	194	796	/	1,795	2,016	/	2,072	4,353	/	3,104	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	246	80	44	1	705	154	347	1,312	62	2,951					
	APPROACH %	0%	0%	0%	66%	22%	12%	0%	82%	18%	20%	76%	4%						
	PEAK HR FACTOR		0.000			0.889			0.964			0.929		0.941					
	APP/DEPART	0	/	63	370	/	581	860	/	951	1,721	/	1,356	0					
PM	3:00 PM				65	15	11	3	165	34	60	270	33	656					0
	3:15 PM				55	16	10	0	199	43	61	302	22	708					0
	3:30 PM				64	14	7	1	177	46	44	288	14	655					0
	3:45 PM				44	11	6	2	225	50	45	327	15	725					0
	4:00 PM				53	13	13	2	214	48	60	221	20	644					0
	4:15 PM				67	11	3	2	207	37	57	265	26	675					0
	4:30 PM				63	10	8	2	194	33	43	233	23	609					0
	4:45 PM				57	9	16	3	188	55	57	269	19	673					0
	5:00 PM				65	11	7	1	202	44	55	302	24	711					0
	5:15 PM				60	11	6	3	225	52	60	304	26	747					0
	5:30 PM				55	8	11	2	213	47	56	291	22	705					0
	5:45 PM				58	10	6	2	204	44	50	274	20	668					0
	VOLUMES	0	0	0	706	139	104	23	2,413	533	648	3,346	264	8,176	0	0	0	0	0
	APPROACH %	0%	0%	0%	74%	15%	11%	1%	81%	18%	15%	79%	6%						
	APP/DEPART	0	/	287	949	/	1,320	2,969	/	3,119	4,258	/	3,450	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	237	39	40	9	828	198	228	1,166	91	2,836					
	APPROACH %	0%	0%	0%	75%	12%	13%	1%	80%	19%	15%	79%	6%						
	PEAK HR FACTOR		0.000			0.952			0.924			0.952		0.949					
	APP/DEPART	0	/	100	316	/	465	1,035	/	1,065	1,485	/	1,206	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	1	1	0	0	2	1	0	0	0	1	2	1	0	0	3
	6:30 AM	1	0	0	0	1	0	1	0	0	1	1	1	0	0	2
	6:45 AM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	7:00 AM	1	1	0	2	4	0	0	0	0	0	1	1	0	2	4
	7:15 AM	2	4	0	5	11	0	0	0	0	0	2	4	0	5	11
	7:30 AM	0	4	0	0	4	0	1	0	0	1	0	5	0	0	5
	7:45 AM	2	3	0	0	5	0	0	0	0	0	2	3	0	0	5
	8:00 AM	2	3	0	1	6	0	0	0	0	0	2	3	0	1	6
	8:15 AM	4	2	0	1	7	0	0	0	0	0	4	2	0	1	7
	8:30 AM	4	2	0	2	8	2	1	0	0	3	6	3	0	2	11
	8:45 AM	5	1	0	0	6	2	0	0	0	2	7	1	0	0	8
	TOTAL	22	21	0	11	54	5	4	0	0	9	27	25	0	11	63
PM	3:00 PM	0	0	0	1	1	0	3	0	0	3	0	3	0	1	4
	3:15 PM	1	2	0	2	5	1	1	0	0	2	2	3	0	2	7
	3:30 PM	2	3	0	4	9	1	0	0	0	1	3	3	0	4	10
	3:45 PM	3	3	0	1	7	0	0	0	0	0	3	3	0	1	7
	4:00 PM	3	2	0	2	7	0	1	0	0	1	3	3	0	2	8
	4:15 PM	0	1	0	2	3	1	2	0	0	3	1	3	0	2	6
	4:30 PM	2	2	0	5	9	1	2	0	0	3	3	4	0	5	12
	4:45 PM	1	3	0	4	8	0	3	0	0	3	1	6	0	4	11
	5:00 PM	0	0	0	1	1	2	3	0	0	5	2	3	0	1	6
	5:15 PM	0	2	0	0	2	0	2	0	0	2	0	4	0	0	4
	5:30 PM	1	1	0	1	3	2	3	0	0	5	3	4	0	1	8
	5:45 PM	2	2	0	0	4	1	1	0	0	2	3	3	0	0	6
	TOTAL	15	21	0	23	59	9	21	0	0	30	24	42	0	23	89

INTERSECTION TURNING MOVEMENT COUNTS

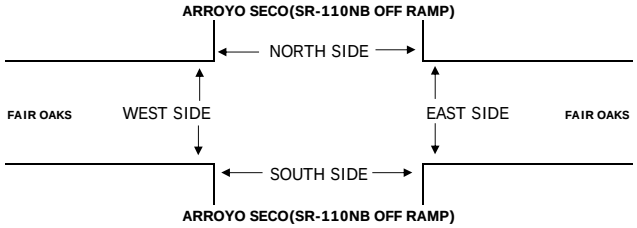
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB OFF RAMP)	LOCATION #:	4
TUESDAY	EAST & WEST:	FAIR OAKS	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			EASTBOUND FAIR OAKS			WESTBOUND FAIR OAKS				U-TURNS				
	LANES:	NL 0.5	NT 1	NR 0.5	SL 0.5	ST X	SR 1.5	EL 0	ET 2	ER X	WL X	WT 2.5	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	19	6	14	1		66	0	86			141	1	334					0
	6:15 AM	23	8	10	0		72	0	80			165	2	360					0
	6:30 AM	25	11	17	1		88	0	95			178	4	419					0
	6:45 AM	28	9	24	0		100	0	112			199	5	477					0
	7:00 AM	39	13	20	0		111	0	161			206	4	554					0
	7:15 AM	46	21	30	3		89	0	192			230	5	616					0
	7:30 AM	41	18	27	5		108	0	252			245	1	697					0
	7:45 AM	71	31	43	1		110	0	248			279	6	789					0
	8:00 AM	38	21	27	0		125	0	233			279	5	728					0
	8:15 AM	43	20	35	3		121	0	215			261	5	703					0
	8:30 AM	51	22	21	5		104	0	202			247	7	659					0
	8:45 AM	49	20	34	3		110	0	199			245	5	665					0
	VOLUMES	473	200	302	22	0	1,204	0	2,075	0	0	2,675	50	7,001	0	0	0	0	0
	APPROACH %	49%	21%	31%	2%	0%	98%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	975	/	250	1,226	/	0	2,075	/	2,399	2,725	/	4,352	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	193	90	132	9	0	464	0	948	0	0	1,064	17	2,917					
	APPROACH %	47%	22%	32%	2%	0%	98%	0%	100%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.716			0.946			0.940			0.948		0.924					
	APP/DEPART	415	/	107	473	/	0	948	/	1,089	1,081	/	1,721	0					
PM	3:00 PM	58	54	47	2		71	0	228			231	5	696					0
	3:15 PM	47	33	55	2		66	0	254			276	8	741					0
	3:30 PM	41	51	51	4		74	0	243			231	5	700					0
	3:45 PM	43	66	69	0		73	0	267			270	12	800					0
	4:00 PM	37	39	37	3		47	0	266			220	10	659					0
	4:15 PM	64	85	41	5		72	0	275			209	4	755					0
	4:30 PM	49	71	60	6		66	0	255			185	8	700					0
	4:45 PM	44	93	61	4		63	0	249			234	8	756					0
	5:00 PM	57	84	53	4		77	0	264			250	7	796					0
	5:15 PM	62	74	55	2		67	0	288			262	8	818					0
	5:30 PM	54	77	52	3		64	0	271			248	5	774					0
	5:45 PM	50	67	48	3		58	0	257			239	7	729					0
	VOLUMES	606	794	629	38	0	798	0	3,117	0	0	2,855	87	8,924	0	0	0	0	0
	APPROACH %	30%	39%	31%	5%	0%	95%	0%	100%	0%	0%	97%	3%						
	APP/DEPART	2,029	/	881	836	/	0	3,117	/	3,784	2,942	/	4,259	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	217	328	221	13	0	271	0	1,072	0	0	994	28	3,144					
	APPROACH %	28%	43%	29%	5%	0%	95%	0%	100%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.967			0.877			0.931			0.946		0.961					
	APP/DEPART	766	/	356	284	/	0	1,072	/	1,306	1,022	/	1,482	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	6:15 AM	1	1	2	0	4	1	0	0	0	1	2	1	2	0	5
	6:30 AM	1	0	0	0	1	0	1	0	0	1	1	1	0	0	2
	6:45 AM	0	0	1	0	1	0	1	0	0	1	0	1	1	0	2
	7:00 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	7:15 AM	2	5	4	0	11	0	0	0	0	0	2	5	4	0	11
	7:30 AM	0	3	0	0	3	0	1	0	0	1	0	4	0	0	4
	7:45 AM	2	3	0	0	5	0	0	0	0	0	2	3	0	0	5
	8:00 AM	3	3	2	0	8	0	0	0	0	0	3	3	2	0	8
	8:15 AM	3	2	1	0	6	0	0	0	0	0	3	2	1	0	6
	8:30 AM	4	3	3	0	10	3	1	0	0	4	7	4	3	0	14
	8:45 AM	5	0	6	0	11	2	0	0	0	2	7	0	6	0	13
	TOTAL	22	21	20	0	63	6	4	0	0	10	28	25	20	0	73
PM	3:00 PM	0	0	3	0	3	0	2	0	0	2	0	2	3	0	5
	3:15 PM	1	1	3	0	5	1	2	0	0	3	2	3	3	0	8
	3:30 PM	2	4	3	0	9	1	0	0	0	1	3	4	3	0	10
	3:45 PM	2	3	3	0	8	0	0	0	0	0	2	3	3	0	8
	4:00 PM	4	2	1	0	7	0	1	0	0	1	4	3	1	0	8
	4:15 PM	0	0	3	0	3	0	2	0	0	2	0	2	3	0	5
	4:30 PM	1	2	2	0	5	2	2	1	1	6	3	4	3	1	11
	4:45 PM	2	4	2	0	8	0	3	0	1	4	2	7	2	1	12
	5:00 PM	0	0	3	0	3	2	4	1	0	7	2	4	4	0	10
	5:15 PM	0	2	3	0	5	0	1	0	0	1	0	3	3	0	6
	5:30 PM	2	0	1	0	3	2	3	0	0	5	4	3	1	0	8
	5:45 PM	1	3	2	0	6	1	1	0	0	2	2	4	2	0	8
	TOTAL	15	21	29	0	65	9	21	2	2	34	24	42	31	2	99

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

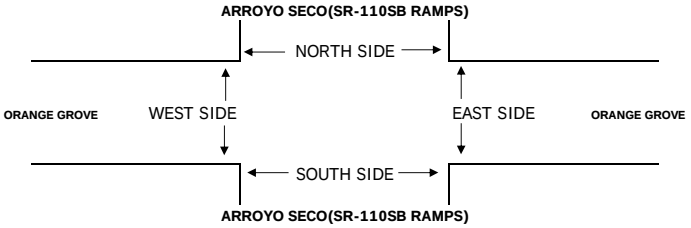
DATE:	LOCATION:	PASADENS	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	5
TUESDAY	EAST & WEST:	ORANGE GROVE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND ORANGE GROVE			WESTBOUND ORANGE GROVE				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST 0	SR 0.5	EL X	ET 1	ER 1	WL 1	WT 2	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				4		0		22	215	17	110		368					0
	6:15 AM				6		2		26	237	22	126		419					0
	6:30 AM				3		1		31	271	20	134		460					0
	6:45 AM				7		0		42	304	24	142		519					0
	7:00 AM				8		0		36	362	26	146		578					0
	7:15 AM				6		2		58	346	26	194		632					0
	7:30 AM				8		6		73	287	32	216		622					0
	7:45 AM				15		2		75	274	19	204		589					0
	8:00 AM				18		5		66	331	31	205		656					0
	8:15 AM				16		2		76	283	49	209		635					0
	8:30 AM				13		6		68	266	32	209		594					0
	8:45 AM				14		5		64	242	36	157		518					0
	VOLUMES	0	0	0	118	0	31	0	637	3,418	334	2,052	0	6,590	0	0	0	0	0
	APPROACH %	0%	0%	0%	79%	0%	21%	0%	16%	84%	14%	86%	0%						
	APP/DEPART	0	/	0	149	/	3,752	4,055	/	755	2,386	/	2,083	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	57	0	15	0	290	1,175	131	834	0	2,502					
	APPROACH %	0%	0%	0%	79%	0%	21%	0%	20%	80%	14%	86%	0%						
	PEAK HR FACTOR		0.000			0.783			0.923			0.935		0.954					
	APP/DEPART	0	/	0	72	/	1,306	1,465	/	347	965	/	849	0					
PM	3:00 PM				19		2		77	130	18	223		469					0
	3:15 PM				25		9		80	126	19	234		493					0
	3:30 PM				25		2		83	119	23	232		484					0
	3:45 PM				18		9		59	117	21	283		507					0
	4:00 PM				27		10		71	164	21	245		538					0
	4:15 PM				28		8		84	154	16	294		584					0
	4:30 PM				18		6		88	166	16	285		579					0
	4:45 PM				17		8		66	151	35	291		568					0
	5:00 PM				29		3		70	162	32	294		590					0
	5:15 PM				30		6		84	134	27	317		598					0
	5:30 PM				33		6		92	145	31	306		613					0
	5:45 PM				37		4		77	131	29	308		586					0
	VOLUMES	0	0	0	306	0	73	0	931	1,699	288	3,312	0	6,609	0	0	0	0	0
	APPROACH %	0%	0%	0%	81%	0%	19%	0%	35%	65%	8%	92%	0%						
	APP/DEPART	0	/	0	379	/	1,987	2,630	/	1,237	3,600	/	3,385	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	129	0	19	0	323	572	119	1,225	0	2,387					
	APPROACH %	0%	0%	0%	87%	0%	13%	0%	36%	64%	9%	91%	0%						
	PEAK HR FACTOR		0.000			0.902			0.944			0.977		0.973					
	APP/DEPART	0	/	0	148	/	691	895	/	452	1,344	/	1,244	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	0	0	2	2	0	2	0	2	4
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	0	0	3	0	0	0	2	2	1	2	0	2	5
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	3:30 PM	2	2	0	2	6	0	0	0	0	0	2	2	0	2	6
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	2	4	0	0	0	0	0	0	2	0	2	4
	4:15 PM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	4:30 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	4:45 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	7	0	5	19	1	0	0	0	1	8	7	0	5	20

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

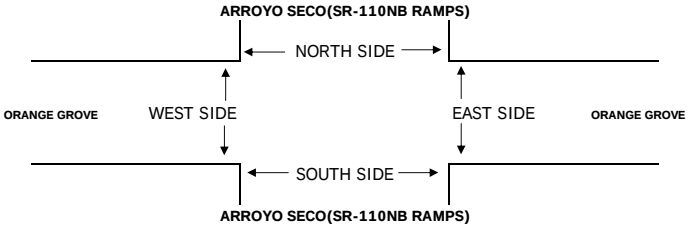
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	6
TUESDAY	EAST & WEST:	ORANGE GROVE	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND ORANGE GROVE			WESTBOUND ORANGE GROVE				U-TURNS				
	LANES:	NL 1.5	NT 0	NR 0.5	SL X	ST X	SR X	EL 1	ET 1	ER X	WL X	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	58	1	8				0	27			71	7	172					0
	6:15 AM	76	0	11				2	29			70	10	198					0
	6:30 AM	82	0	14				4	31			73	6	210					0
	6:45 AM	89	1	10				2	46			76	8	232					0
	7:00 AM	99	0	13				2	43			75	8	240					0
	7:15 AM	141	0	14				6	59			79	10	309					0
	7:30 AM	149	1	16				5	74			98	28	371					0
	7:45 AM	133	1	14				5	85			92	25	355					0
	8:00 AM	134	0	19				3	80			101	22	359					0
	8:15 AM	120	0	14				4	89			137	22	386					0
	8:30 AM	121	1	19				0	82			120	17	360					0
	8:45 AM	117	0	26				6	70			77	20	316					0
	VOLUMES	1,319	5	178	0	0	0	39	715	0	0	1,069	183	3,508	0	0	0	0	0
	APPROACH %	88%	0%	12%	0%	0%	0%	5%	95%	0%	0%	85%	15%						
	APP/DEPART	1,502	/	227	0	/	0	754	/	893	1,252	/	2,388	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	536	2	63	0	0	0	17	328	0	0	428	97	1,471					
	APPROACH %	89%	0%	10%	0%	0%	0%	5%	95%	0%	0%	82%	18%						
	PEAK HR FACTOR		0.905			0.000			0.927			0.825		0.953					
	APP/DEPART	601	/	116	0	/	0	345	/	391	525	/	964	0					
PM	3:00 PM	160	0	29				2	95			80	23	389					0
	3:15 PM	172	0	37				4	100			81	11	405					0
	3:30 PM	173	0	29				1	108			83	11	405					0
	3:45 PM	186	0	38				3	74			118	18	437					0
	4:00 PM	198	2	41				2	95			70	17	425					0
	4:15 PM	213	0	58				8	104			95	17	495					0
	4:30 PM	217	1	40				4	102			84	11	459					0
	4:45 PM	227	1	48				7	77			101	13	474					0
	5:00 PM	213	1	29				4	94			112	26	479					0
	5:15 PM	243	1	47				3	110			100	22	526					0
	5:30 PM	236	1	52				3	123			103	18	536					0
	5:45 PM	246	0	56				3	110			89	14	518					0
	VOLUMES	2,484	7	504	0	0	0	44	1,192	0	0	1,116	201	5,548	0	0	0	0	0
	APPROACH %	83%	0%	17%	0%	0%	0%	4%	96%	0%	0%	85%	15%						
	APP/DEPART	2,995	/	252	0	/	0	1,236	/	1,696	1,317	/	3,600	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	938	3	184	0	0	0	13	437	0	0	404	80	2,059					
	APPROACH %	83%	0%	16%	0%	0%	0%	3%	97%	0%	0%	83%	17%						
	PEAK HR FACTOR		0.931			0.000			0.893			0.877		0.960					
	APP/DEPART	1,125	/	96	0	/	0	450	/	621	484	/	1,342	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	3	0	0	0	3	0	0	0	0	0	3	0	0	0	3
	4:30 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	4:45 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	2	0	0	9	1	0	0	0	1	8	2	0	0	10

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

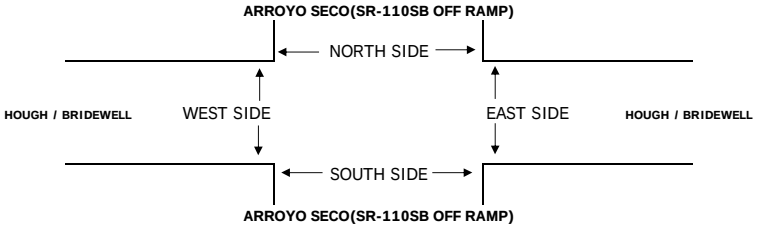
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMP)	LOCATION #:	7
TUESDAY	EAST & WEST:	HOUGH / BRIDEWELL	CONTROL:	1 WAY STOP: EB

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			EASTBOUND HOUGH / BRIDEWELL			WESTBOUND HOUGH / BRIDEWELL				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	0	0			1	2	0		2				5					0
	6:15 AM	0	0			2	4	1		3				10					0
	6:30 AM	0	0			2	0	0		1				3					0
	6:45 AM	1	0			2	3	0		2				8					0
	7:00 AM	0	0			3	3	0		2				8					0
	7:15 AM	0	1			4	6	0		1				12					0
	7:30 AM	2	0			13	9	2		0				26					0
	7:45 AM	2	2			10	13	0		1				28					0
	8:00 AM	0	1			6	6	3		2				18					0
	8:15 AM	0	0			3	5	1		3				12					0
	8:30 AM	0	1			3	6	0		1				11					0
	8:45 AM	0	0			4	7	0		2				13					0
	VOLUMES	5	5	0	0	53	64	7	0	20	0	0	0	154	0	0	0	0	0
	APPROACH %	50%	50%	0%	0%	45%	55%	26%	0%	74%	0%	0%	0%						
	APP/DEPART	10	/	12	117	/	73	27	/	0	0	/	69	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	4	3	0	0	32	33	6	0	6	0	0	0	84					
	APPROACH %	57%	43%	0%	0%	49%	51%	50%	0%	50%	0%	0%	0%						
	PEAK HR FACTOR		0.438			0.707			0.600			0.000		0.750					
	APP/DEPART	7	/	9	65	/	38	12	/	0	0	/	37	0					
PM	3:00 PM	1	1			3	6	1		4				16					0
	3:15 PM	0	2			11	16	0		3				32					0
	3:30 PM	2	0			3	6	1		1				13					0
	3:45 PM	0	0			6	6	0		4				16					0
	4:00 PM	0	0			7	6	0		0				13					0
	4:15 PM	1	0			10	7	0		0				18					0
	4:30 PM	0	0			11	10	2		3				26					0
	4:45 PM	0	0			9	6	1		2				18					0
	5:00 PM	0	0			5	13	1		3				22					0
	5:15 PM	1	0			9	11	1		1				23					0
	5:30 PM	0	0			10	7	2		1				20					0
	5:45 PM	0	0			10	5	1		0				16					0
	VOLUMES	5	3	0	0	94	99	10	0	22	0	0	0	233	0	0	0	0	0
	APPROACH %	63%	38%	0%	0%	49%	51%	31%	0%	69%	0%	0%	0%						
	APP/DEPART	8	/	13	193	/	116	32	/	0	0	/	104	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	1	0	0	0	34	40	5	0	9	0	0	0	89					
	APPROACH %	100%	0%	0%	0%	46%	54%	36%	0%	64%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.881			0.700			0.000		0.856					
	APP/DEPART	1	/	5	74	/	43	14	/	0	0	/	41	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	6:15 AM	0	0		1	1	0	0		0	0	0	0	0	1	1
	6:30 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	6:45 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:00 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:15 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:30 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	7:45 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:00 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:15 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:30 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	8:45 AM	0	0		0	0	0	0		0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
PM	3:00 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	3:15 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	3:30 PM	0	0		0	0	0	0		1	1	0	0	0	1	1
	3:45 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	4:00 PM	0	0		1	1	0	0		0	0	0	0	0	1	1
	4:15 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	4:30 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	4:45 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:00 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:15 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:30 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	5:45 PM	0	0		0	0	0	0		0	0	0	0	0	0	0
	TOTAL	0	0	0	1	1	0	0	0	1	1	0	0	0	2	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	8
TUESDAY	EAST & WEST:	SALONICA / BRIDEWELL	CONTROL:	2 WAY STOP NS

NOTES:

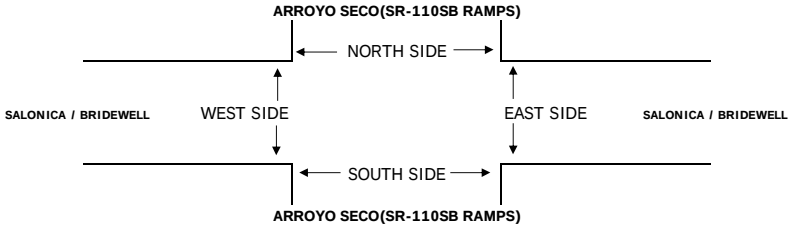
OFF RAMP = ALL WB

ON RAMP = NR, SL & ET

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND SALONICA / BRIDEWELL			WESTBOUND SALONICA / BRIDEWELL				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	0	0	2	7	0	0	0	31	1	0	2	0	43					0
	6:15 AM	3	0	5	11	0	0	0	51	1	0	2	0	73					0
	6:30 AM	0	0	5	12	0	1	0	46	2	0	1	0	67					0
	6:45 AM	3	0	0	6	0	0	0	37	1	0	8	1	56					0
	7:00 AM	4	0	5	7	0	2	1	80	1	1	13	0	114					0
	7:15 AM	2	0	5	11	0	4	0	50	1	0	12	0	85					0
	7:30 AM	4	1	4	8	0	4	0	61	2	1	7	0	92					0
	7:45 AM	5	0	3	10	0	0	1	52	2	0	11	0	84					0
	8:00 AM	5	0	2	9	0	0	0	44	5	1	22	0	88					0
	8:15 AM	2	0	3	3	0	0	1	49	2	1	12	0	73					0
	8:30 AM	3	0	4	3	0	2	1	37	1	0	16	0	67					0
	8:45 AM	2	1	4	5	0	2	0	43	1	0	16	0	74					0
	VOLUMES	33	2	42	92	0	15	4	581	20	4	122	1	916	0	0	0	0	0
	APPROACH %	43%	3%	55%	86%	0%	14%	1%	96%	3%	3%	96%	1%						
	APP/DEPART	77	/	7	107	/	24	605	/	715	127	/	170	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	15	1	17	36	0	10	2	243	6	2	43	0	375					
	APPROACH %	45%	3%	52%	78%	0%	22%	1%	97%	2%	4%	96%	0%						
	PEAK HR FACTOR		0.917			0.767			0.765			0.804		0.822					
	APP/DEPART	33	/	3	46	/	8	251	/	296	45	/	68	0					
PM	3:00 PM	0	0	1	4	1	0	1	28	1	1	34	1	72					0
	3:15 PM	3	0	0	1	0	1	0	25	2	3	37	1	73					0
	3:30 PM	6	0	1	3	0	0	1	25	5	0	25	1	67					0
	3:45 PM	2	0	1	5	0	3	0	24	2	1	28	0	66					0
	4:00 PM	4	0	0	2	1	2	0	21	3	1	43	0	77					0
	4:15 PM	6	0	0	5	0	0	0	21	3	1	27	0	63					0
	4:30 PM	0	0	2	3	0	0	0	32	5	1	23	0	66					0
	4:45 PM	3	0	2	5	0	2	0	28	7	0	41	0	88					0
	5:00 PM	2	0	0	5	0	4	1	36	2	3	48	0	101					0
	5:15 PM	3	0	0	8	0	0	1	32	3	2	48	2	99					0
	5:30 PM	1	1	0	3	2	0	0	17	6	0	34	3	67					0
	5:45 PM	3	0	1	5	0	2	1	31	5	1	41	1	91					0
	VOLUMES	33	1	8	49	4	14	5	320	44	14	429	9	930	0	0	0	0	0
	APPROACH %	79%	2%	19%	73%	6%	21%	1%	87%	12%	3%	95%	2%						
	APP/DEPART	42	/	15	67	/	62	369	/	377	452	/	476	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	9	1	1	21	2	6	3	116	16	6	171	6	358					
	APPROACH %	82%	9%	9%	72%	7%	21%	2%	86%	12%	3%	93%	3%						
	PEAK HR FACTOR		0.688			0.806			0.865			0.880		0.886					
	APP/DEPART	11	/	10	29	/	24	135	/	138	183	/	186	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB OFF RAMP)	LOCATION #:	9
TUESDAY	EAST & WEST:	MARMION	CONTROL:	2-WAY STOP: EB & WB

NOTES:

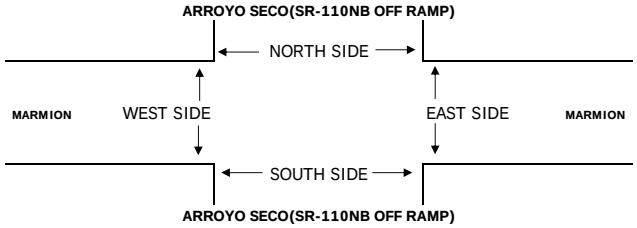
OFF RAMP = ALL NB

ON RAMP = NONE

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			EASTBOUND MARMION			WESTBOUND MARMION				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 1	ER X	WL X	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	31		7					2			14		54					0
	6:15 AM	40		6					0			17		63					0
	6:30 AM	45		6					2			20		73					0
	6:45 AM	71		8					6			22		107					0
	7:00 AM	64		14					4			28		110					0
	7:15 AM	121		18					14			24		177					0
	7:30 AM	136		21					11			32		200					0
	7:45 AM	102		26					4			39		171					0
	8:00 AM	87		22					5			29		143					0
	8:15 AM	61		10					7			19		97					0
	8:30 AM	73		30					2			25		130					0
	8:45 AM	60		26					8			26		120					0
	VOLUMES	891	0	194	0	0	0	0	65	0	0	295	0	1,445	0	0	0	0	0
	APPROACH %	82%	0%	18%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1,085	/	0	0	/	0	65	/	259	295	/	1,186	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	446	0	87	0	0	0	0	34	0	0	124	0	691					
	APPROACH %	84%	0%	16%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.849			0.000			0.607			0.795		0.864					
	APP/DEPART	533	/	0	0	/	0	34	/	121	124	/	570	0					
PM	3:00 PM	113		38					9			16		176					0
	3:15 PM	144		39					7			17		207					0
	3:30 PM	138		40					2			19		199					0
	3:45 PM	110		51					3			12		176					0
	4:00 PM	137		51					5			17		210					0
	4:15 PM	151		70					6			12		239					0
	4:30 PM	142		71					6			26		245					0
	4:45 PM	159		74					3			12		248					0
	5:00 PM	147		76					7			22		252					0
	5:15 PM	165		70					2			24		261					0
	5:30 PM	196		77					8			29		310					0
	5:45 PM	165		78					7			21		271					0
	VOLUMES	1,767	0	735	0	0	0	0	65	0	0	227	0	2,794	0	0	0	0	0
	APPROACH %	71%	0%	29%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	2,502	/	0	0	/	0	65	/	800	227	/	1,994	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	673	0	301	0	0	0	0	24	0	0	96	0	1,094					
	APPROACH %	69%	0%	31%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.892			0.000			0.750			0.828		0.882					
	APP/DEPART	974	/	0	0	/	0	24	/	325	96	/	769	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	6:15 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	6:30 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	6:45 AM		0	0	2	2		0	0	0	0	0	0	0	2	2
	7:00 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	7:15 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	7:30 AM		0	0	1	1		0	0	0	0	0	0	0	1	1
	7:45 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:00 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:15 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:30 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	8:45 AM		0	0	0	0		0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3
PM	3:00 PM		0	0	3	3		0	0	0	0	0	0	0	3	3
	3:15 PM		0	0	2	2		0	0	0	0	0	0	0	2	2
	3:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	3:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:00 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:15 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	4:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:00 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:15 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:30 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	5:45 PM		0	0	0	0		0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	5	5	0	0	0	0	0	0	0	0	5	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	LA RIBA / AVENUE 66	LOCATION #:	10
TUESDAY	EAST & WEST:	ARROYO SECO(SR-110SB ON RAMP)	CONTROL:	2-WAY STOP: S&W

NOTES:

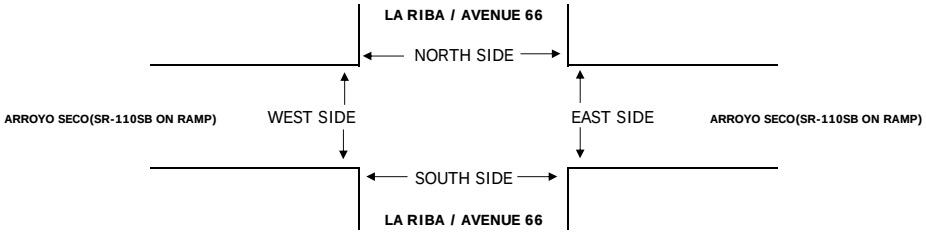
SR = SR-110SB ON RAMP

WT = SR-110SB ON RAMP

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND LA RIBA / AVENUE 66			SOUTHBOUND LA RIBA / AVENUE 66			EASTBOUND ARROYO SECO(SR-110SB ON RAMP)			WESTBOUND ARROYO SECO(SR-110SB ON RAMP)				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL X	ET X	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				0		7					151	3	161					0
	6:15 AM				2		4					137	3	146					0
	6:30 AM				4		6					201	2	213					0
	6:45 AM				6		4					163	1	174					0
	7:00 AM				3		13					149	5	170					0
	7:15 AM				9		14					168	6	197					0
	7:30 AM				16		5					128	16	165					0
	7:45 AM				13		5					125	11	154					0
	8:00 AM				5		3					96	17	121					0
	8:15 AM				4		5					96	20	125					0
	8:30 AM				10		4					92	11	117					0
	8:45 AM				6		2					75	23	106					0
	VOLUMES	0	0	0	78	0	72	0	0	0	0	1,581	118	1,849	0	0	0	0	0
	APPROACH %	0%	0%	0%	52%	0%	48%	0%	0%	0%	0%	93%	7%						
	APP/DEPART	0	/	118	150	/	0	0	/	78	1,699	/	1,653	0					
	BEGIN PEAK HR		6:30 AM																
	VOLUMES	0	0	0	22	0	37	0	0	0	0	681	14	754					
	APPROACH %	0%	0%	0%	37%	0%	63%	0%	0%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.641			0.000			0.856		0.885					
	APP/DEPART	0	/	14	59	/	0	0	/	22	695	/	718	0					
PM	3:00 PM				3		5					126	16	150					0
	3:15 PM				6		8					102	18	134					0
	3:30 PM				3		4					115	12	134					0
	3:45 PM				7		3					98	13	121					0
	4:00 PM				5		6					105	10	126					0
	4:15 PM				6		5					97	13	121					0
	4:30 PM				2		8					93	14	117					0
	4:45 PM				4		9					84	13	110					0
	5:00 PM				8		6					120	11	145					0
	5:15 PM				4		7					132	15	158					0
	5:30 PM				8		2					99	14	123					0
	5:45 PM				3		1					102	12	118					0
	VOLUMES	0	0	0	59	0	64	0	0	0	0	1,273	161	1,557	0	0	0	0	0
	APPROACH %	0%	0%	0%	48%	0%	52%	0%	0%	0%	0%	89%	11%						
	APP/DEPART	0	/	161	123	/	0	0	/	59	1,434	/	1,337	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	23	0	16	0	0	0	0	453	52	544					
	APPROACH %	0%	0%	0%	59%	0%	41%	0%	0%	0%	0%	90%	10%						
	PEAK HR FACTOR		0.000			0.696			0.000			0.859		0.861					
	APP/DEPART	0	/	52	39	/	0	0	/	23	505	/	469	0					



		PEDESTRIAN CROSSINGS					BICYCLE ACTIVATIONS					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:15 AM	0		0	0	0	0		0	1	1	0	0	0	1	1
	8:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	8:45 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
PM	3:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	3:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:30 PM	0		0	0	0	0		1	0	1	0	0	1	0	1
	4:45 PM	0		0	0	0	0		1	0	1	0	0	1	0	1
	5:00 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:15 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	2	0	2	0	0	2	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	11
TUESDAY	EAST & WEST:	SHULTS / ARROYO	CONTROL:	3-WAY STOP: NB, SB, WB

NOTES:

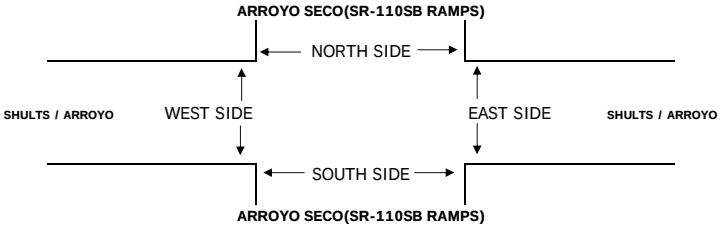
OFF RAMP = ALL EB

ON RAMP = NL, SR & WT

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND SHULTS / ARROYO			WESTBOUND SHULTS / ARROYO				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0.3	WT 0.3	WR 0.3	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	1	0	0	2	1	0	1	49	0	0	11	0	65					0
	6:15 AM	2	0	1	3	0	0	0	56	0	0	6	0	68					0
	6:30 AM	1	1	1	1	0	0	0	60	1	2	5	0	72					0
	6:45 AM	3	1	0	0	1	0	2	57	2	0	20	0	86					0
	7:00 AM	1	0	0	0	0	1	1	65	2	0	18	0	88					0
	7:15 AM	4	0	2	0	0	1	1	54	1	1	11	0	75					0
	7:30 AM	4	0	0	1	0	2	1	61	3	2	15	1	90					0
	7:45 AM	3	1	0	0	1	1	1	49	4	3	15	0	78					0
	8:00 AM	1	1	1	1	2	3	4	38	2	1	17	0	71					0
	8:15 AM	0	0	1	0	1	1	1	50	1	1	20	0	76					0
	8:30 AM	0	0	1	1	0	1	3	40	4	0	14	0	64					0
	8:45 AM	0	0	0	1	0	0	2	41	0	0	10	0	54					0
	VOLUMES	20	4	7	10	6	10	17	620	20	10	162	1	887	0	0	0	0	0
	APPROACH %	65%	13%	23%	38%	23%	38%	3%	94%	3%	6%	94%	1%						
	APP/DEPART	31	/	22	26	/	36	657	/	637	173	/	192	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	12	1	2	1	1	4	5	237	8	3	64	1	339					
	APPROACH %	80%	7%	13%	17%	17%	67%	2%	95%	3%	4%	94%	1%						
	PEAK HR FACTOR		0.625			0.500			0.919			0.850		0.942					
	APP/DEPART	15	/	7	6	/	12	250	/	240	68	/	80	0					
PM	3:00 PM	2	0	0	0	0	2	0	46	1	2	34	0	87					0
	3:15 PM	4	0	0	1	1	3	3	42	3	0	42	0	99					0
	3:30 PM	2	1	1	2	1	3	4	33	5	3	26	0	81					0
	3:45 PM	2	0	1	1	0	3	6	23	6	1	34	2	79					0
	4:00 PM	0	0	0	0	2	3	2	40	0	3	32	1	83					0
	4:15 PM	2	1	0	0	1	1	0	26	3	0	22	0	56					0
	4:30 PM	0	0	1	0	0	3	2	29	4	0	25	0	64					0
	4:45 PM	2	0	0	0	0	0	0	21	1	1	29	0	54					0
	5:00 PM	2	0	0	0	0	1	0	33	3	3	35	0	77					0
	5:15 PM	0	1	0	0	0	0	3	30	2	0	34	0	70					0
	5:30 PM	1	0	0	0	0	2	3	36	4	0	16	0	62					0
	5:45 PM	8	0	1	0	0	1	1	32	5	4	24	0	76					0
	VOLUMES	25	3	4	4	5	22	24	391	37	17	353	3	888	0	0	0	0	0
	APPROACH %	78%	9%	13%	13%	16%	71%	5%	87%	8%	5%	95%	1%						
	APP/DEPART	32	/	30	31	/	59	452	/	399	373	/	400	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	10	1	2	4	2	11	13	144	15	6	136	2	346					
	APPROACH %	77%	8%	15%	24%	12%	65%	8%	84%	9%	4%	94%	1%						
	PEAK HR FACTOR		0.813			0.708			0.896			0.857		0.874					
	APP/DEPART	13	/	16	17	/	23	172	/	150	144	/	157	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	3:30 PM	1	0	0	2	3	0	0	0	0	0	1	0	0	2	3
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	5:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	7	8	0	0	0	1	1	1	0	0	8	9

INTERSECTION TURNING MOVEMENT COUNTS

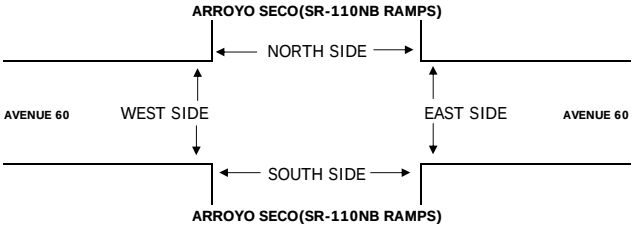
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	12
TUESDAY	EAST & WEST:	AVENUE 60	CONTROL:	1-WAY STOP: SB

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND AVENUE 60			WESTBOUND AVENUE 60				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST X	SR 0.5	EL 1	ET 1	ER X	WL X	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				1		1	7	20			48	7	84					0
	6:15 AM				6		13	4	30			53	16	122					0
	6:30 AM				1		9	4	24			55	20	113					0
	6:45 AM				3		16	7	61			68	26	181					0
	7:00 AM				2		21	5	64			72	29	193					0
	7:15 AM				7		9	13	90			88	41	248					0
	7:30 AM				2		10	16	153			126	56	363					0
	7:45 AM				3		13	11	125			96	44	292					0
	8:00 AM				5		17	15	133			104	37	311					0
	8:15 AM				2		15	9	139			92	47	304					0
	8:30 AM				6		11	13	127			88	44	289					0
	8:45 AM				3		14	8	122			90	39	276					0
	VOLUMES	0	0	0	41	0	149	112	1,088	0	0	980	406	2,776	0	0	0	0	0
	APPROACH %	0%	0%	0%	22%	0%	78%	9%	91%	0%	0%	71%	29%						
	APP/DEPART	0	/	518	190	/	0	1,200	/	1,129	1,386	/	1,129	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	12	0	55	51	550	0	0	418	184	1,270					
	APPROACH %	0%	0%	0%	18%	0%	82%	8%	92%	0%	0%	69%	31%						
	PEAK HR FACTOR		0.000			0.761			0.889			0.827		0.875					
	APP/DEPART	0	/	235	67	/	0	601	/	562	602	/	473	0					
PM	3:00 PM				6		27	10	90			84	23	240					0
	3:15 PM				8		20	11	82			85	20	226					0
	3:30 PM				10		26	12	93			88	18	247					0
	3:45 PM				7		27	17	86			79	26	242					0
	4:00 PM				5		24	16	93			91	23	252					0
	4:15 PM				10		28	11	86			86	23	244					0
	4:30 PM				9		26	12	91			91	20	249					0
	4:45 PM				9		24	13	104			79	24	253					0
	5:00 PM				11		22	5	99			101	28	266					0
	5:15 PM				8		19	15	124			106	40	312					0
	5:30 PM				4		19	14	88			96	36	257					0
	5:45 PM				14		27	17	127			85	25	295					0
	VOLUMES	0	0	0	101	0	289	153	1,163	0	0	1,071	306	3,083	0	0	0	0	0
	APPROACH %	0%	0%	0%	26%	0%	74%	12%	88%	0%	0%	78%	22%						
	APP/DEPART	0	/	459	390	/	0	1,316	/	1,264	1,377	/	1,360	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	37	0	87	51	438	0	0	388	129	1,130					
	APPROACH %	0%	0%	0%	30%	0%	70%	10%	90%	0%	0%	75%	25%						
	PEAK HR FACTOR		0.000			0.756			0.849			0.885		0.905					
	APP/DEPART	0	/	180	124	/	0	489	/	475	517	/	475	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	6:30 AM	1		0	0	1	1		0	0	1	2	0	0	0	2
	6:45 AM	4		0	0	4	0		0	0	0	4	0	0	0	4
	7:00 AM	1		0	0	1	2		0	0	2	3	0	0	0	3
	7:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	7:30 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	7:45 AM	2		0	0	2	1		0	0	1	3	0	0	0	3
	8:00 AM	1		0	0	1	0		0	0	0	1	0	0	0	1
	8:15 AM	1		0	0	1	0		0	0	0	1	0	0	0	1
	8:30 AM	0		0	0	0	1		0	0	1	1	0	0	0	1
	8:45 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	TOTAL	16	0	0	0	16	5	0	0	0	5	21	0	0	0	21
PM	3:00 PM	5		0	0	5	1		0	0	1	6	0	0	0	6
	3:15 PM	9		0	0	9	0		0	0	0	9	0	0	0	9
	3:30 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	3:45 PM	4		0	0	4	1		0	0	1	5	0	0	0	5
	4:00 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	4:15 PM	1		0	0	1	0		0	0	0	1	0	0	0	1
	4:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:45 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:00 PM	1		0	1	2	1		0	0	1	2	0	0	1	3
	5:15 PM	4		0	0	4	0		0	0	0	4	0	0	0	4
	5:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	5:45 PM	3		0	0	3	1		0	0	1	4	0	0	0	4
	TOTAL	33	0	0	1	34	4	0	0	0	4	37	0	0	1	38

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

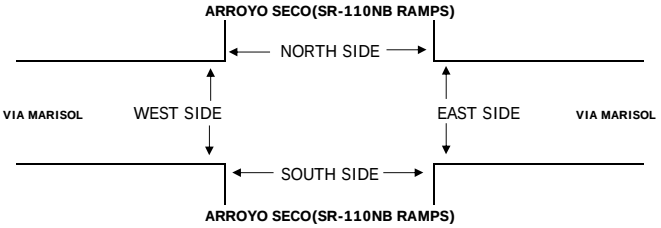
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	13
TUESDAY	EAST & WEST:	VIA MARISOL	CONTROL:	3-WAY STOP: NB, EB & WB

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND VIA MARISOL			WESTBOUND VIA MARISOL				U-TURNS				
	LANES:	NL 0.5	NT 0	NR 0.5	SL X	ST X	SR X	EL 0	ET 2	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	8	0	10				1	11			62	2	94					0
	6:15 AM	7	0	12				5	11			44	3	82					0
	6:30 AM	5	0	32				3	8			68	3	119					0
	6:45 AM	11	0	21				3	13			86	12	146					0
	7:00 AM	6	0	21				5	35			72	11	150					0
	7:15 AM	12	0	35				12	39			94	16	208					0
	7:30 AM	17	0	55				16	58			114	23	283					0
	7:45 AM	20	0	48				9	83			120	14	294					0
	8:00 AM	16	0	47				16	60			119	9	267					0
	8:15 AM	15	1	35				5	36			102	13	207					0
	8:30 AM	15	0	28				6	41			71	19	180					0
	8:45 AM	16	0	29				6	22			76	13	162					0
	VOLUMES	148	1	373	0	0	0	87	417	0	0	1,028	138	2,192	0	0	0	0	0
	APPROACH %	28%	0%	71%	0%	0%	0%	17%	83%	0%	0%	88%	12%						
	APP/DEPART	522	/	226	0	/	0	504	/	790	1,166	/	1,176	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	65	0	185	0	0	0	53	240	0	0	447	62	1,052					
	APPROACH %	26%	0%	74%	0%	0%	0%	18%	82%	0%	0%	88%	12%						
	PEAK HR FACTOR		0.868			0.000			0.796			0.929		0.895					
	APP/DEPART	250	/	115	0	/	0	293	/	425	509	/	512	0					
PM	3:00 PM	23	0	50				6	40			54	7	180					0
	3:15 PM	39	0	62				10	48			80	8	247					0
	3:30 PM	26	0	78				2	44			65	7	222					0
	3:45 PM	36	0	74				11	40			69	13	243					0
	4:00 PM	30	0	60				9	44			61	6	210					0
	4:15 PM	41	0	94				9	45			52	15	256					0
	4:30 PM	29	0	78				5	56			75	5	248					0
	4:45 PM	34	0	91				9	45			61	13	253					0
	5:00 PM	34	0	81				7	54			67	10	253					0
	5:15 PM	32	0	83				11	65			79	17	287					0
	5:30 PM	28	0	62				13	71			72	9	255					0
	5:45 PM	29	0	80				6	55			56	7	233					0
	VOLUMES	381	0	893	0	0	0	98	607	0	0	791	117	2,887	0	0	0	0	0
	APPROACH %	30%	0%	70%	0%	0%	0%	14%	86%	0%	0%	87%	13%						
	APP/DEPART	1,274	/	215	0	/	0	705	/	1,500	908	/	1,172	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	128	0	317	0	0	0	40	235	0	0	279	49	1,048					
	APPROACH %	29%	0%	71%	0%	0%	0%	15%	85%	0%	0%	85%	15%						
	PEAK HR FACTOR		0.890			0.000			0.818			0.854		0.913					
	APP/DEPART	445	/	89	0	/	0	275	/	552	328	/	407	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	7:00 AM	1	1	0	0	2	1	1	0	0	2	2	2	0	0	4
	7:15 AM	2	5	0	0	7	0	1	0	0	1	2	6	0	0	8
	7:30 AM	7	3	0	0	10	0	0	0	0	0	7	3	0	0	10
	7:45 AM	4	18	0	0	22	0	0	0	0	0	4	18	0	0	22
	8:00 AM	3	13	0	0	16	0	0	0	0	0	3	13	0	0	16
	8:15 AM	8	10	0	0	18	0	0	0	0	0	8	10	0	0	18
	8:30 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	8:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	28	53	0	0	81	1	2	0	0	3	29	55	0	0	84
PM	3:00 PM	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6
	3:15 PM	3	4	0	0	7	0	1	0	0	1	3	5	0	0	8
	3:30 PM	3	2	0	0	5	0	1	0	0	1	3	3	0	0	6
	3:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	4:00 PM	1	9	0	3	13	0	1	0	0	1	1	10	0	3	14
	4:15 PM	1	1	0	0	2	0	1	0	0	1	1	2	0	0	3
	4:30 PM	8	0	0	0	8	0	0	0	0	0	8	0	0	0	8
	4:45 PM	2	4	0	2	8	1	0	0	0	1	3	4	0	2	9
	5:00 PM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	2	1	0	0	3	0	0	0	0	0	2	1	0	0	3
	5:45 PM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	TOTAL	23	32	0	5	60	1	4	0	0	5	24	36	0	5	65

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	14
TUESDAY	EAST & WEST:	AVENUE 57 / CARLOTA	CONTROL:	2-WAY STOP: SB & EB

NOTES:

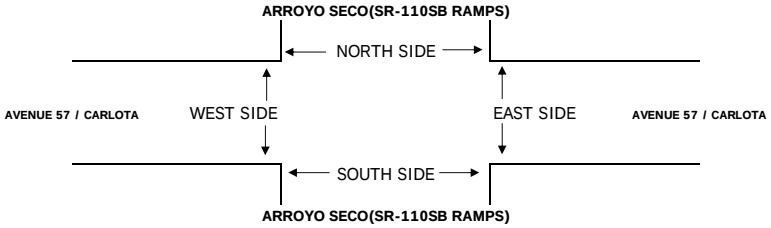
OFF RAMP = ALL NB

ON RAMP = ALL ST

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 57 / CARLOTA			WESTBOUND AVENUE 57 / CARLOTA				U-TURNS				
	LANES:	NL X	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM		6			87	0	0		0				93					0
	6:15 AM		8			60	1	0		0				69					0
	6:30 AM		3			95	3	0		1				102					0
	6:45 AM		8			101	3	0		0				112					0
	7:00 AM		20			73	2	0		1				96					0
	7:15 AM		11			90	1	1		0				103					0
	7:30 AM		16			93	3	0		0				112					0
	7:45 AM		14			96	1	0		0				111					0
	8:00 AM		15			79	2	1		0				97					0
	8:15 AM		15			89	2	0		0				106					0
	8:30 AM		23			85	0	0		0				108					0
	8:45 AM		11			68	2	0		0				81					0
	VOLUMES	0	150	0	0	1,016	20	2	0	2	0	0	0	1,190	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	98%	2%	50%	0%	50%	0%	0%	0%						
	APP/DEPART	150	/	152	1,036	/	1,018	4	/	0	0	/	20	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	60	0	0	357	8	1	0	0	0	0	0	426					
	APPROACH %	0%	100%	0%	0%	98%	2%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.938			0.941			0.250			0.000		0.951					
	APP/DEPART	60	/	61	365	/	357	1	/	0	0	/	8	0					
PM	3:00 PM		33			24	0	1		0				58					0
	3:15 PM		47			29	2	0		0				78					0
	3:30 PM		38			22	1	0		1				62					0
	3:45 PM		43			31	1	1		0				76					0
	4:00 PM		48			30	0	1		0				79					0
	4:15 PM		57			22	3	0		0				82					0
	4:30 PM		59			36	1	2		0				98					0
	4:45 PM		60			24	0	1		0				85					0
	5:00 PM		59			33	1	0		0				93					0
	5:15 PM		66			30	2	1		0				99					0
	5:30 PM		49			26	2	0		0				77					0
	5:45 PM		53			25	1	1		0				80					0
	VOLUMES	0	612	0	0	332	14	8	0	1	0	0	0	967	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	96%	4%	89%	0%	11%	0%	0%	0%						
	APP/DEPART	612	/	620	346	/	333	9	/	0	0	/	14	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	244	0	0	123	4	4	0	0	0	0	0	375					
	APPROACH %	0%	100%	0%	0%	97%	3%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.924			0.858			0.500			0.000		0.947					
	APP/DEPART	244	/	248	127	/	123	4	/	0	0	/	4	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	15
TUESDAY	EAST & WEST:	AVENUE 52 / GLEN ELLEN	CONTROL:	3 WAY STOP: SB, EB & WB

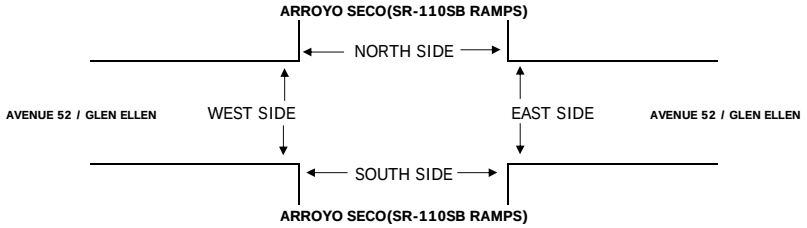
NOTES:

ON RAMP: ST, ER & WL

OFF RAMP: SEE TMC15-B

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 52 / GLEN ELLEN			WESTBOUND AVENUE 52 / GLEN ELLEN				RIGHT TURNS EXITING GLEN ELLEN NB				
	LANES:	NL X	NT X	NR X	SL 0	ST 1	SR 0	EL 0	ET 1	ER 1	WL 0	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				1	3	8	0	18	99	1	36	0	166		0			0
	6:15 AM				3	13	5	0	13	113	1	48	0	196		0			0
	6:30 AM				10	8	12	2	30	121	3	44	0	230		0			0
	6:45 AM				6	10	22	1	46	105	5	56	3	254		1			1
	7:00 AM				9	7	15	1	41	97	0	65	2	237		1			1
	7:15 AM				35	9	14	1	72	99	1	88	4	323		0			0
	7:30 AM				31	6	25	2	101	73	1	87	1	327		0			0
	7:45 AM				21	8	28	3	58	66	0	91	3	278		0			0
	8:00 AM				17	5	16	4	74	74	1	71	3	265		0			0
	8:15 AM				23	7	23	2	52	81	0	63	2	253		1			1
	8:30 AM				20	4	24	0	46	76	1	78	0	249		0			0
	8:45 AM				18	9	19	1	54	69	1	75	1	247		0			0
	VOLUMES	0	0	0	194	89	211	17	605	1,073	15	802	19	3,025	0	3	0	0	3
	APPROACH %	0%	0%	0%	39%	18%	43%	1%	36%	63%	2%	96%	2%						
	APP/DEPART	0	/	36	494	/	1,177	1,695	/	799	836	/	1,013	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	104	28	83	10	305	312	3	337	11	1,193					
	APPROACH %	0%	0%	0%	48%	13%	39%	2%	49%	50%	1%	96%	3%						
	PEAK HR FACTOR		0.000			0.867			0.891			0.934		0.912					
	APP/DEPART	0	/	21	215	/	343	627	/	409	351	/	420	0					
PM	3:00 PM				12	3	33	1	44	85	4	122	7	311		2			2
	3:15 PM				11	5	35	2	46	71	2	126	6	304		3			3
	3:30 PM				6	2	23	0	47	69	0	125	4	276		1			1
	3:45 PM				14	7	26	1	52	82	5	125	6	318		3			3
	4:00 PM				8	3	37	4	44	81	3	116	2	298		2			2
	4:15 PM				14	3	25	3	39	75	1	135	15	310		4			4
	4:30 PM				8	3	30	4	53	72	2	149	2	323		2			2
	4:45 PM				11	2	46	1	52	82	3	121	7	325		3			3
	5:00 PM				14	5	39	6	56	83	2	118	5	328		3			3
	5:15 PM				13	1	33	1	45	69	2	143	3	310		2			2
	5:30 PM				11	4	32	3	45	59	3	127	6	290		2			2
	5:45 PM				15	4	24	5	44	73	1	123	9	298		1			1
	VOLUMES	0	0	0	137	42	383	31	567	901	28	1,530	72	3,691	0	28	0	0	28
	APPROACH %	0%	0%	0%	24%	7%	68%	2%	38%	60%	2%	94%	4%						
	APP/DEPART	0	/	103	562	/	971	1,499	/	704	1,630	/	1,913	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	46	11	148	12	206	306	9	531	17	1,286					
	APPROACH %	0%	0%	0%	22%	5%	72%	2%	39%	58%	2%	95%	3%						
	PEAK HR FACTOR		0.000			0.869			0.903			0.910		0.980					
	APP/DEPART	0	/	29	205	/	326	524	/	252	557	/	679	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:45 AM	0	2	0	0	2	0	0	1	0	1	0	2	1	0	3
	7:00 AM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	7:45 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
	8:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:15 AM	0	4	0	0	4	0	0	0	1	1	0	4	0	1	5
	8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	TOTAL	2	16	0	3	21	0	0	1	1	2	2	16	1	4	23
PM	3:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	3:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	3:30 PM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	3:45 PM	3	2	0	0	5	0	0	0	0	0	3	2	0	0	5
	4:00 PM	0	3	1	3	7	0	0	0	0	0	0	3	1	3	7
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	4:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	TOTAL	5	15	3	3	26	0	0	0	0	0	5	15	3	3	26

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	15-B
TUESDAY	EAST & WEST:	AVENUE 52 / GLEN ELLEN	CONTROL:	3 WAY STOP: SB, EB & WB

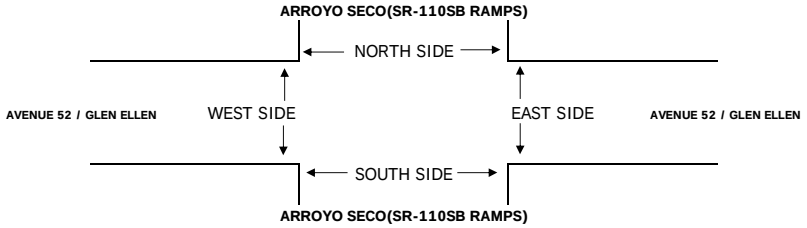
NOTES:

OFF RAMP TRAFFIC ONLY

SB U TURNS = SR ONTO GLEN ELLEN

AM		▲ N	
PM			
MD	◄ W		E ►
OTHER		S ▼	
OTHER			

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 52 / GLEN ELLEN			WESTBOUND AVENUE 52 / GLEN ELLEN				RIGHT TURNS EXITING GLEN ELLEN NB				
	LANES:	NL X	NT X	NR X	SL 0.5	ST 0	SR 0.5	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				0	0	8							8		0			0
	6:15 AM				1	0	5							6		0			0
	6:30 AM				3	0	9							12		0			0
	6:45 AM				6	0	22							28		1			1
	7:00 AM				7	0	15							22		1			1
	7:15 AM				20	0	14							34		0			0
	7:30 AM				17	0	24							41		0			0
	7:45 AM				6	0	24							30		0			0
	8:00 AM				6	0	16							22		0			0
	8:15 AM				6	0	14							20		1			1
	8:30 AM				3	0	11							14		0			0
	8:45 AM				10	0	13							23		0			0
	VOLUMES	0	0	0	85	0	175	0	0	0	0	0	0	260	0	3	0	0	3
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	260	/	0	0	/	85	0	/	175	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	49	0	78	0	0	0	0	0	0	127					
	APPROACH %	0%	0%	0%	39%	0%	61%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.774			0.000			0.000		0.774					
	APP/DEPART	0	/	0	127	/	0	0	/	49	0	/	78	0					
PM	3:00 PM				10	0	25							35		2			2
	3:15 PM				6	0	35							41		3			3
	3:30 PM				6	0	23							29		1			1
	3:45 PM				9	0	26							35		3			3
	4:00 PM				7	0	37							44		2			2
	4:15 PM				10	0	21							31		4			4
	4:30 PM				4	0	18							22		2			2
	4:45 PM				10	0	39							49		3			3
	5:00 PM				10	0	39							49		3			3
	5:15 PM				10	0	33							43		2			2
	5:30 PM				8	0	28							36		2			2
	5:45 PM				8	0	28							36		1			1
	VOLUMES	0	0	0	98	0	352	0	0	0	0	0	0	450	0	28	0	0	28
	APPROACH %	0%	0%	0%	22%	0%	78%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	450	/	0	0	/	98	0	/	352	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	38	0	139	0	0	0	0	0	0	177					
	APPROACH %	0%	0%	0%	21%	0%	79%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.903			0.000			0.000		0.903					
	APP/DEPART	0	/	0	177	/	0	0	/	38	0	/	139	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM					0					0	0	0	0	0	0
	6:15 AM					0					0	0	0	0	0	0
	6:30 AM					0					0	0	0	0	0	0
	6:45 AM					0					0	0	0	0	0	0
	7:00 AM					0					0	0	0	0	0	0
	7:15 AM					0					0	0	0	0	0	0
	7:30 AM					0					0	0	0	0	0	0
	7:45 AM					0					0	0	0	0	0	0
	8:00 AM					0					0	0	0	0	0	0
	8:15 AM					0					0	0	0	0	0	0
	8:30 AM					0					0	0	0	0	0	0
	8:45 AM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM					0					0	0	0	0	0	0
	3:15 PM					0					0	0	0	0	0	0
	3:30 PM					0					0	0	0	0	0	0
	3:45 PM					0					0	0	0	0	0	0
	4:00 PM					0					0	0	0	0	0	0
	4:15 PM					0					0	0	0	0	0	0
	4:30 PM					0					0	0	0	0	0	0
	4:45 PM					0					0	0	0	0	0	0
	5:00 PM					0					0	0	0	0	0	0
	5:15 PM					0					0	0	0	0	0	0
	5:30 PM					0					0	0	0	0	0	0
	5:45 PM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

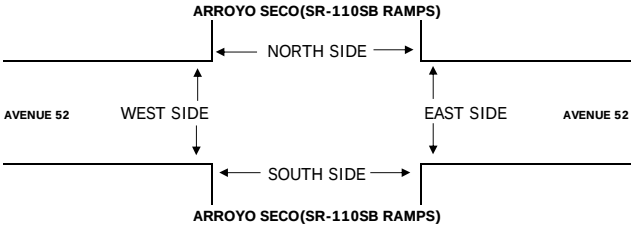
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	16
TUESDAY	EAST & WEST:	AVENUE 52	CONTROL:	3 WAY STOP

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 52			WESTBOUND AVENUE 52				U-TURNS				
	LANES:	NL 0.5	NT X	NR 0.5	SL X	ST X	SR X	EL 0	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	30	0	0				14	5			5	3	57					0
	6:15 AM	37	0	0				8	9			11	4	69					0
	6:30 AM	42	1	1				23	20			8	2	97					0
	6:45 AM	52	1	1				26	21			9	5	115					0
	7:00 AM	61	0	1				27	25			10	6	130					0
	7:15 AM	72	0	2				43	66			15	6	204					0
	7:30 AM	72	0	0				65	68			24	15	244					0
	7:45 AM	70	2	1				49	29			22	13	186					0
	8:00 AM	57	0	1				46	42			20	10	176					0
	8:15 AM	48	1	0				44	31			15	10	149					0
	8:30 AM	63	0	0				29	39			16	3	150					0
	8:45 AM	57	1	2				32	40			18	8	158					0
	VOLUMES	661	6	9	0	0	0	406	395	0	0	173	85	1,735	0	0	0	0	0
	APPROACH %	98%	1%	1%	0%	0%	0%	51%	49%	0%	0%	67%	33%						
	APP/DEPART	676	/	497	0	/	0	801	/	404	258	/	834	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	271	2	4	0	0	0	203	205	0	0	81	44	810					
	APPROACH %	98%	1%	1%	0%	0%	0%	50%	50%	0%	0%	65%	35%						
	PEAK HR FACTOR		0.936			0.000			0.767			0.801		0.830					
	APP/DEPART	277	/	249	0	/	0	408	/	209	125	/	352	0					
PM	3:00 PM	114	0	1				34	24			21	8	202					0
	3:15 PM	116	0	1				27	29			15	12	200					0
	3:30 PM	102	1	2				30	27			29	7	198					0
	3:45 PM	106	1	1				37	25			28	6	204					0
	4:00 PM	87	0	2				23	28			33	12	185					0
	4:15 PM	123	0	3				23	26			28	18	221					0
	4:30 PM	124	0	2				28	37			32	9	232					0
	4:45 PM	100	1	1				23	38			28	11	202					0
	5:00 PM	102	1	1				24	47			25	14	214					0
	5:15 PM	109	0	0				26	32			36	14	217					0
	5:30 PM	100	0	3				28	27			35	12	205					0
	5:45 PM	108	2	0				20	41			28	20	219					0
	VOLUMES	1,291	6	17	0	0	0	323	381	0	0	338	143	2,499	0	0	0	0	0
	APPROACH %	98%	0%	1%	0%	0%	0%	46%	54%	0%	0%	70%	30%						
	APP/DEPART	1,314	/	472	0	/	0	704	/	398	481	/	1,629	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	449	2	7	0	0	0	98	148	0	0	113	52	869					
	APPROACH %	98%	0%	2%	0%	0%	0%	40%	60%	0%	0%	68%	32%						
	PEAK HR FACTOR		0.909			0.000			0.866			0.897		0.936					
	APP/DEPART	458	/	152	0	/	0	246	/	155	165	/	562	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	2	0	2	4	0	0	0	0	0	0	2	0	2	4
	7:00 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
	7:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
	8:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	TOTAL	1	16	0	2	19	0	0	0	0	0	1	16	0	2	19
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	3:30 PM	1	3	0	0	4	0	0	0	0	0	1	3	0	0	4
	3:45 PM	3	2	0	0	5	0	0	0	0	0	3	2	0	0	5
	4:00 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	4:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	TOTAL	5	16	0	0	21	0	0	0	0	0	5	16	0	0	21

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

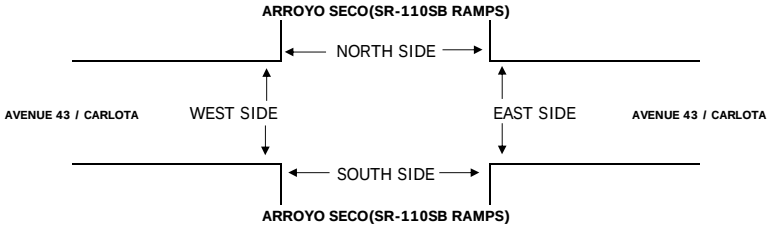
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB RAMPS)	LOCATION #:	17
TUESDAY	EAST & WEST:	AVENUE 43 / CARLOTA	CONTROL:	4 WAY STOP

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110SB RAMPS)			EASTBOUND AVENUE 43 / CARLOTA			WESTBOUND AVENUE 43 / CARLOTA				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	1	12	2	3	1	5	34	10	1	1	15	18	103					0
	6:15 AM	0	6	4	2	0	5	40	16	0	4	10	27	114					0
	6:30 AM	1	8	3	4	2	8	44	20	0	4	21	27	142					0
	6:45 AM	0	7	4	5	12	11	28	20	1	2	31	22	143					0
	7:00 AM	0	3	5	15	14	17	29	28	2	10	40	18	181					0
	7:15 AM	2	3	8	16	18	24	37	42	3	12	60	36	261					0
	7:30 AM	2	10	20	13	11	24	55	77	3	10	57	35	317					0
	7:45 AM	2	7	11	21	18	33	39	63	3	13	82	32	324					0
	8:00 AM	2	2	10	17	16	17	41	51	2	6	56	27	247					0
	8:15 AM	2	6	3	31	18	40	44	50	3	12	45	14	268					0
	8:30 AM	0	4	4	26	22	30	32	43	2	8	32	21	224					0
	8:45 AM	1	3	2	19	14	34	33	51	1	8	24	18	208					0
	VOLUMES	13	71	76	172	146	248	456	471	21	90	473	295	2,532	0	0	0	0	0
	APPROACH %	8%	44%	48%	30%	26%	44%	48%	50%	2%	10%	55%	34%						
	APP/DEPART	160	/	822	566	/	257	948	/	719	858	/	734	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	8	25	44	82	63	114	179	241	11	41	240	108	1,156					
	APPROACH %	10%	32%	57%	32%	24%	44%	42%	56%	3%	11%	62%	28%						
	PEAK HR FACTOR		0.602			0.728			0.798			0.766		0.892					
	APP/DEPART	77	/	312	259	/	115	431	/	367	389	/	362	0					
PM	3:00 PM	1	7	6	8	3	29	29	42	4	14	52	13	208					0
	3:15 PM	1	4	7	13	7	29	18	49	1	8	53	22	212					0
	3:30 PM	1	9	8	15	9	27	26	49	1	8	70	17	240					0
	3:45 PM	0	8	6	9	8	29	33	46	4	16	77	13	249					0
	4:00 PM	3	8	7	8	5	24	32	35	4	13	66	23	228					0
	4:15 PM	0	6	10	13	7	24	20	38	3	12	85	16	234					0
	4:30 PM	0	4	7	14	8	29	14	47	2	11	74	26	236					0
	4:45 PM	1	7	5	9	3	25	23	54	1	9	77	14	228					0
	5:00 PM	1	5	5	13	6	27	19	48	1	6	72	20	223					0
	5:15 PM	0	3	6	11	7	26	26	44	3	10	71	18	225					0
	5:30 PM	2	6	8	11	4	26	20	37	2	8	63	16	203					0
	5:45 PM	1	6	4	14	5	29	18	40	2	13	56	23	211					0
	VOLUMES	11	73	79	138	72	324	278	529	28	128	816	221	2,697	0	0	0	0	0
	APPROACH %	7%	45%	48%	26%	13%	61%	33%	63%	3%	11%	70%	19%						
	APP/DEPART	163	/	572	534	/	228	835	/	746	1,165	/	1,151	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	4	31	31	45	29	104	111	168	12	49	298	69	951					
	APPROACH %	6%	47%	47%	25%	16%	58%	38%	58%	4%	12%	72%	17%						
	PEAK HR FACTOR		0.917			0.873			0.877			0.920		0.955					
	APP/DEPART	66	/	211	178	/	90	291	/	244	416	/	406	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	6:30 AM	3	4	0	0	7	1	0	0	0	1	4	4	0	0	8
	6:45 AM	3	1	0	0	4	0	0	0	0	0	3	1	0	0	4
	7:00 AM	7	7	0	0	14	1	0	0	0	1	8	7	0	0	15
	7:15 AM	13	9	0	0	22	0	0	0	0	0	13	9	0	0	22
	7:30 AM	23	10	0	0	33	0	0	0	0	0	23	10	0	0	33
	7:45 AM	10	6	1	0	17	0	2	0	0	2	10	8	1	0	19
	8:00 AM	7	4	0	1	12	1	0	0	0	1	8	4	0	1	13
	8:15 AM	7	3	0	0	10	0	0	0	0	0	7	3	0	0	10
	8:30 AM	7	6	1	0	14	2	1	0	0	3	9	7	1	0	17
	8:45 AM	6	2	0	1	9	5	1	0	2	8	11	3	0	3	17
	TOTAL	88	52	2	2	144	10	4	0	2	16	98	56	2	4	160
PM	3:00 PM	15	7	0	0	22	0	0	0	0	0	15	7	0	0	22
	3:15 PM	8	2	0	1	11	0	6	0	0	6	8	8	0	1	17
	3:30 PM	10	6	0	0	16	0	1	0	0	1	10	7	0	0	17
	3:45 PM	5	2	0	0	7	5	4	1	0	10	10	6	1	0	17
	4:00 PM	10	2	2	0	14	0	0	0	0	0	10	2	2	0	14
	4:15 PM	13	10	0	0	23	1	1	0	0	2	14	11	0	0	25
	4:30 PM	8	8	0	0	16	0	2	0	0	2	8	10	0	0	18
	4:45 PM	11	4	0	0	15	2	0	1	0	3	13	4	1	0	18
	5:00 PM	6	7	1	0	14	1	0	0	0	1	7	7	1	0	15
	5:15 PM	9	7	0	0	16	0	1	0	1	2	9	8	0	1	18
	5:30 PM	10	2	0	0	12	0	1	0	0	1	10	3	0	0	13
	5:45 PM	7	1	0	0	8	0	0	0	0	0	7	1	0	0	8
	TOTAL	112	58	3	1	174	9	16	2	1	28	121	74	5	2	202

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	18
TUESDAY	EAST & WEST:	AVENUE 43 / HOMER	CONTROL:	4 WAY STOP

NOTES:

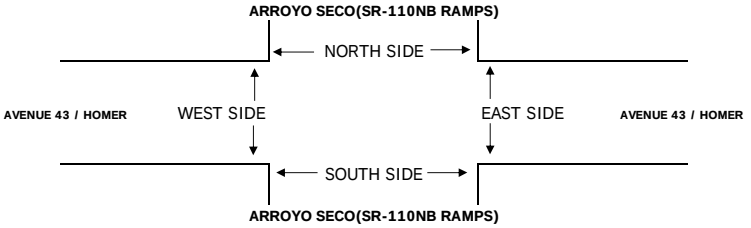
SOUTH LEG TRAFFIC IS HOMER & NB RAMPS COMBINED

SEE TMC18-B FOR RAMP TRAFFIC ONLY

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND AVENUE 43 / HOMER			WESTBOUND AVENUE 43 / HOMER				RIGHT TURNS EXITING HOMER SB				
	LANES:	NL 0.3	NT 1.3	NR 0.3	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	24	0	5	0	2	3	1	8	7	4	24	0	78	1				1
	6:15 AM	16	0	2	0	0	2	0	8	13	3	22	1	67	0				0
	6:30 AM	14	0	8	0	1	3	1	13	13	7	33	0	93	0				0
	6:45 AM	26	0	6	0	0	1	0	9	17	4	24	1	88	1				1
	7:00 AM	30	1	11	0	1	6	0	26	21	9	34	1	140	1				1
	7:15 AM	30	0	19	3	1	5	1	45	22	12	69	0	207	2				2
	7:30 AM	27	0	17	4	3	4	2	65	46	13	70	2	253	0				0
	7:45 AM	38	0	16	1	1	9	1	55	44	16	75	1	257	1				1
	8:00 AM	38	3	21	1	2	6	3	43	36	19	49	0	221	1				1
	8:15 AM	26	1	12	2	3	4	1	41	33	13	37	3	176	0				0
	8:30 AM	21	0	8	1	0	3	1	44	38	18	42	0	176	1				1
	8:45 AM	23	0	10	0	2	3	4	29	36	14	26	1	148	1				1
	VOLUMES	313	5	135	12	16	49	15	386	326	132	505	10	1,904	9	0	0	0	9
	APPROACH %	69%	1%	30%	16%	21%	64%	2%	53%	45%	20%	78%	2%						
	APP/DEPART	453	/	30	77	/	474	727	/	533	647	/	867	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	133	3	73	9	7	24	7	208	148	60	263	3	938					
	APPROACH %	64%	1%	35%	23%	18%	60%	2%	57%	41%	18%	81%	1%						
	PEAK HR FACTOR		0.843			0.909			0.803			0.886		0.912					
	APP/DEPART	209	/	13	40	/	215	363	/	290	326	/	420	0					
PM	3:00 PM	49	1	32	1	1	4	2	22	28	7	32	1	180	7				7
	3:15 PM	49	4	24	1	2	2	3	26	22	5	28	1	167	1				1
	3:30 PM	60	4	18	2	0	3	5	26	24	14	32	1	189	3				3
	3:45 PM	58	5	22	1	0	2	3	18	24	12	23	4	172	2				2
	4:00 PM	55	5	23	3	0	1	5	28	27	13	40	2	202	4				4
	4:15 PM	50	0	25	3	1	1	1	19	20	8	29	0	157	4				4
	4:30 PM	46	3	36	0	0	2	3	27	27	7	29	2	182	2				2
	4:45 PM	48	4	19	2	0	3	1	30	20	18	38	0	183	2				2
	5:00 PM	63	1	23	0	1	1	2	39	27	6	32	1	196	4				4
	5:15 PM	51	0	16	2	1	2	1	31	27	12	29	2	174	2				2
	5:30 PM	52	1	26	2	1	4	1	32	24	11	23	2	179	1				1
	5:45 PM	62	2	18	2	0	2	5	29	33	10	36	4	203	0				0
	VOLUMES	643	30	282	19	7	27	32	327	303	123	371	20	2,184	32	0	0	0	32
	APPROACH %	67%	3%	30%	36%	13%	51%	5%	49%	46%	24%	72%	4%						
	APP/DEPART	955	/	82	53	/	433	662	/	628	514	/	1,041	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	228	4	83	6	3	9	9	131	111	39	120	9	752					
	APPROACH %	72%	1%	26%	33%	17%	50%	4%	52%	44%	23%	71%	5%						
	PEAK HR FACTOR		0.905			0.643			0.923			0.840		0.926					
	APP/DEPART	315	/	22	18	/	153	251	/	220	168	/	357	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	6:30 AM	2	3	0	0	5	0	1	0	0	1	2	4	0	0	6
	6:45 AM	4	1	0	0	5	0	0	0	0	0	4	1	0	0	5
	7:00 AM	3	5	0	0	8	1	0	0	0	1	4	5	0	0	9
	7:15 AM	9	13	0	0	22	1	0	0	0	1	10	13	0	0	23
	7:30 AM	29	6	4	0	39	0	0	0	0	0	29	6	4	0	39
	7:45 AM	15	5	2	0	22	0	2	0	0	2	15	7	2	0	24
	8:00 AM	2	6	1	1	10	0	0	0	0	0	2	6	1	1	10
	8:15 AM	4	3	0	0	7	0	0	0	0	0	4	3	0	0	7
	8:30 AM	4	6	0	0	10	0	0	0	0	0	4	6	0	0	10
	8:45 AM	2	2	0	1	5	1	1	0	0	2	3	3	0	1	7
	TOTAL	76	50	7	2	135	3	4	0	0	7	79	54	7	2	142
PM	3:00 PM	5	2	1	0	8	0	0	0	0	0	5	2	1	0	8
	3:15 PM	2	0	0	0	2	0	1	0	0	1	2	1	0	0	3
	3:30 PM	3	3	0	0	6	0	0	0	0	0	3	3	0	0	6
	3:45 PM	0	1	1	0	2	2	0	0	0	2	2	1	1	0	4
	4:00 PM	6	1	1	0	8	0	0	1	0	1	6	1	2	0	9
	4:15 PM	7	3	0	3	13	0	1	1	0	2	7	4	1	3	15
	4:30 PM	1	5	5	0	11	1	0	0	0	1	2	5	5	0	12
	4:45 PM	5	5	0	0	10	0	1	2	0	3	5	6	2	0	13
	5:00 PM	4	2	0	0	6	0	0	0	0	0	4	2	0	0	6
	5:15 PM	6	2	2	0	10	0	0	0	0	0	6	2	2	0	10
	5:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:45 PM	5	1	0	0	6	0	0	0	0	0	5	1	0	0	6
	TOTAL	45	25	10	3	83	3	3	4	0	10	48	28	14	3	93

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

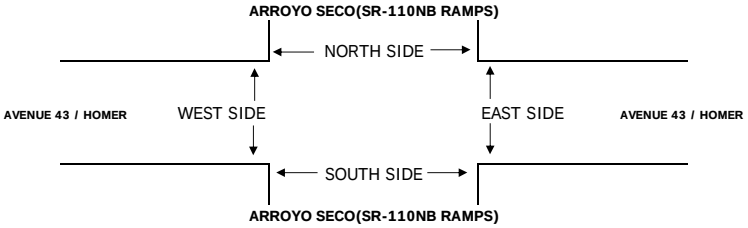
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	18-B
TUESDAY	EAST & WEST:	AVENUE 43 / HOMER	CONTROL:	4 WAY STOP

NOTES:
ON / OFF RAMP TRAFFIC ONLY
ON RAMP: ST, ER & WL
OFF RAMP: ALL NORTH

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND AVENUE 43 / HOMER			WESTBOUND AVENUE 43 / HOMER				RIGHT TURN EXITING HOMER SB				
	LANES:	NL 0.3	NT 0.3	NR 0.3	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM	18	0	5		1				6	4			34	1				1
	6:15 AM	10	0	2		0				13	3			28	0				0
	6:30 AM	11	0	5		1				10	6			33	0				0
	6:45 AM	24	0	6		0				18	4			52	1				1
	7:00 AM	24	1	10		1				20	8			64	1				1
	7:15 AM	24	0	16		1				19	12			72	2				2
	7:30 AM	19	0	12		3				44	13			91	0				0
	7:45 AM	37	0	16		1				39	12			105	1				1
	8:00 AM	30	3	15		0				35	17			100	1				1
	8:15 AM	24	1	8		2				31	11			77	0				0
	8:30 AM	17	0	8		0				33	16			74	1				1
	8:45 AM	16	0	8		1				33	12			70	1				1
	VOLUMES	254	5	111	0	11	0	0	0	301	118	0	0	800	9	0	0	0	9
	APPROACH %	69%	1%	30%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	APP/DEPART	370	/	5	11	/	430	301	/	111	118	/	254	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	110	4	51	0	6	0	0	0	149	53	0	0	373					
	APPROACH %	67%	2%	31%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	PEAK HR FACTOR		0.778			0.500			0.847			0.779		0.888					
	APP/DEPART	165	/	4	6	/	208	149	/	51	53	/	110	0					
PM	3:00 PM	44	1	32		1				26	6			110	7				7
	3:15 PM	46	4	24		2				18	4			98	1				1
	3:30 PM	56	3	15		0				25	13			112	3				3
	3:45 PM	55	4	19		0				24	9			111	2				2
	4:00 PM	47	5	23		0				24	11			110	4				4
	4:15 PM	44	0	23		1				17	6			91	4				4
	4:30 PM	41	3	33		0				25	5			107	2				2
	4:45 PM	47	5	18		0				19	14			103	2				2
	5:00 PM	59	1	20		1				23	5			109	4				4
	5:15 PM	48	0	14		1				25	9			97	2				2
	5:30 PM	49	1	23		1				24	9			107	1				1
	5:45 PM	57	2	17		0				27	7			110	0				0
	VOLUMES	593	29	261	0	7	0	0	0	277	98	0	0	1,265	32	0	0	0	32
	APPROACH %	67%	3%	30%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	APP/DEPART	883	/	29	7	/	382	277	/	261	98	/	593	0					
	BEGIN PEAK HR		3:15 PM																
	VOLUMES	204	16	81	0	2	0	0	0	91	37	0	0	431					
	APPROACH %	68%	5%	27%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	PEAK HR FACTOR		0.965			0.250			0.875			0.712		0.962					
	APP/DEPART	301	/	16	2	/	130	91	/	81	37	/	204	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM					0					0	0	0	0	0	0
	6:15 AM					0					0	0	0	0	0	0
	6:30 AM					0					0	0	0	0	0	0
	6:45 AM					0					0	0	0	0	0	0
	7:00 AM					0					0	0	0	0	0	0
	7:15 AM					0					0	0	0	0	0	0
	7:30 AM					0					0	0	0	0	0	0
	7:45 AM					0					0	0	0	0	0	0
	8:00 AM					0					0	0	0	0	0	0
	8:15 AM					0					0	0	0	0	0	0
	8:30 AM					0					0	0	0	0	0	0
	8:45 AM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM					0					0	0	0	0	0	0
	3:15 PM					0					0	0	0	0	0	0
	3:30 PM					0					0	0	0	0	0	0
	3:45 PM					0					0	0	0	0	0	0
	4:00 PM					0					0	0	0	0	0	0
	4:15 PM					0					0	0	0	0	0	0
	4:30 PM					0					0	0	0	0	0	0
	4:45 PM					0					0	0	0	0	0	0
	5:00 PM					0					0	0	0	0	0	0
	5:15 PM					0					0	0	0	0	0	0
	5:30 PM					0					0	0	0	0	0	0
	5:45 PM					0					0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

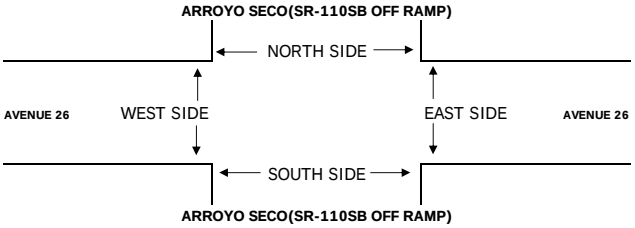
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMP)	LOCATION #:	19
TUESDAY	EAST & WEST:	AVENUE 26	CONTROL:	1 WAY STOP SB

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			EASTBOUND AVENUE 26			WESTBOUND AVENUE 26				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 0	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				6		16		144			132		298					0
	6:15 AM				12		17		200			144		373					0
	6:30 AM				24		25		245			131		425					0
	6:45 AM				82		44		279			159		564					0
	7:00 AM				44		34		349			170		597					0
	7:15 AM				53		30		344			219		646					0
	7:30 AM				51		19		366			234		670					0
	7:45 AM				59		40		372			197		668					0
	8:00 AM				73		16		341			169		599					0
	8:15 AM				41		19		323			163		546					0
	8:30 AM				30		22		303			181		536					0
	8:45 AM				46		31		298			152		527					0
	VOLUMES	0	0	0	521	0	313	0	3,564	0	0	2,051	0	6,449	0	0	0	0	0
	APPROACH %	0%	0%	0%	62%	0%	38%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	834	/	0	3,564	/	4,085	2,051	/	2,364	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	236	0	105	0	1,423	0	0	819	0	2,583					
	APPROACH %	0%	0%	0%	69%	0%	31%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.861			0.956			0.875		0.964					
	APP/DEPART	0	/	0	341	/	0	1,423	/	1,659	819	/	924	0					
PM	3:00 PM				10		30		268			226		534					0
	3:15 PM				7		26		232			196		461					0
	3:30 PM				20		28		247			213		508					0
	3:45 PM				5		20		232			207		464					0
	4:00 PM				11		28		257			226		522					0
	4:15 PM				10		36		244			229		519					0
	4:30 PM				8		26		197			245		476					0
	4:45 PM				10		29		233			231		503					0
	5:00 PM				35		31		230			242		538					0
	5:15 PM				53		36		263			249		601					0
	5:30 PM				49		29		266			238		582					0
	5:45 PM				30		37		228			237		532					0
	VOLUMES	0	0	0	248	0	356	0	2,897	0	0	2,739	0	6,240	0	0	0	0	0
	APPROACH %	0%	0%	0%	41%	0%	59%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	604	/	0	2,897	/	3,145	2,739	/	3,095	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	167	0	133	0	987	0	0	966	0	2,253					
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.843			0.928			0.970		0.937					
	APP/DEPART	0	/	0	300	/	0	987	/	1,154	966	/	1,099	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	1		0	0	1	1		0	0	1	2	0	0	0	2
	6:15 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:30 AM	4		0	0	4	0		0	0	0	4	0	0	0	4
	6:45 AM	7		0	0	7	1		0	0	1	8	0	0	0	8
	7:00 AM	9		0	0	9	4		0	0	4	13	0	0	0	13
	7:15 AM	7		0	0	7	2		0	0	2	9	0	0	0	9
	7:30 AM	3		0	0	3	1		0	0	1	4	0	0	0	4
	7:45 AM	4		0	0	4	2		0	0	2	6	0	0	0	6
	8:00 AM	3		0	0	3	1		0	0	1	4	0	0	0	4
	8:15 AM	9		0	0	9	0		0	0	0	9	0	0	0	9
	8:30 AM	5		0	0	5	0		0	0	0	5	0	0	0	5
	8:45 AM	6		0	0	6	0		0	0	0	6	0	0	0	6
	TOTAL	58	0	0	0	58	12	0	0	0	12	70	0	0	0	70
PM	3:00 PM	9		0	0	9	4		0	0	4	13	0	0	0	13
	3:15 PM	10		1	0	11	1		0	0	1	11	0	1	0	12
	3:30 PM	4		0	0	4	1		0	0	1	5	0	0	0	5
	3:45 PM	14		0	0	14	0		0	0	0	14	0	0	0	14
	4:00 PM	19		0	0	19	4		0	0	4	23	0	0	0	23
	4:15 PM	19		0	0	19	2		0	0	2	21	0	0	0	21
	4:30 PM	13		0	0	13	2		0	0	2	15	0	0	0	15
	4:45 PM	18		0	0	18	0		0	0	0	18	0	0	0	18
	5:00 PM	12		0	1	13	2		0	0	2	14	0	0	1	15
	5:15 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	5:30 PM	3		0	0	3	0		0	0	0	3	0	0	0	3
	5:45 PM	8		1	0	9	1		0	0	1	9	0	1	0	10
	TOTAL	132	0	2	1	135	17	0	0	0	17	149	0	2	1	152

INTERSECTION TURNING MOVEMENT COUNTS

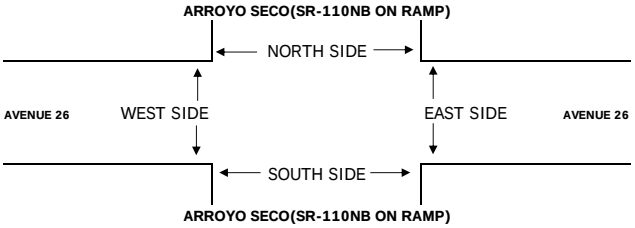
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB ON RAMP)	LOCATION #:	20
TUESDAY	EAST & WEST:	AVENUE 26	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB ON RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB ON RAMP)			EASTBOUND AVENUE 26			WESTBOUND AVENUE 26				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR X	EL 0.5	ET 2.5	ER X	WL X	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM							8	61			143	7	219					0
	6:15 AM							4	110			141	9	264					0
	6:30 AM							14	149			136	8	307					0
	6:45 AM							10	206			172	9	397					0
	7:00 AM							14	194			176	12	396					0
	7:15 AM							16	221			242	15	494					0
	7:30 AM							28	253			252	28	561					0
	7:45 AM							22	304			198	25	549					0
	8:00 AM							15	300			173	12	500					0
	8:15 AM							22	240			173	20	455					0
	8:30 AM							23	178			184	14	399					0
	8:45 AM							15	224			188	28	455					0
	VOLUMES	0	0	0	0	0	0	191	2,440	0	0	2,178	187	4,996	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	7%	93%	0%	0%	92%	8%						
	APP/DEPART	0	/	378	0	/	0	2,631	/	2,440	2,365	/	2,178	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	81	1,078	0	0	865	80	2,104					
	APPROACH %	0%	0%	0%	0%	0%	0%	7%	93%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.000			0.000			0.889			0.844		0.938					
	APP/DEPART	0	/	161	0	/	0	1,159	/	1,078	945	/	865	0					
PM	3:00 PM							24	147			236	31	438					0
	3:15 PM							18	138			210	32	398					0
	3:30 PM							21	150			237	40	448					0
	3:45 PM							29	135			246	29	439					0
	4:00 PM							29	152			248	48	477					0
	4:15 PM							39	128			217	32	416					0
	4:30 PM							26	132			238	27	423					0
	4:45 PM							28	145			252	38	463					0
	5:00 PM							28	178			260	37	503					0
	5:15 PM							22	213			246	41	522					0
	5:30 PM							34	206			250	32	522					0
	5:45 PM							21	163			227	37	448					0
	VOLUMES	0	0	0	0	0	0	319	1,887	0	0	2,867	424	5,497	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	14%	86%	0%	0%	87%	13%						
	APP/DEPART	0	/	743	0	/	0	2,206	/	1,887	3,291	/	2,867	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	112	742	0	0	1,008	148	2,010					
	APPROACH %	0%	0%	0%	0%	0%	0%	13%	87%	0%	0%	87%	13%						
	PEAK HR FACTOR		0.000			0.000			0.890			0.973		0.963					
	APP/DEPART	0	/	260	0	/	0	854	/	742	1,156	/	1,008	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	2		0	0	2	1		0	0	1	3	0	0	0	3
	6:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	6:30 AM	7		0	0	7	0		0	0	0	7	0	0	0	7
	6:45 AM	6		0	0	6	1		0	0	1	7	0	0	0	7
	7:00 AM	16		0	0	16	3		0	0	3	19	0	0	0	19
	7:15 AM	15		0	0	15	1		0	0	1	16	0	0	0	16
	7:30 AM	9		0	0	9	0		0	0	0	9	0	0	0	9
	7:45 AM	11		0	0	11	2		0	0	2	13	0	0	0	13
	8:00 AM	12		0	0	12	1		0	0	1	13	0	0	0	13
	8:15 AM	8		0	0	8	0		0	0	0	8	0	0	0	8
	8:30 AM	9		0	0	9	0		0	0	0	9	0	0	0	9
	8:45 AM	5		0	1	6	1		0	0	1	6	0	0	1	7
	TOTAL	102	0	0	1	103	10	0	0	0	10	112	0	0	1	113
PM	3:00 PM	9		0	0	9	5		0	0	5	14	0	0	0	14
	3:15 PM	8		0	0	8	2		0	0	2	10	0	0	0	10
	3:30 PM	11		0	0	11	2		0	0	2	13	0	0	0	13
	3:45 PM	15		0	0	15	3		0	0	3	18	0	0	0	18
	4:00 PM	15		1	0	16	0		0	0	0	15	0	1	0	16
	4:15 PM	8		0	0	8	4		0	0	4	12	0	0	0	12
	4:30 PM	11		0	0	11	2		0	0	2	13	0	0	0	13
	4:45 PM	13		0	0	13	1		0	0	1	14	0	0	0	14
	5:00 PM	7		0	0	7	2		0	0	2	9	0	0	0	9
	5:15 PM	10		0	0	10	0		0	0	0	10	0	0	0	10
	5:30 PM	2		0	0	2	0		0	0	0	2	0	0	0	2
	5:45 PM	7		0	0	7	1		0	0	1	8	0	0	0	8
	TOTAL	116	0	1	0	117	22	0	0	0	22	138	0	1	0	139

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

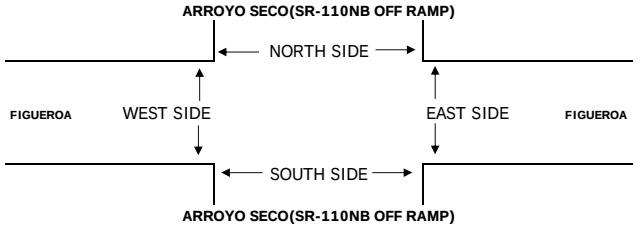
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB OFF RAMP)	LOCATION #:	21
TUESDAY	EAST & WEST:	FIGUEROA	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

		NORTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB OFF RAMP)			EASTBOUND FIGUEROA			WESTBOUND FIGUEROA				U-TURNS				
	LANES:	NL X	NT X	NR 2	SL X	ST X	SR X	EL X	ET 2	ER X	WL X	WT 3	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM			53					41			186		280					0
	6:15 AM			77					50			216		343					0
	6:30 AM			81					61			240		382					0
	6:45 AM			101					69			331		501					0
	7:00 AM			85					84			341		510					0
	7:15 AM			109					80			374		563					0
	7:30 AM			139					101			359		599					0
	7:45 AM			117					97			403		617					0
	8:00 AM			92					76			440		608					0
	8:15 AM			81					98			379		558					0
	8:30 AM			80					95			383		558					0
	8:45 AM			81					83			363		527					0
	VOLUMES	0	0	1,096	0	0	0	0	935	0	0	4,015	0	6,046	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1,096	/	0	0	/	0	935	/	2,031	4,015	/	4,015	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	457	0	0	0	0	354	0	0	1,576	0	2,387					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.822			0.000			0.876			0.895		0.967					
	APP/DEPART	457	/	0	0	/	0	354	/	811	1,576	/	1,576	0					
PM	3:00 PM			101					139			220		460					0
	3:15 PM			127					130			235		492					0
	3:30 PM			106					126			241		473					0
	3:45 PM			105					132			210		447					0
	4:00 PM			102					127			239		468					0
	4:15 PM			111					145			237		493					0
	4:30 PM			99					149			203		451					0
	4:45 PM			95					155			216		466					0
	5:00 PM			105					149			228		482					0
	5:15 PM			92					179			245		516					0
	5:30 PM			96					202			197		495					0
	5:45 PM			101					192			222		515					0
	VOLUMES	0	0	1,240	0	0	0	0	1,825	0	0	2,693	0	5,758	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1,240	/	0	0	/	0	1,825	/	3,065	2,693	/	2,693	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	394	0	0	0	0	722	0	0	892	0	2,008					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.938			0.000			0.894			0.910		0.973					
	APP/DEPART	394	/	0	0	/	0	722	/	1,116	892	/	892	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM		2			2		0			0	0	2	0	0	2
	6:15 AM		4			4		0			0	0	4	0	0	4
	6:30 AM		3			3		0			0	0	3	0	0	3
	6:45 AM		3			3		0			0	0	3	0	0	3
	7:00 AM		2			2		0			0	0	2	0	0	2
	7:15 AM		4			4		0			0	0	4	0	0	4
	7:30 AM		2			2		1			1	0	3	0	0	3
	7:45 AM		5			5		0			0	0	5	0	0	5
	8:00 AM		5			5		0			0	0	5	0	0	5
	8:15 AM		1			1		0			0	0	1	0	0	1
	8:30 AM		3			3		1			1	0	4	0	0	4
	8:45 AM		4			4		2			2	0	6	0	0	6
	TOTAL	0	38	0	0	38	0	4	0	0	4	0	42	0	0	42
PM	3:00 PM		2			2		0			0	0	2	0	0	2
	3:15 PM		3			3		1			1	0	4	0	0	4
	3:30 PM		1			1		6			6	0	7	0	0	7
	3:45 PM		2			2		0			0	0	2	0	0	2
	4:00 PM		3			3		3			3	0	6	0	0	6
	4:15 PM		4			4		0			0	0	4	0	0	4
	4:30 PM		5			5		1			1	0	6	0	0	6
	4:45 PM		2			2		2			2	0	4	0	0	4
	5:00 PM		2			2		0			0	0	2	0	0	2
	5:15 PM		2			2		0			0	0	2	0	0	2
	5:30 PM		0			0		0			0	0	0	0	0	0
	5:45 PM		6			6		4			4	0	10	0	0	10
	TOTAL	0	32	0	0	32	0	17	0	0	17	0	49	0	0	49

INTERSECTION TURNING MOVEMENT COUNTS

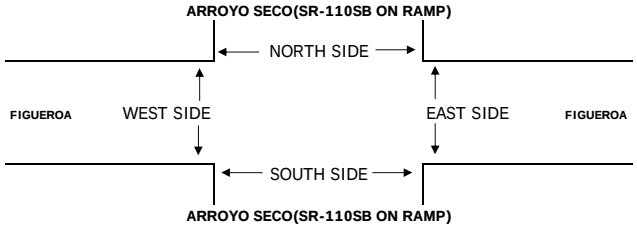
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB ON RAMP)	LOCATION #:	22
TUESDAY	EAST & WEST:	FIGUEROA	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110SB ON RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB ON RAMP)			EASTBOUND FIGUEROA			WESTBOUND FIGUEROA				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST 1	SR 0	EL 0	ET 2	ER 0	WL 2	WT 0.5	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				3	1	1	0	37	54	111	59	15	281					0
	6:15 AM				2	6	2	0	50	39	126	70	22	317					0
	6:30 AM				10	10	1	0	49	28	123	95	20	336					0
	6:45 AM				3	1	2	0	67	18	144	155	34	424					0
	7:00 AM				15	5	0	0	67	27	154	152	34	454					0
	7:15 AM				10	4	5	0	72	31	159	182	35	498					0
	7:30 AM				17	4	2	0	85	34	156	163	39	500					0
	7:45 AM				22	7	3	0	74	41	174	194	33	548					0
	8:00 AM				13	6	6	0	64	38	199	202	41	569					0
	8:15 AM				18	10	7	0	79	46	159	154	65	538					0
	8:30 AM				28	10	2	0	65	29	159	172	54	519					0
	8:45 AM				22	10	1	0	63	35	145	157	59	492					0
	VOLUMES	0	0	0	163	74	32	0	772	420	1,809	1,755	451	5,476	0	0	0	0	0
	APPROACH %	0%	0%	0%	61%	28%	12%	0%	65%	35%	45%	44%	11%						
	APP/DEPART	0	/	451	269	/	2,303	1,192	/	935	4,015	/	1,787	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	81	33	18	0	282	154	691	722	193	2,174					
	APPROACH %	0%	0%	0%	61%	25%	14%	0%	65%	35%	43%	45%	12%						
	PEAK HR FACTOR		0.000			0.825			0.872			0.908		0.955					
	APP/DEPART	0	/	193	132	/	878	436	/	363	1,606	/	740	0					
PM	3:00 PM				28	5	1	0	108	21	86	78	54	381					0
	3:15 PM				33	2	6	0	100	15	95	95	47	393					0
	3:30 PM				21	1	0	0	104	35	107	98	35	401					0
	3:45 PM				24	7	8	0	107	19	77	90	44	376					0
	4:00 PM				31	6	1	0	98	20	98	94	46	394					0
	4:15 PM				30	4	3	0	113	25	100	87	49	411					0
	4:30 PM				33	6	5	1	118	10	88	86	30	377					0
	4:45 PM				26	5	4	1	126	11	92	88	34	387					0
	5:00 PM				24	4	5	0	126	12	102	90	38	401					0
	5:15 PM				28	2	2	2	153	9	83	111	52	442					0
	5:30 PM				30	4	3	0	174	10	83	79	33	416					0
	5:45 PM				24	7	6	0	166	14	89	100	35	441					0
	VOLUMES	0	0	0	332	53	44	4	1,493	201	1,100	1,096	497	4,820	0	0	0	0	0
	APPROACH %	0%	0%	0%	77%	12%	10%	0%	88%	12%	41%	41%	18%						
	APP/DEPART	0	/	501	429	/	1,354	1,698	/	1,825	2,693	/	1,140	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	106	17	16	2	619	45	357	380	158	1,700					
	APPROACH %	0%	0%	0%	76%	12%	12%	0%	93%	7%	40%	42%	18%						
	PEAK HR FACTOR		0.000			0.939			0.905			0.910		0.962					
	APP/DEPART	0	/	160	139	/	419	666	/	725	895	/	396	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	2	2		0	4	0	0		0	0	2	2	0	0	4
	6:15 AM	4	4		0	8	1	0		0	1	5	4	0	0	9
	6:30 AM	5	6		4	15	0	0		0	0	5	6	0	4	15
	6:45 AM	6	2		0	8	1	0		0	1	7	2	0	0	9
	7:00 AM	7	2		3	12	1	0		0	1	8	2	0	3	13
	7:15 AM	0	3		2	5	2	0		0	2	2	3	0	2	7
	7:30 AM	1	2		4	7	3	1		0	4	4	3	0	4	11
	7:45 AM	0	4		3	7	1	0		0	1	1	4	0	3	8
	8:00 AM	4	5		5	14	3	0		0	3	7	5	0	5	17
	8:15 AM	1	1		0	2	2	0		0	2	3	1	0	0	4
	8:30 AM	6	2		2	10	1	1		0	2	7	3	0	2	12
	8:45 AM	2	4		3	9	1	1		0	2	3	5	0	3	11
	TOTAL	38	37	0	26	101	16	3	0	0	19	54	40	0	26	120
PM	3:00 PM	2	1		1	4	1	0		0	1	3	1	0	1	5
	3:15 PM	1	3		1	5	1	1		2	4	2	4	0	3	9
	3:30 PM	3	0		3	6	1	5		0	6	4	5	0	3	12
	3:45 PM	2	2		0	4	2	2		0	4	4	4	0	0	8
	4:00 PM	6	3		1	10	2	2		0	4	8	5	0	1	14
	4:15 PM	2	3		2	7	2	1		0	3	4	4	0	2	10
	4:30 PM	1	5		3	9	1	0		0	1	2	5	0	3	10
	4:45 PM	4	4		1	9	0	2		0	2	4	6	0	1	11
	5:00 PM	6	2		1	9	0	0		0	0	6	2	0	1	9
	5:15 PM	3	2		0	5	1	0		0	1	4	2	0	0	6
	5:30 PM	3	0		0	3	1	1		0	2	4	1	0	0	5
	5:45 PM	2	6		3	11	0	3		0	3	2	9	0	3	14
	TOTAL	35	31	0	16	82	12	17	0	2	31	47	48	0	18	113

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

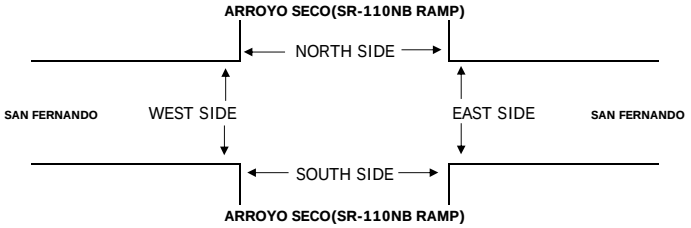
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMP)	LOCATION #:	23
TUESDAY	EAST & WEST:	SAN FERNANDO	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMP)			SOUTHBOUND ARROYO SECO(SR-110NB RAMP)			EASTBOUND SAN FERNANDO			WESTBOUND SAN FERNANDO				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR X	EL 0	ET 2	ER X	WL X	WT 3	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM							9	62			119	2	192					0
	6:15 AM							8	87			125	3	223					0
	6:30 AM							15	102			133	6	256					0
	6:45 AM							9	135			135	10	289					0
	7:00 AM							4	163			151	17	335					0
	7:15 AM							25	158			218	17	418					0
	7:30 AM							16	160			265	26	467					0
	7:45 AM							18	192			222	20	452					0
	8:00 AM							18	154			198	11	381					0
	8:15 AM							18	145			158	17	338					0
	8:30 AM							20	142			151	19	332					0
	8:45 AM							20	163			133	21	337					0
	VOLUMES	0	0	0	0	0	0	180	1,663	0	0	2,008	169	4,020	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	10%	90%	0%	0%	92%	8%						
	APP/DEPART	0	/	349	0	/	0	1,843	/	1,663	2,177	/	2,008	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	77	664	0	0	903	74	1,718					
	APPROACH %	0%	0%	0%	0%	0%	0%	10%	90%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.000			0.000			0.882			0.839		0.920					
	APP/DEPART	0	/	151	0	/	0	741	/	664	977	/	903	0					
PM	3:00 PM							7	81			115	19	222					0
	3:15 PM							4	74			103	21	202					0
	3:30 PM							6	86			134	20	246					0
	3:45 PM							4	76			128	14	222					0
	4:00 PM							7	81			133	20	241					0
	4:15 PM							4	81			143	11	239					0
	4:30 PM							7	87			159	31	284					0
	4:45 PM							11	74			174	24	283					0
	5:00 PM							7	75			211	26	319					0
	5:15 PM							6	73			186	28	293					0
	5:30 PM							5	92			189	17	303					0
	5:45 PM							10	75			207	12	304					0
	VOLUMES	0	0	0	0	0	0	78	955	0	0	1,882	243	3,158	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	8%	92%	0%	0%	89%	11%						
	APP/DEPART	0	/	321	0	/	0	1,033	/	955	2,125	/	1,882	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	0	0	0	28	315	0	0	793	83	1,219					
	APPROACH %	0%	0%	0%	0%	0%	0%	8%	92%	0%	0%	91%	9%						
	PEAK HR FACTOR		0.000			0.000			0.884			0.924		0.955					
	APP/DEPART	0	/	111	0	/	0	343	/	315	876	/	793	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0		0	0	0	0		0	0	0	0	0	0	0	0
	6:15 AM	2		0	0	2	0		0	0	0	2	0	0	0	2
	6:30 AM	8		0	0	8	0		0	0	0	8	0	0	0	8
	6:45 AM	3		0	0	3	0		0	0	0	3	0	0	0	3
	7:00 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	7:15 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	7:30 AM	5		0	0	5	1		0	0	1	6	0	0	0	6
	7:45 AM	6		0	0	6	3		0	0	3	9	0	0	0	9
	8:00 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	8:15 AM	12		0	0	12	0		0	0	0	12	0	0	0	12
	8:30 AM	7		2	0	9	1		0	0	1	8	0	2	0	10
	8:45 AM	9		0	0	9	1		0	0	1	10	0	0	0	10
	TOTAL	79	0	2	0	81	9	0	0	0	9	88	0	2	0	90
PM	3:00 PM	3		0	0	3	1		0	0	1	4	0	0	0	4
	3:15 PM	5		0	0	5	2		0	0	2	7	0	0	0	7
	3:30 PM	1		0	0	1	0		0	0	0	1	0	0	0	1
	3:45 PM	1		0	0	1	0		0	0	0	1	0	0	0	1
	4:00 PM	2		1	0	3	12		0	0	12	14	0	1	0	15
	4:15 PM	4		0	0	4	1		0	0	1	5	0	0	0	5
	4:30 PM	0		0	0	0	0		0	0	0	0	0	0	0	0
	4:45 PM	1		0	0	1	6		0	0	6	7	0	0	0	7
	5:00 PM	2		0	0	2	0		0	0	0	2	0	0	0	2
	5:15 PM	1		0	0	1	1		0	0	1	2	0	0	0	2
	5:30 PM	2		0	0	2	1		0	0	1	3	0	0	0	3
	5:45 PM	2		0	0	2	4		0	0	4	6	0	0	0	6
	TOTAL	24	0	1	0	25	28	0	0	0	28	52	0	1	0	53

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110NB RAMPS)	LOCATION #:	24
TUESDAY	EAST & WEST:	SOLANO / CASANOVA	CONTROL:	1-WAY STOP: WB

NOTES:

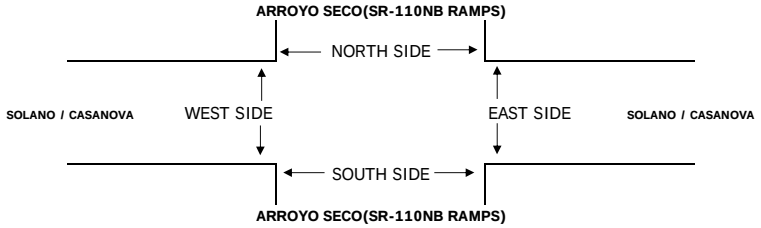
OFF RAMP = ALL NB

ON RAMP = NT & WR

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND ARROYO SECO(SR-110NB RAMPS)			SOUTHBOUND ARROYO SECO(SR-110NB RAMPS)			EASTBOUND SOLANO / CASANOVA			WESTBOUND SOLANO / CASANOVA				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM		2	0	2	10					0		0	14					0
	6:15 AM		2	0	0	7					1		2	12					0
	6:30 AM		1	1	0	16					2		2	22					0
	6:45 AM		6	0	0	12					1		1	20					0
	7:00 AM		6	0	1	20					1		0	28					0
	7:15 AM		5	0	0	26					1		2	34					0
	7:30 AM		12	1	1	31					5		2	52					0
	7:45 AM		5	2	0	37					10		1	55					0
	8:00 AM		2	1	2	20					4		1	30					0
	8:15 AM		6	4	1	21					2		2	36					0
	8:30 AM		7	0	2	27					6		2	44					0
	8:45 AM		14	0	0	21					8		2	45					0
	VOLUMES	0	68	9	9	248	0	0	0	0	41	0	17	392	0	0	0	0	0
	APPROACH %	0%	88%	12%	4%	96%	0%	0%	0%	0%	71%	0%	29%						
	APP/DEPART	77	/	85	257	/	289	0	/	18	58	/	0	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	25	8	4	109	0	0	0	0	21	0	6	173					
	APPROACH %	0%	76%	24%	4%	96%	0%	0%	0%	0%	78%	0%	22%						
	PEAK HR FACTOR		0.635			0.764			0.000			0.614		0.786					
	APP/DEPART	33	/	31	113	/	130	0	/	12	27	/	0	0					
PM	3:00 PM		17	1	0	30					1		1	50					0
	3:15 PM		19	3	0	17					2		0	41					0
	3:30 PM		16	3	1	18					1		4	43					0
	3:45 PM		20	0	4	21					1		0	46					0
	4:00 PM		15	0	2	19					5		1	42					0
	4:15 PM		18	3	1	13					1		1	37					0
	4:30 PM		20	5	1	9					4		3	42					0
	4:45 PM		26	2	1	11					4		0	44					0
	5:00 PM		24	2	1	11					1		2	41					0
	5:15 PM		27	4	2	7					1		2	43					0
	5:30 PM		28	3	0	7					0		0	38					0
	5:45 PM		28	2	2	9					2		0	43					0
	VOLUMES	0	258	28	15	172	0	0	0	0	23	0	14	510	0	0	0	0	0
	APPROACH %	0%	90%	10%	8%	92%	0%	0%	0%	0%	62%	0%	38%						
	APP/DEPART	286	/	272	187	/	195	0	/	43	37	/	0	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	72	7	5	86	0	0	0	0	5	0	5	180					
	APPROACH %	0%	91%	9%	5%	95%	0%	0%	0%	0%	50%	0%	50%						
	PEAK HR FACTOR		0.898			0.758			0.000			0.500		0.900					
	APP/DEPART	79	/	77	91	/	91	0	/	12	10	/	0	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	1		1	0	0	0		0	0	0	1	0	1
	6:15 AM	0	0	1		1	0	0	1		1	0	0	2	0	2
	6:30 AM	0	0	2		2	0	0	0		0	0	0	2	0	2
	6:45 AM	0	0	4		4	0	0	1		1	0	0	5	0	5
	7:00 AM	0	0	7		7	0	0	0		0	0	0	7	0	7
	7:15 AM	1	0	7		8	0	0	0		0	1	0	7	0	8
	7:30 AM	3	3	14		20	0	0	0		0	3	3	14	0	20
	7:45 AM	0	0	67		67	0	0	0		0	0	0	67	0	67
	8:00 AM	0	0	19		19	0	0	0		0	0	0	19	0	19
	8:15 AM	0	2	17		19	0	0	0		0	0	2	17	0	19
	8:30 AM	0	0	13		13	0	0	0		0	0	0	13	0	13
	8:45 AM	0	0	7		7	0	0	0		0	0	0	7	0	7
	TOTAL	4	5	159	0	168	0	0	2	0	2	4	5	161	0	170
PM	3:00 PM	0	0	9		9	0	0	0		0	0	0	9	0	9
	3:15 PM	0	0	12		12	0	0	0		0	0	0	12	0	12
	3:30 PM	0	0	4		4	0	0	0		0	0	0	4	0	4
	3:45 PM	0	0	6		6	0	0	0		0	0	0	6	0	6
	4:00 PM	2	0	6		8	0	0	1		1	2	0	7	0	9
	4:15 PM	0	0	6		6	0	0	0		0	0	0	6	0	6
	4:30 PM	0	0	4		4	0	0	0		0	0	0	4	0	4
	4:45 PM	0	0	6		6	0	0	0		0	0	0	6	0	6
	5:00 PM	0	0	4		4	0	0	0		0	0	0	4	0	4
	5:15 PM	0	0	1		1	0	0	0		0	0	0	1	0	1
	5:30 PM	0	0	1		1	0	0	0		0	0	0	1	0	1
	5:45 PM	0	0	2		2	0	0	0		0	0	0	2	0	2
	TOTAL	2	0	61	0	63	0	0	1	0	1	2	0	62	0	64

INTERSECTION TURNING MOVEMENT COUNTS

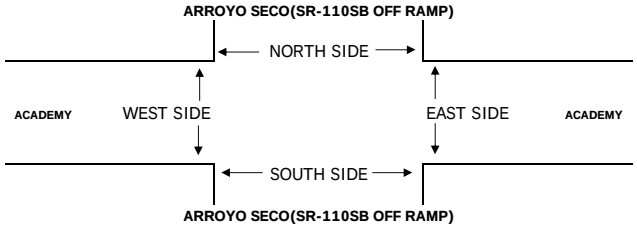
PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB OFF RAMP)	LOCATION #:	25
TUESDAY	EAST & WEST:	ACADEMY	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB OFF RAMP)			EASTBOUND ACADEMY			WESTBOUND ACADEMY				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 1	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM						2							2					0
	6:15 AM						3							3					0
	6:30 AM						5							5					0
	6:45 AM						2							2					0
	7:00 AM						9							9					0
	7:15 AM						8							8					0
	7:30 AM						9							9					0
	7:45 AM						6							6					0
	8:00 AM						7							7					0
	8:15 AM						4							4					0
	8:30 AM						7							7					0
	8:45 AM						6							6					0
	VOLUMES	0	0	0	0	0	68	0	0	0	0	0	0	68	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	68	/	0	0	/	0	0	/	68	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	0	32	0	0	0	0	0	0	32					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.889			0.000			0.000		0.889					
	APP/DEPART	0	/	0	32	/	0	0	/	0	0	/	32	0					
PM	3:00 PM						12							12					0
	3:15 PM						3							3					0
	3:30 PM						11							11					0
	3:45 PM						11							11					0
	4:00 PM						4							4					0
	4:15 PM						6							6					0
	4:30 PM						8							8					0
	4:45 PM						13							13					0
	5:00 PM						5							5					0
	5:15 PM						10							10					0
	5:30 PM						4							4					0
	5:45 PM						5							5					0
	VOLUMES	0	0	0	0	0	92	0	0	0	0	0	0	92	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	92	/	0	0	/	0	0	/	92	0					
	BEGIN PEAK HR		3:00 PM																
	VOLUMES	0	0	0	0	0	37	0	0	0	0	0	0	37					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.771			0.000			0.000		0.771					
	APP/DEPART	0	/	0	37	/	0	0	/	0	0	/	37	0					



		PEDESTRIAN CROSSINGS					BICYCLE CROSSING					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0			0	0	0			0	0	0	0	0	0	0
	6:15 AM	0			0	0	0			0	0	0	0	0	0	0
	6:30 AM	0			0	0	0			0	0	0	0	0	0	0
	6:45 AM	0			0	0	0			0	0	0	0	0	0	0
	7:00 AM	0			0	0	0			0	0	0	0	0	0	0
	7:15 AM	0			0	0	0			0	0	0	0	0	0	0
	7:30 AM	0			0	0	0			0	0	0	0	0	0	0
	7:45 AM	0			0	0	0			0	0	0	0	0	0	0
	8:00 AM	0			0	0	0			0	0	0	0	0	0	0
	8:15 AM	0			0	0	0			0	0	0	0	0	0	0
	8:30 AM	0			0	0	0			0	0	0	0	0	0	0
	8:45 AM	0			0	0	0			0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0			0	0	0			0	0	0	0	0	0	0
	3:15 PM	0			0	0	0			0	0	0	0	0	0	0
	3:30 PM	0			0	0	0			0	0	0	0	0	0	0
	3:45 PM	0			0	0	0			0	0	0	0	0	0	0
	4:00 PM	0			0	0	0			0	0	0	0	0	0	0
	4:15 PM	0			0	0	0			0	0	0	0	0	0	0
	4:30 PM	0			0	0	0			0	0	0	0	0	0	0
	4:45 PM	0			0	0	0			0	0	0	0	0	0	0
	5:00 PM	0			0	0	0			0	0	0	0	0	0	0
	5:15 PM	0			0	0	0			0	0	0	0	0	0	0
	5:30 PM	0			0	0	0			0	0	0	0	0	0	0
	5:45 PM	0			0	0	0			0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

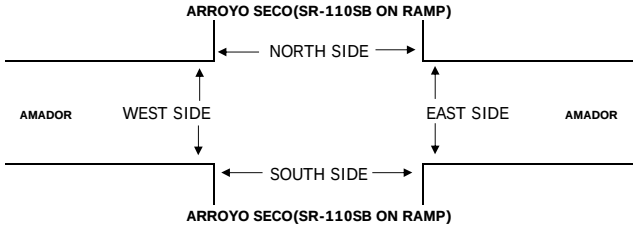
DATE:	LOCATION:	PASADENA	PROJECT #:	CA11-1202-2191
12/6/11	NORTH & SOUTH:	ARROYO SECO(SR-110SB ON RAMP)	LOCATION #:	26
TUESDAY	EAST & WEST:	AMADOR	CONTROL:	1 WAY STOP: SB

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

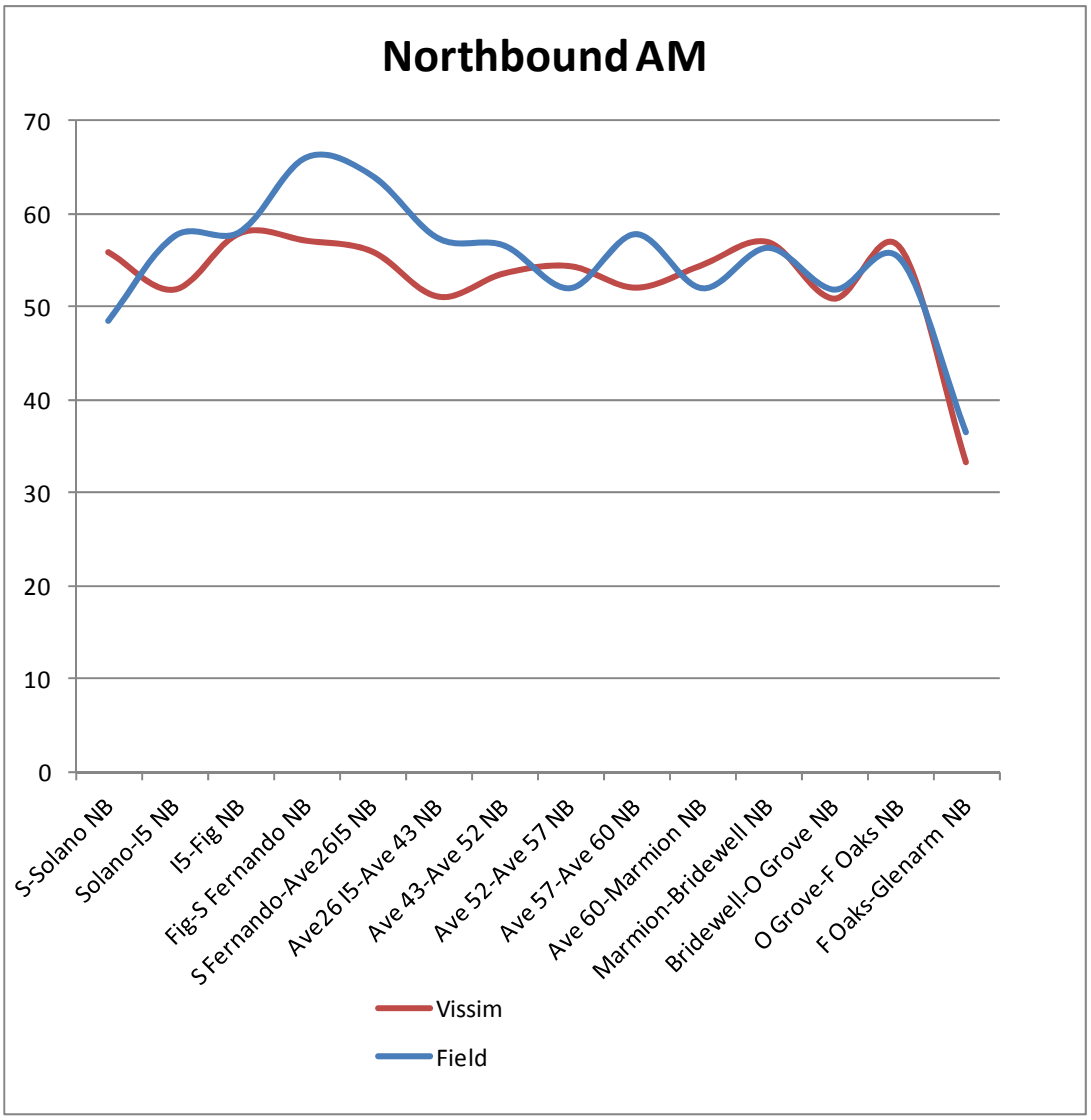
		NORTHBOUND ARROYO SECO(SR-110SB ON RAMP)			SOUTHBOUND ARROYO SECO(SR-110SB ON RAMP)			EASTBOUND AMADOR			WESTBOUND AMADOR				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST 1	SR 0	EL 0	ET 1	ER 1	WL 0	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	6:00 AM				1	0	0	0	5	8	9	16	2	41					0
	6:15 AM				1	0	0	0	8	24	7	5	1	46					0
	6:30 AM				0	0	0	0	13	18	7	14	1	53					0
	6:45 AM				0	0	0	0	17	23	7	12	1	60					0
	7:00 AM				1	1	0	0	23	32	5	17	5	84					0
	7:15 AM				3	3	0	2	21	32	16	21	9	107					0
	7:30 AM				6	5	0	6	44	54	18	22	31	186					0
	7:45 AM				3	2	6	7	40	62	16	29	48	213					0
	8:00 AM				3	0	2	6	23	50	21	20	15	140					0
	8:15 AM				7	1	2	1	38	63	22	15	1	150					0
	8:30 AM				5	0	0	1	34	78	11	25	4	158					0
	8:45 AM				1	1	1	1	28	56	12	28	1	129					0
	VOLUMES	0	0	0	31	13	11	24	294	500	151	224	119	1,367	0	0	0	0	0
	APPROACH %	0%	0%	0%	56%	24%	20%	3%	36%	61%	31%	45%	24%						
	APP/DEPART	0	/	143	55	/	664	818	/	325	494	/	235	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	19	8	10	20	145	229	77	86	95	689					
	APPROACH %	0%	0%	0%	51%	22%	27%	5%	37%	58%	30%	33%	37%						
	PEAK HR FACTOR		0.000			0.841			0.904			0.694		0.809					
	APP/DEPART	0	/	115	37	/	314	394	/	164	258	/	96	0					
PM	3:00 PM				3	0	1	0	33	26	5	21	3	92					0
	3:15 PM				3	1	0	0	26	11	3	20	5	69					0
	3:30 PM				2	1	0	1	20	11	4	27	2	68					0
	3:45 PM				7	1	0	0	21	8	3	19	6	65					0
	4:00 PM				4	1	0	1	15	10	6	27	5	69					0
	4:15 PM				4	0	2	0	19	6	3	30	3	67					0
	4:30 PM				5	0	0	0	20	12	2	15	6	60					0
	4:45 PM				8	1	0	1	25	13	3	28	7	86					0
	5:00 PM				6	0	1	0	23	15	5	18	2	70					0
	5:15 PM				4	0	0	2	26	13	2	19	7	73					0
	5:30 PM				4	1	1	0	22	14	4	26	4	76					0
	5:45 PM				1	1	0	0	20	16	5	23	3	69					0
	VOLUMES	0	0	0	51	7	5	5	270	155	45	273	53	864	0	0	0	0	0
	APPROACH %	0%	0%	0%	81%	11%	8%	1%	63%	36%	12%	74%	14%						
	APP/DEPART	0	/	58	63	/	207	430	/	321	371	/	278	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	22	2	2	3	96	55	14	91	20	305					
	APPROACH %	0%	0%	0%	85%	8%	8%	2%	62%	36%	11%	73%	16%						
	PEAK HR FACTOR		0.000			0.722			0.939			0.822		0.887					
	APP/DEPART	0	/	23	26	/	71	154	/	118	125	/	93	0					

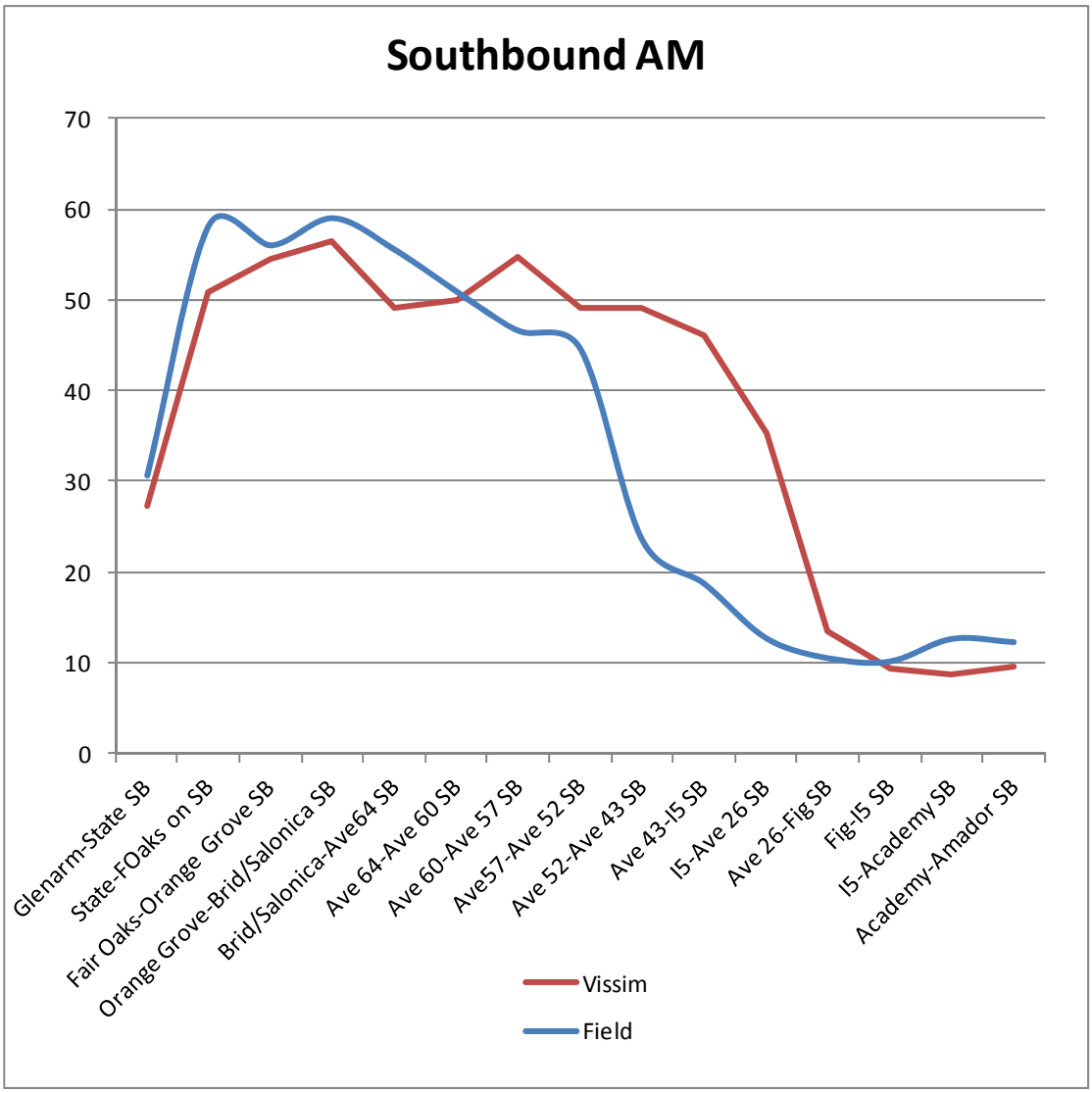


		PEDESTRIAN CROSSINGS					BICYCLE ACTIVATIONS					TOTAL CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	7:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	7:45 AM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	8:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:15 AM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	8:30 AM	2	0	0	0	2	0	1	0	0	1	2	1	0	0	3
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6	0	0	1	7	1	2	0	0	3	7	2	0	1	10
PM	3:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	4:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	4:30 PM	4	0	0	1	5	0	0	0	0	0	4	0	0	1	5
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	3	0	0	1	4	0	0	0	0	0	3	0	0	1	4
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	8	0	0	5	13	0	0	0	0	0	8	0	0	5	13

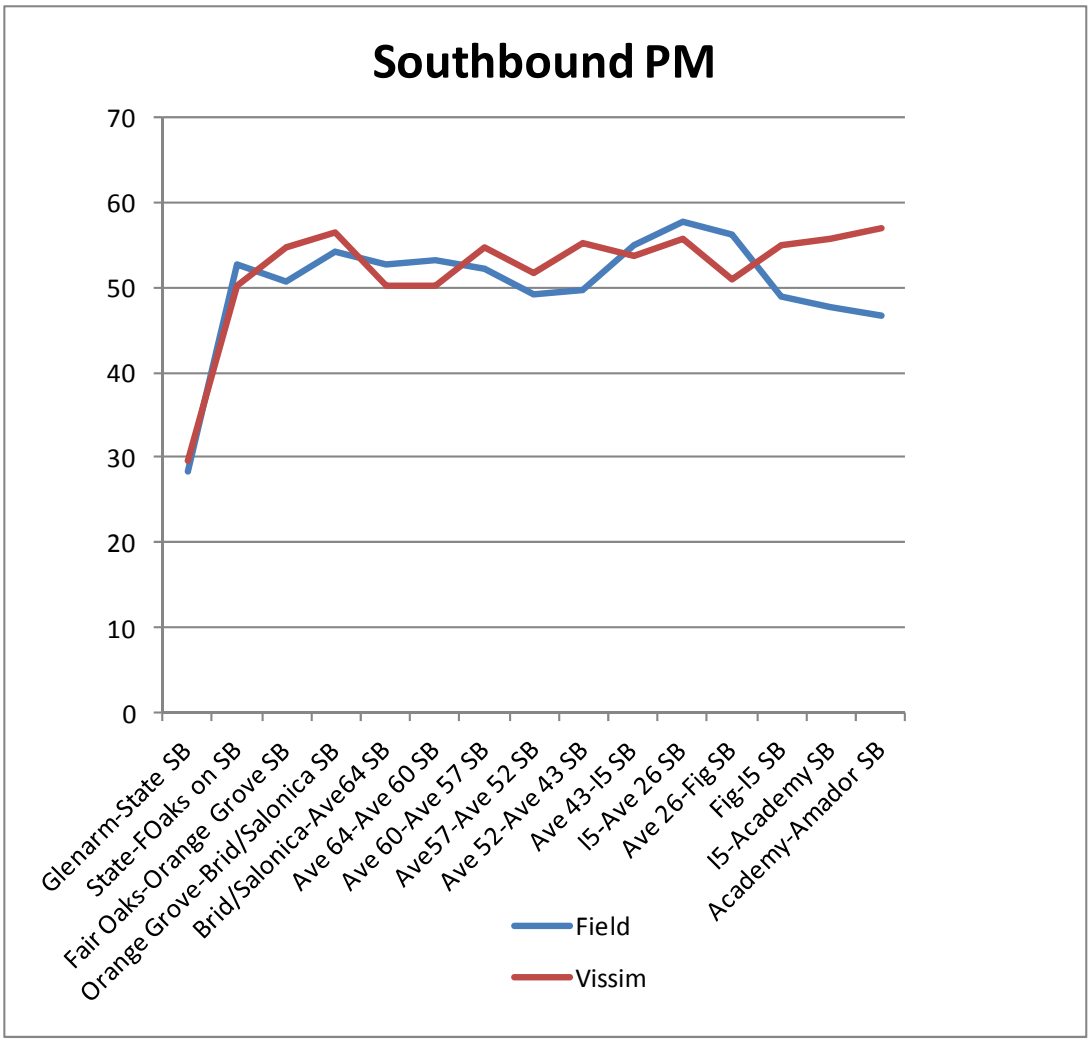
APPENDIX C – SPEED PLOTS

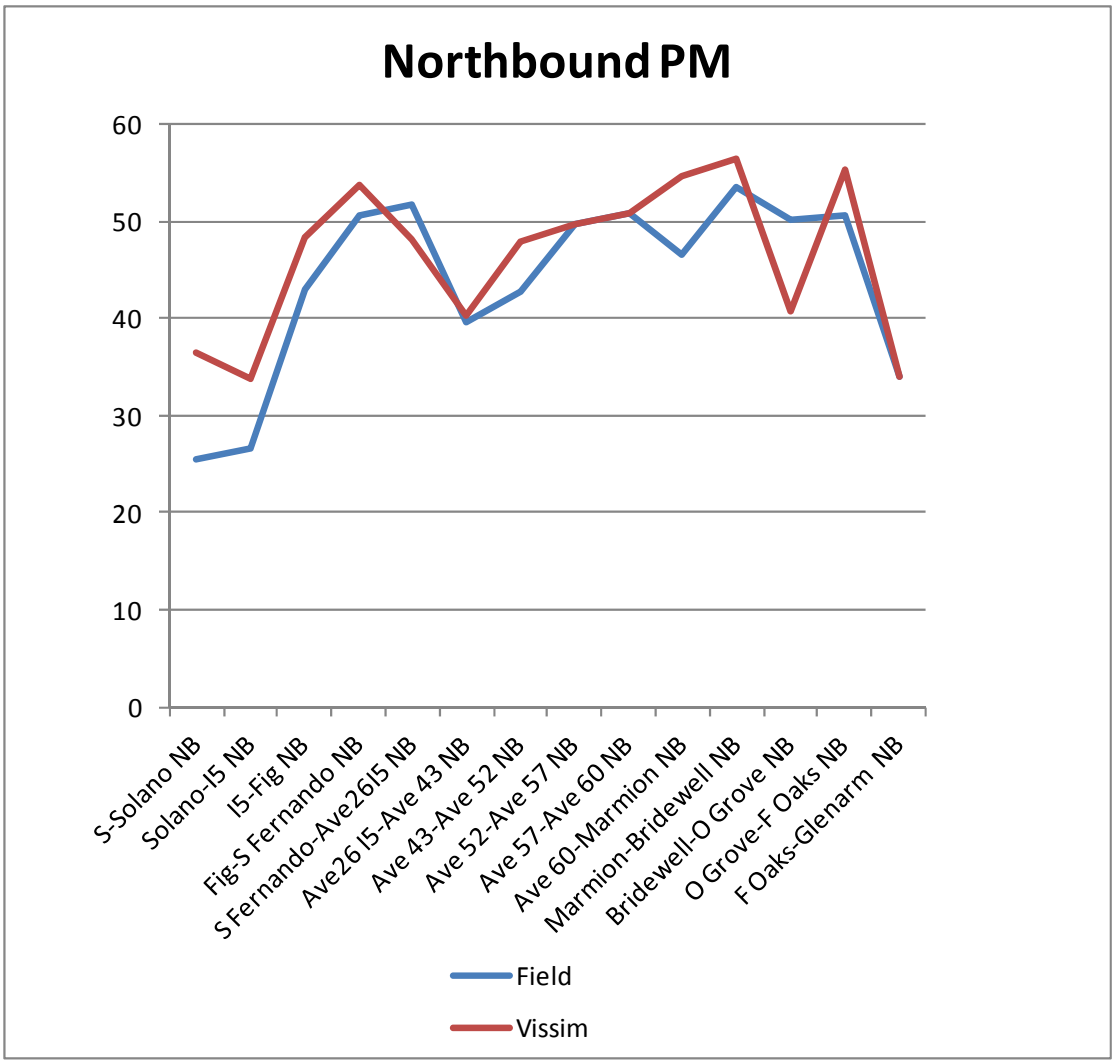
AM Peak Hour


Northbound AM
70
60
50
40
30
20
10
0
S-Solano NB
Solano-I5 NB
I5-Fig NB
Fig-S Fernando NB
S Fernando-Ave26I5 NB
Ave26 I5-Ave 43 NB
Ave 43-Ave 52 NB
Ave 52-Ave 57 NB
Ave 57-Ave 60 NB
Ave 60-Marmion NB
Marmion-Bridewell NB
Bridewell-O Grove NB
O Grove-F Oaks NB
F Oaks-Glenarm NB
Vissim
Field


Southbound AM
70
60
50
40
30
20
10
0
Glenarm-State SB
State-FOaks on SB
Fair Oaks-Orange Grove SB
Orange Grove-Brid/Salonica SB
Brid/Salonica-Ave64 SB
Ave 64-Ave 60 SB
Ave 60-Ave 57 SB
Ave57-Ave 52 SB
Ave 52-Ave 43 SB
Ave 43-I5 SB
I5-Ave 26 SB
Ave 26-Fig SB
Fig-I5 SB
I5-Academy SB
Academy-Amador SB
Vissim
Field

PM Peak Hour


Southbound PM
70
60
50
40
30
20
10
0
Glenarm-State SB
State-FOaks on SB
Fair Oaks-Orange Grove SB
Orange Grove-Brid/Salonica SB
Brid/Salonica-Ave64 SB
Ave 64-Ave 60 SB
Ave 60-Ave 57 SB
Ave57-Ave 52 SB
Ave 52-Ave 43 SB
Ave 43-I5 SB
I5-Ave 26 SB
Ave 26-Fig SB
Fig-I5 SB
I5-Academy SB
Academy-Amador SB
Field
Vissim


Northbound PM
60
50
40
30
20
10
0
S-Solano NB
Solano-I5 NB
I5-Fig NB
Fig-S Fernando NB
S Fernando-Ave26 I5 NB
Ave26 I5-Ave 43 NB
Ave 43-Ave 52 NB
Ave 52-Ave 57 NB
Ave 57-Ave 60 NB
Ave 60-Marmion NB
Marmion-Bridewell NB
Bridewell-O Grove NB
O Grove-F Oaks NB
F Oaks-Glenarm NB
Field
Vissim

APPENDIX D – VOLUME COMPARISON

Existing Conditions AM Peak Hour										
Data Collection Point	Link	Count AM	Model AM	Diff %	Diff	GEH	<700 vph	700-2700 v	> 2700 vph	Screenline
SB btw Schults ramps	10055	4206	4196	0%	10	0.2	0	0	1	
FOaks NB off	10155	505	489	-3%	16	0.7	1	0	0	
Approach State SB	102	423	417	-1%	6	0.3	1	0	0	W IN
north of SB on from La Riba	103	3523	3516	0%	8	0.1	0	0	1	
Homer NB Approach	106	42	42	0%	0	0.0	1	0	0	E IN
NB off to O Grove	109	1148	1143	0%	5	0.1	0	1	0	
north of SB on from I-5	11	4345	3735	-14%	610	9.6	0	0	0	
SB south of State off	110	1379	1371	-1%	8	0.2	0	1	0	
Homer SB Departure	111	10	11	14%	-1	0.4	1	0	0	E OUT
SB btw Fair Oaks and O Grove	112	2272	2256	-1%	16	0.3	0	1	0	
F Oaks SB on	113	893	886	-1%	7	0.2	0	1	0	
SB north of State off	115	1534	1526	-1%	8	0.2	0	1	0	
Glenarm EBR	116	98	104	6%	-6	0.6	1	0	0	W IN
Academy Rd off	12	66	56	-15%	10	1.3	1	0	0	W OUT
NB dep at Glenarm	120	1440	1485	3%	-45	1.2	0	1	0	N OUT
SB State off	121	155	155	0%	0	0.0	1	0	0	
NB approach at Glenarm	126	1551	1601	3%	-50	1.3	0	1	0	
btw F Oaks ramps NB	128	1964	2002	2%	-38	0.8	0	1	0	
EB dep at Glenarm	130	440	443	1%	-3	0.1	0	0	0	E OUT
Glenarm EBT/EBL approach	131	318	319	0%	-1	0.1	0	0	0	W IN
San Fernando WB departure	133	921	930	1%	-9	0.3	0	1	0	W OUT
San Fernando EB departure	134	683	674	-1%	9	0.3	0	0	0	E OUT
north of SB off to Ave 57	138	4312	4306	0%	6	0.1	0	0	1	
Solano NB on	14	37	38	4%	-1	0.2	1	0	0	E IN
north of SB off to Schults	143	4312	4304	0%	8	0.1	0	0	1	
Figureoa SBL	144	653	529	-19%	124	5.1	0	0	0	W IN
Figueroa SB on	146	827	659	-20%	168	6.2	0	0	0	
Ave 52 NB on	149	109	89	-18%	20	2.0	1	0	0	
South end	15	8656	7496	-13%	1160	12.9	0	0	0	S OUT
Glenarm WB departure	152	511	506	-1%	5	0.2	0	0	0	W OUT
Glenarm WB approach	154	783	777	-1%	7	0.2	0	1	0	E IN
Arroyo SB approach	155	1174	1166	-1%	8	0.2	0	1	0	N IN
State SB	157	17	19	9%	-2	0.4	1	0	0	W IN / E OUT
State NB	158	7	7	-1%	0	0.0	1	0	0	E IN / W OUT
SB approach F Oaks	159	913	925	1%	-12	0.4	0	1	0	W IN
NB approach south end	16	5827	5853	0%	-26	0.3	0	0	1	S IN
Figureoa SBT/SBR	161	934	936	0%	-2	0.1	0	1	0	W IN
State NB departure	163	13	11	-15%	2	0.5	1	0	0	W OUT
F Oaks NB departure	165	1290	1236	-4%	54	1.5	0	1	0	W OUT
Solano NB off	17	101	102	1%	-1	0.1	1	0	0	
Grevelia WB approach	170	475	471	-1%	4	0.2	1	0	0	E IN
SB departure F Oaks	171	1076	1063	-1%	14	0.4	0	1	0	E OUT
F Oaks NB approach	173	1083	1074	-1%	9	0.3	0	1	0	E IN
SB on form I-5	10	4184	4169	0%	15	0.2	0	0	1	W IN
SB approach O Grove	176	1384	1383	0%	1	0.0	0	1	0	W IN
SB departure O Grove	178	469	467	0%	2	0.1	1	0	0	E OUT
NB departure O Grove	181	930	911	-2%	19	0.6	0	1	0	W OUT
Bridewell NB	185	10	11	11%	-1	0.3	1	0	0	W IN
SB approach Hough	186	15	16	8%	-1	0.3	1	0	0	W IN
NB departure Hough	187	34	33	-4%	1	0.2	1	0	0	W OUT
SB approach Ave 66	188	650	657	1%	-7	0.3	1	0	0	W IN
WB departure La Riba	189	15	13	-11%	2	0.4	1	0	0	W OUT
NB departure Ave 66	191	24	19	-21%	5	1.1	1	0	0	W OUT
EB approach Marmion	192	31	30	-4%	1	0.2	1	0	0	E IN
WB departure Marmion	193	584	574	-2%	10	0.4	1	0	0	E OUT
Marmion EB btw ramps	194	31	30	-4%	1	0.2	1	0	0	E OUT
WB approach Marmion	195	110	111	1%	-1	0.1	1	0	0	E IN
Ave 60 EB	198	554	562	2%	-8	0.4	1	0	0	E IN / E OUT
Ave 26 NB on	2	165	156	-5%	9	0.7	1	0	0	
Ave 26 EB	20	1511	1516	0%	-5	0.1	0	1	0	
Ave 60 WB	200	555	551	-1%	4	0.2	1	0	0	E IN / E OUT
WB departure Marisol	203	552	543	-2%	9	0.4	0	0	0	W OUT
WB approach Marisol	206	470	472	0%	-2	0.1	0	0	0	E OUT
EB departure Marisol	207	464	471	2%	-7	0.3	0	0	0	E IN
EB approach Marisol	208	253	259	2%	-6	0.4	0	0	0	W IN
SB approach Homer	209	3	3	3%	0	0.1	1	0	0	E IN
NB off to I-5	21	2434	2409	-1%	25	0.5	0	1	0	W OUT
NB departure Homer	210	62	59	-5%	3	0.4	1	0	0	E OUT
WB approach Ave 52	215	58	60	3%	-2	0.2	1	0	0	E IN
EB departure Ave 52	216	276	284	3%	-8	0.5	1	0	0	E OUT
SB approach Glen Ellen	219	90	89	-1%	1	0.1	1	0	0	W IN

Existing Conditions AM Peak Hour										
Data Collection Point	Link	Count AM	Model AM	Diff %	Diff	GEH	<700 vph	700-2700 v	> 2700 vph	Screenline
EB approach Ave 26	22	958	969	1%	-11	0.4	0	1	0	E IN
NB departure Glen Ellen	220	15	13	-15%	2	0.6	1	0	0	W OUT
WB departure Ave 52	221	345	353	2%	-8	0.4	0	0	0	W OUT
EB approach Ave 52	222	702	714	2%	-12	0.5	0	1	0	W IN
EB approach Ave 43	223	460	436	-5%	25	1.2	1	0	0	W IN
WB departure Ave 43	224	332	332	0%	0	0.0	1	0	0	W OUT
Grevelia EB departure	227	112	107	-4%	5	0.4	1	0	0	E OUT
NB approach Carlota	229	106	106	0%	0	0.0	1	0	0	W IN
SB departure Carlota	230	86	46	-47%	40	4.9	1	0	0	W OUT
WB approach Ave 43	231	275	277	1%	-2	0.1	1	0	0	E IN
EB departure Ave 43	232	347	320	-8%	27	1.5	1	0	0	E OUT
NB approach O Grove	24	447	455	2%	-8	0.4	0	0	0	E IN
I-5 NB on	242	1047	1043	0%	4	0.1	0	1	0	E IN
EB approach Ave 22	245	123	127	3%	-4	0.4	1	0	0	W IN
WB departure Ave 22	246	202	205	1%	-3	0.2	1	0	0	W OUT
SB approach Casanova	247	31	34	9%	-3	0.5	1	0	0	E IN
NB departure Casanova	248	11	11	3%	0	0.1	1	0	0	E OUT
Amador SB	249	213	221	4%	-8	0.5	1	0	0	
SB departure Figureoa	25	749	747	0%	2	0.1	0	1	0	W OUT
SB approach Amador Pl	250	17	17	-3%	1	0.1	1	0	0	W IN
NB departure Amador Pl	251	135	133	-2%	2	0.2	1	0	0	W OUT
Amador NB	252	238	231	-3%	7	0.5	1	0	0	E IN
SB approach Arroyo Dr	253	6	6	5%	0	0.1	1	0	0	W OUT
NB departure Arroyo Dr	254	51	55	7%	-4	0.5	1	0	0	W IN
SB departure Arroyo Dr	255	46	46	0%	0	0.0	1	0	0	W OUT
NB approach Arroyo Dr	256	15	16	5%	-1	0.2	1	0	0	W IN
SB off Schults	257	106	107	1%	-1	0.1	1	0	0	
SB on Schults	258	106	105	-1%	1	0.1	1	0	0	
north of the Figueroa SB on	26	3518	3278	-7%	240	4.1	0	0	1	
NB off Figueroa	27	462	451	-2%	11	0.5	1	0	0	
NB approach Figueroa	28	427	415	-3%	12	0.6	0	0	0	W IN
NB approach Carlota	295	1	1	-30%	0	0.3	1	0	0	W IN
SB departure Carlota	296	50	48	-5%	3	0.4	1	0	0	W OUT
north of the S Fernando NB on	30	2941	2969	1%	-28	0.5	0	0	1	
NB on San Fernando	31	77	76	-2%	1	0.1	1	0	0	
south of the I-5/26 NB on	32	2864	2892	1%	-28	0.5	0	0	1	
EB approach San Fernando	33	722	712	-1%	10	0.4	0	1	0	W IN
I-5 on ramp from Ave 26	34	439	436	-1%	3	0.1	1	0	0	E OUT
NB departure Figueroa	36	820	793	-3%	27	1.0	0	1	0	W OUT
Amador SB approach to ramp	6	161	158	-2%	3	0.3	1	0	0	W IN
NB on Solano	10010	34	36	6%	-2	0.4	1	0	0	
SB departure Amador	368	185	192	4%	-7	0.5	1	0	0	E OUT
north of Solano on	370	5760	5786	0%	-26	0.3	0	0	1	
north of the NB I-5 off	10084	3326	3343	1%	-17	0.3	0	0	1	
btw Solano ramps	415	5726	5750	0%	-24	0.3	0	0	1	
I-5/Ave 26 NB on	10002	1208	1199	-1%	9	0.3	0	1	0	
north of SB off to 52	384	4510	4512	0%	-2	0.0	0	0	1	
north of NB on from Marisol	385	3329	3318	0%	11	0.2	0	0	1	
btw Bridewell/Salonica SB ramps	10065	3285	3270	0%	15	0.3	0	0	1	
SB off Ave 43	39	153	152	0%	1	0.0	1	0	0	
SB on Ave 57	392	272	274	1%	-2	0.1	1	0	0	
NB btw O Grove & F Oaks	394	2056	2090	2%	-34	0.7	0	1	0	
south of NB off to O Grove	396	2690	2702	0%	-12	0.2	0	1	0	
south of NB off to Bridewell	398	2741	2748	0%	-7	0.1	0	0	1	
SB off Ave 26	40	202	192	-5%	10	0.7	1	0	0	
north of SB off to Bridewell/Salonica	400	3339	3327	0%	13	0.2	0	0	1	
south of NB off to Marmion	402	3308	3296	0%	12	0.2	0	0	1	
NB btw Ave 52 & Ave 57	404	3622	3602	-1%	20	0.3	0	0	1	
NB south of Ave 52 off	405	3945	3955	0%	-10	0.2	0	0	1	
north of the SB off to Ave 43	407	5088	5045	-1%	43	0.6	0	0	1	
north of the SB off to I-5	211	5375	5273	-2%	103	1.4	0	0	1	
SB off I-5	41	1655	1610	-3%	45	1.1	0	1	0	W OUT
WB approach Marmion	414	110	112	2%	-2	0.2	1	0	0	W IN
SB on from 43	43	440	391	-11%	50	2.4	1	0	0	
btw SB off I-5 and off Ave 26	44	3720	3635	-2%	85	1.4	0	0	1	
WB approach Ave 26	45	987	986	0%	2	0.0	0	1	0	E IN
EB approach Ave 26	46	1388	1399	1%	-11	0.3	0	1	0	W IN
WB departure Ave 26	47	959	907	-5%	52	1.7	0	1	0	W OUT
north of NB on from I-5/26	5	4149	4168	0%	-19	0.3	0	0	1	
SB on from 52	51	593	552	-7%	42	1.7	1	0	0	
SB approach Schults	52	178	181	2%	-3	0.2	1	0	0	W IN

Existing Conditions AM Peak Hour										
Data Collection Point	Link	Count AM	Model AM	Diff %	Diff	GEH	<700 vph	700-2700 v	> 2700 vph	Screenline
NB departure Schults	54	103	104	1%	-1	0.1	1	0	0	W OUT
NB off Ave 43	55	274	265	-3%	9	0.5	1	0	0	
NB off Ave 60	56	109	106	-2%	3	0.3	1	0	0	
NB on Ave 43	57	70	60	-15%	10	1.3	1	0	0	
NB on Ave 60	58	88	88	0%	0	0.0	1	0	0	
SB on from Amador	10004	193	188	-2%	5	0.3	1	0	0	
SB on from La Riba/66	60	789	789	0%	0	0.0	0	1	0	
NB off to Bridewell	61	49	47	-5%	2	0.3	1	0	0	
NB approach Bridewell	63	22	23	2%	-1	0.1	1	0	0	W IN
btw Ave 52 SB ramps	64	4495	4496	0%	-1	0.0	0	0	1	
btw Ave 57 SB ramps	65	4238	4237	0%	1	0.0	0	0	1	
SB approach Ave 57	66	322	322	0%	0	0.0	1	0	0	W IN
SB departure Bridewell	68	19	18	-4%	1	0.2	1	0	0	W OUT
SB off to Ave 52	69	15	16	6%	-1	0.2	1	0	0	
NB departure Ave 57	70	75	71	-5%	4	0.5	1	0	0	W OUT
SB approach Bridewell	71	35	35	1%	0	0.0	1	0	0	W IN
btw Ave 52 NB ramps	73	3513	3512	0%	1	0.0	0	0	1	
NB on Marisol	75	65	67	3%	-2	0.2	1	0	0	
btw Marisol ramps NB	76	3264	3252	0%	12	0.2	0	0	1	
NB off Ave 52	77	432	440	2%	-8	0.4	1	0	0	
NB off to Marisol	78	358	350	-2%	8	0.4	1	0	0	
NB departure Bridewell	79	14	14	-3%	0	0.1	1	0	0	W OUT
SB btw Amador and Academy	8	8463	7510	-11%	953	10.7	0	0	0	
SB on Salonica/Bridewell	80	238	247	4%	-9	0.6	1	0	0	
SB off Salonica/Bridewell	81	54	58	8%	-4	0.6	1	0	0	
NB off to O Grove	10070	728	700	-4%	28	1.0	0	1	0	
btw ave 60 NB ramps	421	3220	3209	0%	11	0.2	0	0	1	
NB on O Grove	86	92	90	-2%	2	0.2	1	0	0	
south of the I-5 SB on	9	8529	7733	-9%	796	8.8	0	0	0	
SB off O Grove	91	81	78	-4%	4	0.4	1	0	0	
NB off Marmion	92	567	551	-3%	16	0.7	1	0	0	
SB approach Salonica	95	240	247	3%	-7	0.4	1	0	0	W IN
SB btw O Grove ramps	96	2191	2179	-1%	12	0.3	0	1	0	
NB departure Salonica	98	80	84	5%	-4	0.4	1	0	0	W OUT
south of off Ave 43	287	3875	3897	1%	-22	0.3	0	0	1	
SB off Ave 57	10045	74	71	-4%	3	0.4	1	0	0	
SB btw Ave 43 ramps	10033	4935	4889	-1%	46	0.7	0	0	1	
EB departure Ave 26	20	1032	1079	5%	-47	1.4	0	1	0	E OUT
WB departure Amador	369	116	116	0%	0	0.0	1	0	0	W OUT
EB departure Solano	17	124	127	2%	-3	0.2	1	0	0	E OUT
EB approach La Riba	190	65	58	-12%	8	1.0	1	0	0	W IN

Existing Conditions PM Peak Hour										
Data Collection Point	Link	Count PM	Model PM	Diff %	Diff	GEH	<700 vph	700-2700 v	> 2700 vph	Screenline
SB btw Schults ramps	10055	2896	2888	0%	8	0.1	0	0	1	
FOaks NB off	10155	817	775	-5%	42	1.5	0	1	0	
Approach State SB	102	350	347	-1%	3	0.2	1	0	0	W IN
north of SB on from La Riba	103	2486	2463	-1%	23	0.5	0	1	0	
Homer NB Approach	106	35	35	0%	0	0.0	1	0	0	E IN
NB off to O Grove	109	864	834	-4%	30	1.0	0	1	0	
north of SB on from I-5	11	3066	3031	-1%	35	0.6	0	0	1	
SB south of State off	110	973	976	0%	-3	0.1	0	1	0	
Homer SB Departure	111	35	42	19%	-7	1.1	1	0	0	E OUT
SB btw Fair Oaks and O Grove	112	1603	1606	0%	-3	0.1	0	1	0	
F Oaks SB on	113	630	633	1%	-3	0.1	1	0	0	
SB north of State off	115	1083	1080	0%	3	0.1	0	1	0	
Glenarm EBR	116	113	119	5%	-6	0.5	1	0	0	W IN
Academy Rd off	12	47	47	0%	0	0.0	1	0	0	W OUT
NB dep at Glenarm	120	1679	1625	-3%	54	1.3	0	1	0	N OUT
SB State off	121	110	110	0%	0	0.0	1	0	0	
NB approach at Glenarm	126	2509	2410	-4%	99	2.0	0	1	0	
btw F Oaks ramps NB	128	3230	3101	-4%	129	2.3	0	0	1	
EB dep at Glenarm	130	1217	1178	-3%	39	1.1	0	1	0	E OUT
Glenarm EBT/EBL approach	131	377	382	1%	-5	0.3	0	0	0	W IN
San Fernando WB departure	133	789	800	1%	-11	0.4	0	1	0	W OUT
San Fernando EB departure	134	312	308	-1%	5	0.3	0	0	0	E OUT
north of SB off to Ave 57	138	3043	3026	-1%	17	0.3	0	0	1	
Solano NB on	14	49	49	0%	0	0.0	1	0	0	E IN
north of SB off to Schults	143	3043	3031	0%	12	0.2	0	0	1	
Figureoa SBL	144	483	490	1%	-7	0.3	0	0	0	W IN
Figueroa SB on	146	584	589	1%	-5	0.2	1	0	0	
Ave 52 NB on	149	98	84	-14%	14	1.5	1	0	0	
South end	15	6107	6063	-1%	44	0.6	0	0	1	S OUT
Glenarm WB departure	152	655	632	-3%	23	0.9	0	0	0	W OUT
Glenarm WB approach	154	345	338	-2%	7	0.4	0	0	0	E IN
Arroyo SB approach	155	1291	1280	-1%	11	0.3	0	1	0	N IN
State SB	157	13	14	6%	-1	0.2	1	0	0	W IN / E OUT
State NB	158	10	10	2%	0	0.1	1	0	0	E IN / W OUT
SB approach F Oaks	159	1068	1074	1%	-6	0.2	0	1	0	W IN
NB approach south end	16	9426	9395	0%	31	0.3	0	0	1	S IN
Figureoa SBT/SBR	161	507	503	-1%	4	0.2	1	0	0	W IN
State NB departure	163	67	68	2%	-1	0.1	1	0	0	W OUT
F Oaks NB departure	165	1172	1137	-3%	35	1.0	0	1	0	W OUT
Solano NB off	17	143	139	-3%	4	0.3	1	0	0	
Grevelia WB approach	170	282	284	1%	-2	0.1	1	0	0	E IN
SB departure F Oaks	171	1288	1302	1%	-14	0.4	0	1	0	E OUT
F Oaks NB approach	173	1020	1010	-1%	10	0.3	0	1	0	E IN
SB on form I-5	10	2952	2947	0%	5	0.1	0	0	1	W IN
SB approach O Grove	176	969	973	0%	-4	0.1	0	1	0	W IN
SB departure O Grove	178	589	580	-2%	9	0.4	1	0	0	E OUT
NB departure O Grove	181	1170	1075	-8%	95	2.8	0	1	0	W OUT
Bridewell NB	185	3	2	-23%	1	0.4	1	0	0	W IN
SB approach Hough	186	12	13	10%	-1	0.3	1	0	0	W IN
NB departure Hough	187	43	39	-10%	4	0.7	1	0	0	W OUT
SB approach Ave 66	188	587	574	-2%	13	0.6	1	0	0	W IN
WB departure La Riba	189	54	50	-8%	5	0.6	1	0	0	W OUT
NB departure Ave 66	191	23	21	-8%	2	0.4	1	0	0	W OUT
EB approach Marmion	192	31	32	5%	-1	0.2	1	0	0	E IN
WB departure Marmion	193	749	713	-5%	36	1.3	0	1	0	E OUT
Marmion EB btw ramps	194	33	32	-2%	1	0.1	1	0	0	E OUT
WB approach Marmion	195	116	117	1%	-1	0.1	1	0	0	E IN
Ave 60 EB	198	466	470	1%	-4	0.2	1	0	0	E IN / E OUT
Ave 26 NB on	2	260	235	-10%	26	1.6	1	0	0	
Ave 26 EB	20	1172	1176	0%	-4	0.1	0	1	0	
Ave 60 WB	200	494	494	0%	1	0.0	1	0	0	E IN / E OUT
WB departure Marisol	203	466	423	-9%	43	2.0	0	0	0	W OUT
WB approach Marisol	206	299	299	0%	1	0.0	0	0	0	E OUT
EB departure Marisol	207	621	580	-7%	41	1.7	0	0	0	E IN
EB approach Marisol	208	246	251	2%	-5	0.3	0	0	0	W IN
SB approach Homer	209	11	11	1%	0	0.0	1	0	0	E IN
NB off to I-5	21	3935	3919	0%	16	0.3	0	0	1	W OUT

Existing Conditions PM Peak Hour										
Data Collection Point	Link	Count PM	Model PM	Diff %	Diff	GEH	<700 vph	700-2700 v	> 2700 vph	Screenline
NB departure Homer	210	60	59	-2%	1	0.1	1	0	0	E OUT
WB approach Ave 52	215	110	114	4%	-4	0.4	1	0	0	E IN
EB departure Ave 52	216	235	207	-12%	28	1.9	1	0	0	E OUT
SB approach Glen Ellen	219	26	28	6%	-2	0.3	1	0	0	W IN
EB approach Ave 26	22	879	892	2%	-13	0.4	0	1	0	E IN
NB departure Glen Ellen	220	30	30	-2%	1	0.1	1	0	0	W OUT
WB departure Ave 52	221	627	587	-6%	40	1.6	0	0	0	W OUT
EB approach Ave 52	222	576	584	1%	-8	0.3	1	0	0	W IN
EB approach Ave 43	223	319	330	3%	-11	0.6	1	0	0	W IN
WB departure Ave 43	224	378	368	-3%	10	0.5	1	0	0	W OUT
Grevelia EB departure	227	358	342	-4%	16	0.8	1	0	0	E OUT
NB approach Carlota	229	94	95	1%	-1	0.1	1	0	0	W IN
SB departure Carlota	230	61	24	-60%	37	5.7	1	0	0	W OUT
WB approach Ave 43	231	149	151	1%	-2	0.2	1	0	0	E IN
EB departure Ave 43	232	244	237	-3%	7	0.5	1	0	0	E OUT
NB approach O Grove	24	516	453	-12%	63	2.9	0	0	0	E IN
I-5 NB on	242	1693	1696	0%	-3	0.1	0	1	0	E IN
EB approach Ave 22	245	153	155	1%	-2	0.2	1	0	0	W IN
WB departure Ave 22	246	146	145	-1%	1	0.1	1	0	0	W OUT
SB approach Casanova	247	3	3	-13%	0	0.2	1	0	0	E IN
NB departure Casanova	248	41	41	1%	0	0.0	1	0	0	E OUT
Amador SB	249	78	77	-2%	1	0.2	1	0	0	
SB departure Figureoa	25	382	379	-1%	4	0.2	1	0	0	W OUT
SB approach Amador Pl	250	37	36	-2%	1	0.1	1	0	0	W IN
NB departure Amador Pl	251	12	13	11%	-1	0.4	1	0	0	W OUT
Amador NB	252	136	135	-1%	1	0.1	1	0	0	E IN
SB approach Arroyo Dr	253	17	17	-2%	0	0.1	1	0	0	W OUT
NB departure Arroyo Dr	254	17	18	5%	-1	0.2	1	0	0	W IN
SB departure Arroyo Dr	255	27	25	-9%	3	0.5	1	0	0	W OUT
NB approach Arroyo Dr	256	13	13	2%	0	0.1	1	0	0	W IN
SB off Schults	257	147	145	-2%	2	0.2	1	0	0	
SB on Schults	258	147	149	1%	-2	0.2	1	0	0	
north of the Figueroa SB on	26	2482	2442	-2%	40	0.8	0	1	0	
NB off Figueroa	27	748	733	-2%	15	0.6	0	1	0	
NB approach Figueroa	28	680	692	2%	-12	0.5	0	0	0	W IN
NB approach Carlota	295	4	4	-8%	0	0.2	1	0	0	W IN
SB departure Carlota	296	3	3	0%	0	0.0	1	0	0	W OUT
north of the S Fernando NB on	30	4758	4717	-1%	41	0.6	0	0	1	
NB on San Fernando	31	125	120	-4%	5	0.5	1	0	0	
south of the I-5/26 NB on	32	4633	4598	-1%	35	0.5	0	0	1	
EB approach San Fernando	33	347	341	-2%	7	0.4	0	0	0	W IN
I-5 on ramp from Ave 26	34	436	434	0%	2	0.1	1	0	0	E OUT
NB departure Figueroa	36	1384	1463	6%	-79	2.1	0	1	0	W OUT
Amador SB approach to ramp	6	87	88	1%	-1	0.1	1	0	0	W IN
NB on Solano	10010	33	34	2%	-1	0.1	1	0	0	
SB departure Amador	368	107	104	-3%	3	0.3	1	0	0	E OUT
north of Solano on	370	9316	9261	-1%	55	0.6	0	0	1	
north of the NB I-5 off	10084	5381	5336	-1%	46	0.6	0	0	1	
btw Solano ramps	415	9283	9231	-1%	52	0.5	0	0	1	
I-5/Ave 26 NB on	10002	1953	1831	-6%	122	2.8	0	1	0	
north of SB off to 52	384	3182	3164	-1%	18	0.3	0	0	1	
north of NB on from Marisol	385	5386	5196	-4%	190	2.6	0	0	1	
btw Bridewell/Salonica SB ramps	10065	2273	2246	-1%	27	0.6	0	1	0	
SB off Ave 43	39	101	97	-4%	4	0.4	1	0	0	
SB on Ave 57	392	210	213	2%	-3	0.2	1	0	0	
NB btw O Grove & F Oaks	394	3326	3187	-4%	139	2.4	0	0	1	
south of NB off to O Grove	396	4354	4188	-4%	166	2.5	0	0	1	
south of NB off to Bridewell	398	4434	4271	-4%	163	2.5	0	0	1	
SB off Ave 26	40	143	136	-5%	7	0.6	1	0	0	
north of SB off to Bridewell/Salonica	400	2356	2323	-1%	33	0.7	0	1	0	
south of NB off to Marmion	402	5351	5167	-3%	184	2.5	0	0	1	
NB btw Ave 52 & Ave 57	404	5859	5644	-4%	215	2.8	0	0	1	
NB south of Ave 52 off	405	6382	6181	-3%	201	2.5	0	0	1	
north of the SB off to Ave 43	407	3590	3532	-2%	58	1.0	0	0	1	
north of the SB off to I-5	211	3792	3715	-2%	77	1.3	0	0	1	
SB off I-5	41	1167	1133	-3%	34	1.0	0	1	0	W OUT
WB approach Marmion	414	22	21	-5%	1	0.3	1	0	0	W IN

Existing Conditions PM Peak Hour										
Data Collection Point	Link	Count PM	Model PM	Diff %	Diff	GEH	<700 vph	700-2700 v	> 2700 vph	Screenline
SB on from 43	43	303	278	-8%	25	1.5	1	0	0	
btw SB off I-5 and off Ave 26	44	2625	2581	-2%	44	0.9	0	1	0	
WB approach Ave 26	45	1197	1197	0%	0	0.0	0	1	0	E IN
EB approach Ave 26	46	1072	1078	1%	-6	0.2	0	1	0	W IN
WB departure Ave 26	47	1014	1014	0%	0	0.0	0	1	0	W OUT
north of NB on from I-5/26	5	6711	6514	-3%	197	2.4	0	0	1	
SB on from 52	51	488	451	-8%	37	1.7	1	0	0	
SB approach Schults	52	171	174	2%	-3	0.2	1	0	0	W IN
NB departure Schults	54	159	157	-1%	2	0.2	1	0	0	W OUT
NB off Ave 43	55	411	398	-3%	13	0.7	1	0	0	
NB off Ave 60	56	161	156	-3%	6	0.4	1	0	0	
NB on Ave 43	57	82	78	-5%	4	0.4	1	0	0	
NB on Ave 60	58	126	128	2%	-2	0.2	1	0	0	
SB on from Amador	10004	136	136	0%	0	0.0	1	0	0	
SB on from La Riba/66	60	557	566	2%	-9	0.4	1	0	0	
NB off to Bridewell	61	80	75	-6%	5	0.6	1	0	0	
NB approach Bridewell	63	15	15	1%	0	0.0	1	0	0	W IN
btw Ave 52 SB ramps	64	3102	3086	-1%	16	0.3	0	0	1	
btw Ave 57 SB ramps	65	2972	2953	-1%	20	0.4	0	0	1	
SB approach Ave 57	66	213	217	2%	-4	0.2	1	0	0	W IN
SB departure Bridewell	68	14	12	-11%	2	0.4	1	0	0	W OUT
SB off to Ave 52	69	80	77	-4%	3	0.3	1	0	0	
NB departure Ave 57	70	75	77	3%	-2	0.2	1	0	0	W OUT
SB approach Bridewell	71	41	42	3%	-1	0.2	1	0	0	W IN
btw Ave 52 NB ramps	73	5761	5558	-4%	203	2.7	0	0	1	
NB on Marisol	75	70	69	-2%	1	0.1	1	0	0	
btw Marisol ramps NB	76	5317	5126	-4%	191	2.6	0	0	1	
NB off Ave 52	77	621	572	-8%	49	2.0	1	0	0	
NB off to Marisol	78	543	521	-4%	22	1.0	1	0	0	
NB departure Bridewell	79	5	6	24%	-1	0.5	1	0	0	W OUT
SB btw Amador and Academy	8	5971	5930	-1%	41	0.5	0	0	1	
SB on Salonica/Bridewell	80	213	217	2%	-4	0.3	1	0	0	
SB off Salonica/Bridewell	81	83	79	-4%	4	0.4	1	0	0	
NB off to O Grove	10070	1124	1061	-6%	63	1.9	0	1	0	
btw ave 60 NB ramps	421	5225	5040	-4%	185	2.6	0	0	1	
NB on O Grove	86	96	86	-10%	10	1.0	1	0	0	
south of the I-5 SB on	9	6018	5980	-1%	38	0.5	0	0	1	
SB off O Grove	91	111	112	1%	-1	0.1	1	0	0	
NB off Marmion	92	917	866	-6%	51	1.7	0	1	0	
SB approach Salonica	95	195	198	2%	-3	0.2	1	0	0	W IN
SB btw O Grove ramps	96	1492	1491	0%	1	0.0	0	1	0	
NB departure Salonica	98	102	98	-4%	4	0.4	1	0	0	W OUT
bwt NB ramps Ave 43	287	6300	6108	-3%	192	2.4	0	0	1	
SB off Ave 57	10045	71	73	3%	-2	0.3	1	0	0	
SB btw Ave 43 ramps	10033	3489	3436	-2%	53	0.9	0	0	1	
EB departure Ave 26	20	701	729	4%	-28	1.0	0	1	0	E OUT
WB departure Amador	369	83	82	-2%	1	0.2	1	0	0	W OUT
EB departure Solano	17	121	116	-4%	5	0.5	1	0	0	E OUT
EB approach La Riba	190	45	42	-6%	3	0.4	1	0	0	W IN

California Department of Transportation (Caltrans), District 7

ARROYO SECO PARKWAY CORRIDOR PARTNERSHIP PLAN - VISSIM TRAVEL TIME RESULTS

DRAFT TECHNICAL MEMORANDUM

REVISED SEPTEMBER 14, 2012

IBI GROUP

DOCUMENT CONTROL

Client:	California Department of Transportation (Caltrans), District 7
Project Name:	Arroyo Seco Parkway Corridor Partnership Plan
Report Title:	Arroyo Seco Parkway Corridor Partnership Plan - VISSIM Travel Time Results
IBI Reference:	31097
Version:	1
Digital Master:	[File Location]
Originator:	tf
Reviewer:	[Name]
Authorization:	[Name]
Circulation List:	
History:	

Table of Contents

1. INTRODUCTION 1

2. PROJECT DESCRIPTION 2

3. CALIBRATION 2

4. FIELD REVIEW & TRAVEL TIME DATA 2

5. TRAVEL TIME ANALYSIS 4

5.1 Existing Conditions – Year 2010 4

5.2 No Build Scenario – Year 2035 5

5.3 Alternative 1 Scenario – Year 2035 6

5.4 Alternative 2 Scenario – Year 2035 10

5.5 Year 2035 Comparison 12

6. VISSIM MODEL OBSERVATIONS 14

6.1 Existing Conditions Scenario 14

6.2 No Build Scenario 14

6.3 Alternative 1 Scenario 14

6.4 Alternative 2 Scenario 15

7. CONCLUSIONS 16

Figures

Figure 1. Project Study Area 3

1. INTRODUCTION

This memo documents the travel time results obtained from the microsimulation model developed for the Arroyo Seco Parkway Corridor Partnership Plan (CPP). The VISSIM model was developed as technical support for the development of the CPP, and has the purpose to assess the potential operational impacts of changes to the current geometric and access conditions within the corridor.

Summary of Conclusions

VISSIM microsimulation is designed to provide a more detailed analysis for travel time and a visual representation of the proposed scenarios. VISSIM has the technical ability to model driver behavior and aggressiveness to more accurately reflect 'real world' operations. The VISSIM model provided the opportunity to identify problem areas and look for opportunities where lane geometrics may need to be adjusted or possibly ramp termini controls and/or signal timing improved which in turn would improve some sections of the parkway's operations.

In general, there were deficiencies observed at several sections on the parkway. In general, the same theme of issues occurred in all of the scenarios analyzed:

- Long queues at on-ramps due to lack of an acceleration lane
- Spillback on the parkway due to long queues on off-ramps hindering the flow of traffic
- Congestion due to spillbacks and freeway to freeway mergers

These issues are to be expected within a corridor that operates at or above capacity. As the design for the Arroyo Seco Parkway continues, the microsimulation can be further refined and operational deficiencies observed as the design progresses or changes. Several key ramp termini that were observed to effect how smooth traffic operations flow through the corridor: Ave 43, Ave 52, and Orange Grove Blvd. These intersections can be reviewed further (i.e. signal timing adjustment or signal warrant) to improve operations, which would ultimately improve the overall operations of the parkway that is affected by the traffic entering/exiting these ramps.

The analysis of the scenarios indicates that the alternatives do not impact significantly the time to travel between the northern and southern termini. Considering future conditions, the implementation of the auxiliary lane in Alternative 1 is estimated to impact travel times by 20% in the worst case scenario. Alternative 2 has similar behavior, but impacts to travel times in less than 10%.

Most delays resulting from Alternative 1 (auxiliary lanes) occur near the Avenue 43 and Avenue 52 on and off-ramps. North of Avenue 52, the auxiliary lane concept has very little influence on traffic delays within the corridor.

2. PROJECT DESCRIPTION

The Study Area for this project encompasses the segment of the SR-110 north of Stadium Way and Hill Street in Los Angeles, until the northern terminus of the parkway, at Glenarm Street in Pasadena, as well as all the ramps that connect to the facility and ramp termini. The corridor modeled is approximately 7 miles long and has 29 access points. Figure 1 illustrates the Study Area.

3. CALIBRATION

The microsimulation model calibration results are provided in the Microsimulation Calibration Technical Memorandum dated August 30, 2012 and provided under separate cover.

4. FIELD REVIEW & TRAVEL TIME DATA

Field reviews were conducted on January 25, 2012 and March 27, 2012 to collect travel time data and to assess visually the behavior of traffic during peak periods. In the northbound direction, data was collected from the Stadium Way on ramp to Glenarm Street (36,940.5 ft). In the opposite direction, data was collected from Glenarm Street to the Stadium Way exit (36,850 ft). Data collected is summarized in Table 3-1.

Table 4-1 –Corridor Travel Time (minutes) – Existing Conditions

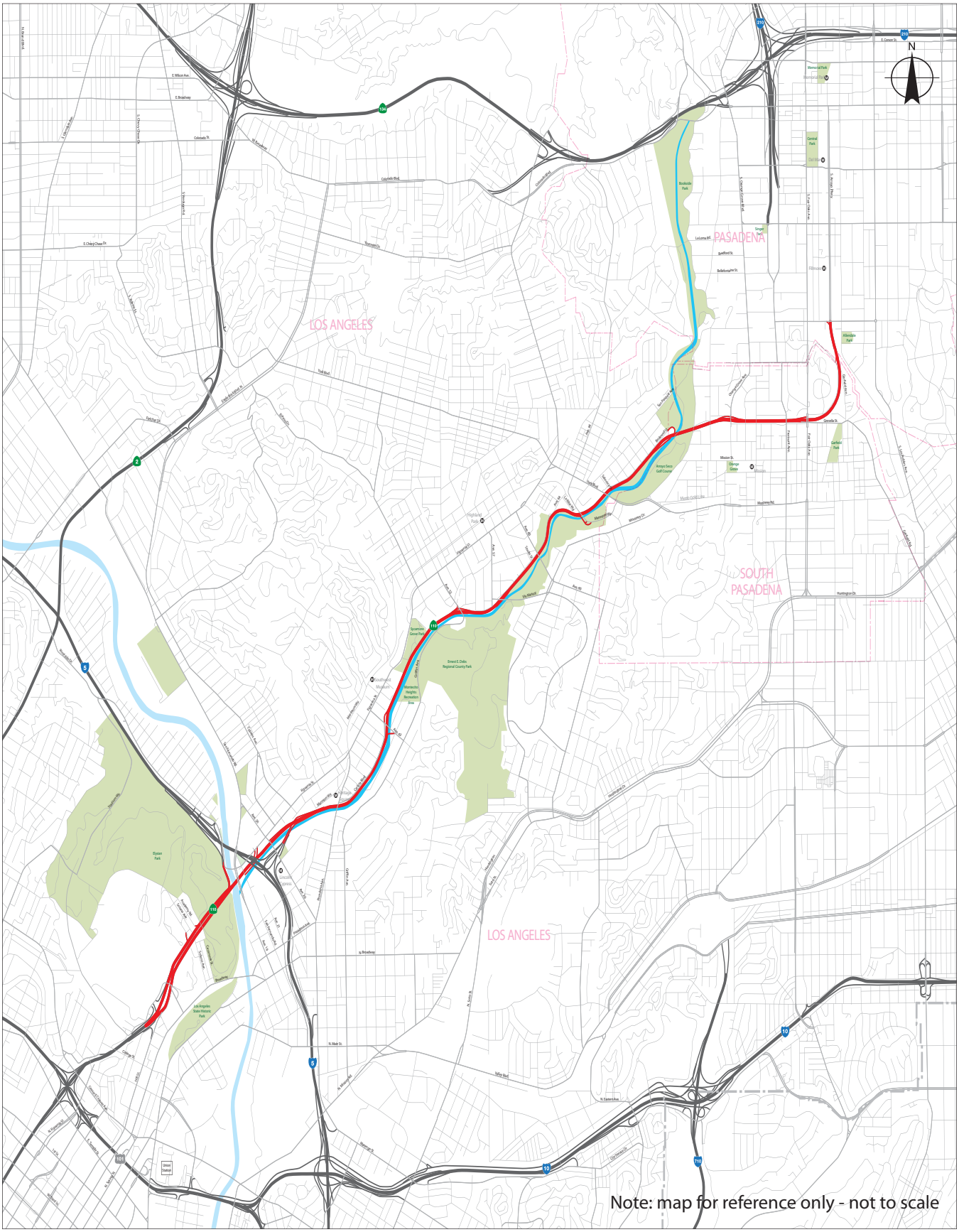
Direction	Peak Period	Run 1 (min.)	Run 2 (min.)	Run 3 (min.)	Run 4 (min.)	Run 5 (min.)	Run 6 (min.)	Mean	Std. Dev.
Northbound	AM	7.75	8.52	7.95	**8.55**	7.67	7.22	7.94	0.52
	PM	9.00	9.17	10.42	10.57	10.08		9.85	0.72
Southbound	AM	19.58	21.42	19.20	**10.45**	**12.05**	**16.43**	16.52	1.18
	PM	8.00	7.60	8.40	8.30	8.17	8.58	8.18	0.34

Note: bold denotes data collected on March 27, 2012

Travel times along the corridor were collected for the segment by driving the corridor's extent 6 times in each direction during the AM peak period, and 5 times in the northbound direction and 6 times in the southbound direction in the PM peak period. On average, travel times during AM peak period were 8 minutes in the northbound direction, and 17 minutes in the southbound direction. In the PM peak period, times are more balanced, with the northbound average travel time increasing slightly to 10 minutes, and southbound times decreasing to 8 minutes.

In the AM peak period, southbound traffic was observed to slow down south of Ave 52 (average speed under 25 mph until the end of the study area), while northbound traffic was able to drive at close to free-flow conditions. In the PM peak period, northbound traffic is very heavy (with speeds under 30 mph) up to the interchange with I-5, but speeds picked up after this exit and vehicles traveled at speeds of at least 50 mph in most segments until the northern terminus of the corridor, with the exception of the segment approaching Glenarm St, where speeds dropped once again to close to 40 mph.

Figure 1 - Project Study Area



5. TRAVEL TIME ANALYSIS

This section focuses on the travel time data collected from the VISSIM model. The travel time results for the corridor are summarized in the section below. Travel times were evaluated on the Arroyo Seco Parkway for vehicular traffic for the AM and PM peak hours for northbound and southbound traffic. In VISSIM, the average travel time (including waiting or dwell times) is determined as the time a vehicle crosses the first cross section to when it crosses the second cross section. The travel time data for the Arroyo Seco Parkway was recorded for the length of Stadium Way on ramp to Glenarm Street in the northbound direction, and for the length of Glenarm Street to the Stadium Way exit in the southbound direction as well as individual ramp to ramp travel time sections. The travel time summary reflects the time spent to drive from one end of the corridor to the other, as well as the amount of vehicles that traveled through this segment. A summary of the full corridor travel time results are shown in the following subsections.

5.1 Existing Conditions – Year 2010

In the AM peak hour, it is estimated that about 5,830 vehicles enter the corridor (traveling northbound) through the south terminus. In the southbound direction about 1,535 vehicles enter the corridor at Glenarm Street and over 8,000 depart the corridor southbound at the southern terminus of the simulation length at Stadium Way. Interstate 5 is a major entry and departure point for trips traveling in the corridor.

The AM peak hour travel time section defined between Amador Street and Glenarm Street for the northbound direction was an average of 8 minutes in VISSIM. The VISSIM model was able to process about 831 vehicles through the corridor. As previously stated in the field review summary, the existing AM northbound travel time was 8 minutes. The VISSIM model calculated 14 minutes and 343 vehicles through the corridor for the southbound direction during the AM peak hour. The field review averaged 17 minutes in the southbound AM peak hour for the corridor.

The PM peak hour travel time section defined between Amador Street and Glenarm Street for the northbound direction was an average of 9 minutes and 820 vehicles in VISSIM. In the field review summary, the existing PM northbound travel time was 10 minutes. The VISSIM model calculated 8 minutes and 270 vehicles through the corridor for the southbound direction during the AM peak hour. The field review averaged 8 minutes in the southbound AM peak hour for the corridor.

It should be noted that these travel times are recorded for vehicles that pass through the start and destination cross sections of the corridor marked in VISSIM. A summary of the travel time results for the existing scenario is shown in Table 5-1.

The VISSIM travel time analysis summary sheets which include the ramp to ramp calculations are attached in Appendix A.

Table 5-1 –Corridor Travel Time (minutes) – VISSIM Model Existing Conditions

Segment Boundary	Peak Hour	Direction	Existing 2010	
			Average	Volume
Amador St to Glenarm St	AM	NB	8	831
	PM	NB	9	820
Glenarm St to Amador St	AM	SB	14	343
	PM	SB	8	270

Notes:

1. Average refers to the average travel time to pass through the corridor in minutes during the peak hour.
2. Volume refers to the number of vehicles that were able to pass the start and destination markers within the VISSIM model.

5.2 No Build Scenario – Year 2035

The No Build scenario assumes that the existing lane geometrics will remain the same on the Arroyo Seco Parkway. The Year 2035 No Build traffic conditions were obtained from the localized traffic model developed for the Arroyo Seco Parkway planning project analysis. The Year 2035 No Build scenario was modeled consistent with the 2008 Regional Transportation Plan (2008 RTP). A sensitivity analysis was conducted considering the gap closure in the SR-710 freeway in the northern portion of the study area. Overall traffic growth at the corridor northern and southern termini averages 5% in this period, with the exception of the traffic in the southbound direction, which experiences traffic growth of about 25%.

A number of different concepts are currently being considered to close the gap in the SR-710 freeway from Valley Boulevard to Del Mar Boulevard. In addition to the base condition, a sensitivity analysis was completed including an extension of SR-710. The 710 freeway extension has been modeled as an 8-lane tunnel facility with three general purpose and one HOV lane, no intermediate access points (ramps) and no toll. This configuration was consistent with the proposed in the 2008 Regional Transportation Plan developed by the Southern California Association of Governments (SCAG). The gap closure in the SR-710 freeway could be used as a travel alternative to the Arroyo Seco Parkway, as it provides additional connection between Pasadena and the I-5.

The average travel time calculated in VISSIM for the No Build scenario was 9 minutes and 571 vehicles in the AM peak hour for the northbound direction. The VISSIM model calculated 14 minutes and 260 vehicles through the corridor for the southbound direction during the same period. As compared to the existing model travel time results, the delay has increased slightly for the AM peak hour in both directions; however, the number of vehicles able to pass through the start and end destinations markers reduced significantly by 260 trips in the northbound and 83 vehicles in the southbound direction.

The PM peak hour travel time section defined between Amador Street and Glenarm Street for the northbound direction was an average of 11 minutes and 550 vehicles in VISSIM. The VISSIM model calculated 8 minutes and 235 vehicles through the corridor for the southbound direction during the PM peak hour. As compared to the existing model travel time results, the delay remained basically the same in the southbound direction, but increased in the northbound direction. The number of vehicles able to pass through the start and end destinations markers reduced significantly by 270 trips in the northbound and 35 vehicles in the southbound direction.

The average travel time calculated in VISSIM for the No Build (SR-710 Sensitivity Analysis) was 9 minutes and 548 vehicles in the AM peak hour for the northbound direction. The VISSIM model calculated 13 minutes and 194 vehicles through the corridor for the southbound direction during the AM peak hour. As compared to the existing model travel time results, the delay has increased slightly for the AM peak hour in the northbound direction; however, the number of vehicles forecast to pass through the start and end destinations markers reduced by 283 trips in the northbound and 149 vehicles in the southbound direction. .

The PM peak hour travel time section defined between Amador Street and Glenarm Street for the northbound direction was an average of 12 minutes and 535 vehicles in VISSIM. The VISSIM model calculated 8 minutes and 203 vehicles through the corridor for the southbound direction during the PM peak hour. As compared to the existing model travel time results, the delay has increased slightly for the AM peak hour in both directions; however, the number of vehicles forecast to pass through the start and end destinations markers reduced significantly by 285 trips in the northbound and 67 vehicles in the southbound direction

A summary of the travel time results for the No Build scenario is shown in Table 5-2.

Table 5-2 – No Build (Year 2035) Corridor Travel Time (minutes)

Segment Boundary	Peak Hour	Dir.	Existing 2010		No Build 2035		NB SR-710 SA 2035	
			Average	Volume	Average	Volume	Average	Volume
Amador St to Glenarm St	AM	NB	8	831	9	571	9	548
	PM	NB	9	820	11	550	12	535
Glenarm St to Amador St	AM	SB	14	343	14	260	13	194
	PM	SB	8	270	8	235	8	203

Notes:

1. Average refers to the average travel time to pass through the corridor in minutes during the peak hour.
2. Volume refers to the number of vehicles that were able to pass the start and destination markers within the VISSIM model.

The results above show that there are no significant differences in travel time between the No Build scenarios, but as expected, the volumes using the full length of the corridor are lower in the SR-710 Sensitivity Analysis. The major difference in travel times in the northbound direction between the two No Build scenarios is due to congestion in the vicinity of the NB off-ramp to Avenue 43, which has a greater off-ramp volume in the SR-710 Sensitivity Analysis scenario.

5.3 Alternative 1 Scenario – Year 2035

Alternative 1 scenario assumes that selected segments of Arroyo Seco Parkway would be converted from three through lanes to two through lanes with an auxiliary lane between ramps. This concept would provide additional acceleration lane length for vehicles where a stop sign precedes entry onto the parkway. These on-ramps would have an exclusive lane on entry and a weave segment to merge into adjacent through lanes. This scenario also includes a change in the posted speed limit, lowering the existing 55 mph limit to 45 mph. The horizon year for analysis is 2035, and consistent with the No Build scenario, the SR-710 Sensitivity Analysis was performed for this alternative. The proposed locations for auxiliary lanes on northbound Arroyo Seco Parkway are noted in Table 5-3, and Table 5-4 shows the auxiliary lane locations in the southbound direction.

Table 5-3 – Northbound Arroyo Seco Parkway – Proposed Auxiliary Lane Locations

Segment	Length (ft)	Existing Condition			Alternative 1 Proposed Condition		
		Main line Lanes	Aux Lanes	Shoulder	Main line Lanes	Aux Lanes	Shoulder
I-5 on to Ave 43	4,680	3	--		2	1	
Btwn Ave 43 off and Ave 43 on	50	3	--		2	--	
Btwn Ave 43 on and Ave 52 off	4,940	3	--		2	1	
Btwn Ave 52 off and Ave 52 on	460	3	--		2	--	X
Btwn Ave 52 on and Ave 57 off	1,180	3	--		2	1	
Btwn Ave 57 off and Ave 57 on	600	3	--		2	--	X
Btwn Ave 57 on and Ave 60 off	2,080	3	--		2	1	
Btwn Ave 60 off and Ave 60 on	50	3	--		2	--	
Btwn Ave 60 on and Ave 64 off		3	--		2	1	
South of Bridewell off		3	--		3	--	
Btwn Bridewell off and OG off		3	--		3	--	
Btwn OG off and OG on	925	3	--		2	--	X
Btwn OG on and Fair Oaks off	2,490	3	--		3	--	

Table 5-4 – Southbound Arroyo Seco Parkway – Proposed Auxiliary Lane Locations

Segment	Length (ft)	Existing Condition			Alternative 1 Proposed Condition		
		Main line Lanes	Aux Lanes	Shoulder	Main line Lanes	Aux Lanes	Shoulder
North of State/Fair Oaks exit		3	1		3	1	
Btwn Fair Oaks off and on	1,500	2	--	X	2	--	X
Btwn Fair Oaks on and OG off		2	1		2	1	
Btwn OG off and OG on	1,250	2	--	X	2	--	X
Btwn OG on and York off	4,990	3	--		2	1	
York on	500	3	--		2	1	
South of York on to Ave 64 on	100	3	--		2	--	X
Btwn Ave 64 on and Ave 60 off	2,570	3	--		2	1	
Btwn Ave 60 off and Ave 60 on	50	3	--		2	--	
Btwn Ave 60 on and Ave 57 off	2,080	3	--		2	1	
Btwn Ave 57 off and Ave 57 on	100	3	--		2	--	
Btwn Ave 57 on and Ave 52 off	980	3	--		2	1	
Btwn Ave 52 off and Ave 52 on	525	3	--		2	--	X
Btwn Ave 52 on and Ave 43 off	4,200	3	--		2	1	
Btwn Ave 43 off and Ave 43 on	100	3	--		2	--	

The average travel time calculated in VISSIM for the Alternative 1 scenario was 10 minutes and 641 vehicles in the AM peak hour for the northbound direction. The VISSIM model calculated 14 minutes and 220 vehicles through the corridor for the southbound direction during the AM peak hour. As compared to the No Build model travel time results, the delay has increased a maximum of one minute for the AM peak hour in the northbound direction; however, the number of vehicles forecast to pass through the start and end destinations markers increased by 70 trips in the northbound and reduced by 10 vehicles in the southbound direction. This can be explained by the fact that, in this scenario, more vehicles are forecast to travel the whole corridor in the northbound direction and fewer are forecast to travel the whole length of the corridor in the southbound direction.

The PM peak hour travel time in the section between Amador Street and Glenarm Street for the northbound direction was an average of 15 minutes and 540 vehicles in VISSIM. The VISSIM model calculated 9 minutes and 190 vehicles through the corridor for the southbound direction during the PM peak hour. As compared to the existing model travel time results, the delay has increased slightly for the AM peak hour in both directions; however, the number of vehicles forecast to pass through the start and end destinations markers was reduced by 40 trips in the northbound and 45 vehicles in the southbound direction. This difference is partially a result of changing travel patterns forecast in the future condition. Fewer vehicles are forecast to utilize the whole corridor in Alternative 1 compared to the No Build condition.

A summary of the travel time results for the Alternative 1 is shown in Table 5-5. The VISSIM travel time analysis summary sheets which include the ramp to ramp calculations are attached in Appendix A.

Table 5-5 –Corridor Travel Time (minutes) – Alternative 1 (Year 2035)

Segment Boundary	Peak Hour	Dir.	Existing 2010		No Build 2035		NB SR-710 SA 2035		Alternative 1 2035		Alternative 1 SR-710 SA 2035	
			Average	Volume	Average	Volume	Average	Volume	Average	Volume	Average	Volume
Amador St to Glenarm St	AM	NB	8	831	9	571	9	548	10	641	10	556
	PM	NB	9	820	11	550	12	535	15	540	14	505
Glenarm St to Amador St	AM	SB	14	343	14	260	13	194	14	220	14	142
	PM	SB	8	270	8	235	8	203	9	190	9	153

Notes:

1. Average refers to the average travel time to pass through the corridor in minutes during the peak hour.
2. Volume refers to the number of vehicles that were able to pass the start and destination markers within the VISSIM model.

The results above show that there are no significant differences in travel time between the Alternative 1 scenarios, but as expected the volumes using the full length of the corridor are lower in the SR-710 Sensitivity Analysis. Both scenarios show an increase in delay in the vicinity of the northbound off-ramp to Avenue 43, where a lane reduction was implemented to configure the beginning of the auxiliary lane.

5.4 Alternative 2 Scenario – Year 2035

The Alternative 2 scenario assumes that, in addition to the reduction of the posted speed limit from 55 mph to 45 mph, selected onramps will be closed on the Arroyo Seco Parkway. The following ramps are assumed to be closed in Alternative 2:

- Northbound Onramp from Solano Avenue
- Northbound Onramp from Avenue 52
- Northbound Onramp from Avenue57/Via Marisol

The average travel time calculated in VISSIM for the Alternative 2 scenario was 10 minutes and 594 vehicles in the AM peak hour for the northbound direction. The VISSIM model calculated 15 minutes and 222 vehicles through the corridor for the southbound direction during the AM peak hour. As compared to the No Build model travel time results, the delay has increased slightly for the AM peak hour in both directions; however, the number of vehicles able to pass through the start and end destinations markers increased by 23 trips in the northbound and reduced by 38 vehicles in the southbound direction. The volumes forecast to use the whole corridor for both scenarios is the same in the northbound direction, but the total volume of vehicles using the corridor is reduced in Alternative 2 since specific on-ramps are closed. In the southbound direction, volumes in Alternative 2 are lower in both cases.

The PM peak hour travel time section defined between Amador Street and Glenarm Street for the northbound direction was an average of 14 minutes and 601 vehicles in VISSIM. The VISSIM model calculated 9 minutes and 196 vehicles through the corridor for the southbound direction during the PM peak hour. As compared to the No Build model travel time results, the delay has increased slightly for the AM peak hour in both directions; however, the number of vehicles able to pass through the start and end destinations markers increased by 51 trips in the northbound and is reduced by 39 vehicles in the southbound direction. The volumes forecast to travel the whole length of the corridor are higher in Alternative 2 in the northbound direction, and lower in the southbound direction when compared to the No Build condition..

A summary of the travel time results for the Alternative 2 (and respective SR-710 Sensitivity Analysis) scenario are shown in Table 5-6. The VISSIM travel time analysis summary sheets which include the ramp to ramp calculations are attached in Appendix A.

Table 5-6 –Corridor Travel Time (minutes) – Alternative 2 (Year 2035)

Segment Boundary	Peak Hour	Dir.	Existing 2010		No Build 2035		NB SR-710 SA 2035		Alternative 2 2035		Alternative 2 SR-710 SA 2035	
			Average	Volume	Average	Volume	Average	Volume	Average	Volume	Average	Volume
Amador St to Glenarm St	AM	NB	8	831	9	571	9	548	10	594	10	554
	PM	NB	9	820	11	550	12	535	14	601	13	541
Glenarm St to Amador St	AM	SB	14	343	14	260	13	194	15	222	15	151
	PM	SB	8	270	8	235	8	203	9	196	9	197

Notes:

1. Average refers to the average travel time to pass through the corridor in minutes during the peak hour.
2. Volume refers to the number of vehicles that were able to pass the start and destination markers within the VISSIM model.

As with the previous scenarios, Alternative 2 does not show significant differences in travel time between the scenario with and without the SR-710 connection. Also consistent with the other alternatives, the volumes that traverse the entire corridor are lower in the SR-710 Sensitivity Analysis. Volumes in the Alternative 2 SR-710 Sensitivity Analysis Scenario are lower in the northbound direction when compared to the base Alternative 2 volumes.

5.5 Year 2035 Comparison

Future year scenarios are derived from the subarea regional model developed for the Arroyo Seco Parkway Corridor Partnership Plan, and although no major differences in the volumes that use the corridor are observed, the demands and traffic distribution are different for each scenario analyzed, and affect the dynamics of the simulation in different ways. Table 5-7 presents a comparison between the three future year scenarios.

Table 5-7 –Corridor Travel Time (minutes) –Year 2035 Scenarios

Segment Boundary	Peak Hour	Dir.	No Build 2035		NB SR-710 SA 2035		Alternative 1 2035		Alternative 1 SR-710 SA 2035		Alternative 2 2035		Alternative 2 SR-710 SA 2035	
			Average	Volume	Average	Volume	Average	Volume	Average	Volume	Average	Volume	Average	Volume
Amador St to Glenarm St	AM	NB	9	571	9	548	10	641	10	556	10	594	10	554
	PM	NB	11	550	12	535	15	540	14	505	14	601	13	541
Glenarm St to Amador St	AM	SB	14	260	13	194	14	220	14	142	15	222	15	151
	PM	SB	8	235	8	203	9	190	9	153	9	196	9	197

Notes:

1. Average refers to the average travel time to pass through the corridor in minutes during the peak hour.
2. Volume refers to the number of vehicles that were able to pass the start and destination markers within the VISSIM model.

6. VISSIM MODEL OBSERVATIONS

6.1 Existing Conditions Scenario

As previously stated, the existing conditions modeled in VISSIM were compared to the field observations for both the AM and PM peak hour for the northbound and southbound direction. Given the comparison of existing to the field review data, no significant issues were identified with the existing conditions AM and PM VISSIM model. However, the following operational issues (similar to field conditions) were noted as present within the model's operations:

- Acceleration distance is too short for cars entering the parkway following a stop sign (AM and PM)
- There is significant congestion near the I-5 merge (SB for AM, NB for PM)
- Occasional congestion near the I-5 NB off-ramp due to weaving (AM)
- Long queues at La Riba/Ave 66 SB on-ramp (AM and PM)
- Long queues at Ave 52/Glen Ellen SB on-ramp (AM)
- Congestion NB preceding Solano Ave (PM)
- Congestion on the curve preceding the Marmion Way NB off-ramp (PM)

6.2 No Build Scenario

In the Horizon Year 2035 No Build scenarios, significant operational deficiencies were observed for both the northbound and southbound direction during both peak hours. These deficiencies result from forecast increases in baseline traffic volumes in the study area. Results obtained from the SR-710 Sensitivity Analysis are consistent with the results obtained from the base model run. The main issues which contributed to the deficient operations and inability for the model to process all the volume inputs on the parkway observed during the No Build scenario are the same as the existing conditions scenario with the addition of :

- Spillback onto the parkway at Orange Grove northbound off-ramp due to northbound left turn queue at the southbound SR-110 on-ramp blocking lanes resulting in heavy congestion northbound on the parkway (PM)

As noted in the previous section, the volume differences between the without and with I-710 scenario did not result in significant differences between the two scenarios, and the observations in VISSIM were determined to be the same for both without and with I-710.

6.3 Alternative 1 Scenario

In the Horizon Year 2035 Alternative 1 scenarios, significant operational deficiencies were again observed for both the northbound and southbound direction during both peak hours. . The primary issues observed during the Alternative 1 analysis are consistent with for the No Build condition, with the following additions:

- Heavy congestion at Ave 43 northbound and southbound off-ramps due to vehicles in auxiliary lane blocking traffic in order to merge to the two far left lanes (AM and PM)
- Heavy congestion at Ave 52 northbound and southbound off-ramps due to vehicles in auxiliary lane blocking traffic in order to merge to the two far left lanes (AM)

- Occasional congestion at the Avenue 60 southbound off-ramps due to vehicles in auxiliary lane blocking traffic in order to merge to the two far left lanes (AM)

The majority of the congestion observed in the VISSIM model for Alternative 1 is due to traffic in the auxiliary lane trying to merge left to the two general purpose lanes. This results in a spillback effect in the northbound direction south of Avenue 43 in the PM peak hour. The AM peak hour shows the same results; however, the congestion is shown for both northbound and southbound and more centralized around the on/off ramps without extending as far through the network as was observed in the PM peak hour.

Similar to the No Build scenario, the observations in VISSIM were determined to be the same for both the base condition and the SR-710 Sensitivity Analysis for Alternative 1.

6.4 Alternative 2 Scenario

- In the Horizon Year 2035 Alternative 2 scenarios, significant operational deficiencies were also observed for both the northbound and southbound direction during both peak hours This alternative (and SR-710 Sensitivity Analysis) present the same operational issues as the No Build Scenario.

Similar to the previous scenarios, the observations in VISSIM were determined to be the same for both the base condition and the SR-710 Sensitivity Analysis for Alternative 2.

7. CONCLUSIONS

VISSIM microsimulation is designed to provide a more detailed analysis for travel time and a visual representation of the proposed scenarios. VISSIM has the technical ability to model driver behavior and aggressiveness to more accurately reflect 'real world' operations. The VISSIM model provided the opportunity to identify problem areas and look for opportunities where lane geometrics may need to be adjusted or possibly ramp termini controls and/or signal timing improved which in turn would improve some sections of the parkway's operations.

In general, there were deficiencies observed at several sections on the parkway. In general, the same theme of issues occurred in all of the scenarios analyzed:

- Long queues at on-ramps due to lack of an acceleration lane
- Spillback on the parkway due to long queues on off-ramps hindering the flow of traffic
- Congestion due to spillbacks and freeway to freeway mergers

These issues are to be expected within a corridor that operates at or above capacity. As the design for the Arroyo Seco Parkway continues, the microsimulation can be further refined and operational deficiencies observed as the design progresses or changes. Several key ramp termini that were observed to effect how smooth traffic operations flow through the corridor: Ave 43, Ave 52, and Orange Grove Blvd. These intersections can be reviewed further (i.e. signal timing adjustment or signal warrant) to improve operations, which would ultimately improve the overall operations of the parkway that is affected by the traffic entering/exiting these ramps.

The analysis of the scenarios indicates that the alternatives do not impact significantly the time to travel between the northern and southern termini. Considering future conditions, the implementation of the auxiliary lane in Alternative 1 is estimated to impact travel times by 20% in the worst case scenario. Alternative 2 has similar behavior, but impacts to travel times in less than 10%.

Most delays resulting from Alternative 1 (auxiliary lanes) occur near the Avenue 43 and Avenue 52 on and off-ramps. North of Avenue 52, the auxiliary lane concept has very little influence on traffic delays within the corridor.

APPENDIX A - RAMP TO RAMP CALCULATIONS

	NB		SB		State-FOaks on SB	State-FOaks on SB	Glenarm-State SB	Glenarm-State SB	Fair Oaks-Orange Grove SB	Fair Oaks-Orange Grove SB	Orange Grove-Bnd/Salonica SB	Orange Grove-Bnd/Salonica SB	Bnd/Salonica-Ave64 SB	Bnd/Salonica-Ave64 SB	Ave 64-Ave 60 SB	Ave 64-Ave 60 SB	Ave 60-Ave 57 SB	Ave 60-Ave 57 SB	Ave 57-Ave 52 SB	Ave 57-Ave 52 SB	Ave57-Ave 52 SB	Ave 52-Ave 43 SB	Ave 52-Ave 43 SB	Ave 43-I5 SB	Ave 43-I5 SB	I5-Ave 26 SB	I5-Ave 26 SB	Ave 26-Fig SB	Ave 26-Fig SB	Fig-I5 SB	Fig-I5 SB	I5-Academy SB	I5-Academy SB	Academy-Amador SB	Academy-Amador SB	S-Solano NB	S-Solano NB	Solano-I5 NB	Solano-I5 NB	I5-Fig NB	I5-Fig NB	Fig-S Fernando NB	Fig-S Fernando NB	F Fernando-Ave2/65 NB	F Fernando-Ave2/65 NB	Ave26-I5-Ave 43 NB	Ave26-I5-Ave 43 NB	Ave 43-Ave 52 NB	Ave 43-Ave 52 NB	Ave 52-Ave 57 NB	Ave 52-Ave 57 NB	Ave 57-Ave 60 NB	Ave 57-Ave 60 NB	Ave 60-Marmion NB	Ave 60-Marmion NB	Ave 60-Marmion NB	Marmion-Bridewell NB	Marmion-Bridewell NB	Bridewell-O Grove NB	Bridewell-O Grove NB	O Grove-F Oaks NB	O Grove-F Oaks NB	F Oaks-Glenarm NB	F Oaks-Glenarm NB
Alternative	Time	Throughput	Time	Throughput																																																													
Existing AM	8	831	14	343	0.86	1368	0.28	1009	0.39	1294	0.94	2183	0.43	3518	0.53	4304	0.4	4308	0.2	4512	0.91	5042	1.07	5254	0.46	3362	1.58	3207	1.93	3667	1.53	3532	1.06	7388	0.26	5853	0.41	3343	0.2	2893	0.15	2893	0.48	2968	0.93	4162	0.98	3513	0.21	3602	0.41	3316	0.4	3297	0.77	2703	0.59	2702	0.42	2089	1.50	1343
NB 710 AM	9	548	13	194	0.87	1334	0.26	544	0.38	1252	0.94	2152	0.43	3506	0.53	4296	0.40	4313	0.20	4497	0.92	5079	1.04	5204	0.44	3412	1.48	3247	1.78	3743	1.42	3613	1.00	7452	0.26	6185	0.42	3704	0.20	3210	0.15	3208	0.48	3276	1.68	4235	1.00	3644	0.23	3766	0.41	3494	0.41	3454	0.78	2859	0.59	2858	0.49	2316	1.55	935
NB no 710 AM	9	571	14	260	0.87	1432	0.28	758	0.38	1357	0.94	2201	0.43	3594	0.54	4413	0.40	4383	0.20	4586	0.92	5147	1.07	5282	0.48	3400	1.54	3234	1.95	3700	1.51	3550	1.05	7383	0.27	6132	0.41	3661	0.21	3145	0.15	3144	0.48	3219	1.19	4344	0.98	3739	0.24	3844	0.41	3544	0.41	3566	0.78	2940	0.59	2940	0.45	2393	1.59	1072
Alt 1 710 AM	10	556	14	142	1.00	974	0.26	387	0.46	902	1.15	1756	0.47	2947	0.6	3653	0.48	3653	0.22	3868	1.00	4342	1.08	4583	0.36	3198	1.13	3093	1.74	3597	1.48	3478	1.04	7388	0.32	6032	0.49	3485	0.25	2942	0.19	2944	0.58	3015	1.21	3902	1.16	3258	0.25	3369	0.47	3045	0.49	2988	0.94	2447	0.67	2451	0.51	1921	1.55	832
Alt 1 no 710 AM	10	641	14	220	1.00	1150	0.27	614	0.46	1057	1.15	1703	0.47	2945	0.6	3689	0.48	3657	0.22	3884	1.00	4306	1.08	4553	0.36	3155	1.00	3078	1.58	3607	1.4	3484	1.03	7354	0.33	6034	0.48	3449	0.25	2921	0.19	2922	0.58	2998	1.07	4065	1.16	3444	0.26	3536	0.47	3190	0.48	3198	0.94	2635	0.67	2636	0.51	2105	1.61	1063
Alt 2 710 AM	10	554	15	151	1.00	1064	0.27	426	0.46	996	1.14	1800	0.47	3067	0.59	3832	0.48	3839	0.23	4090	1.04	4689	1.15	4920	0.41	3288	1.35	3141	1.83	3633	1.5	3516	1.04	7407	0.32	6182	0.5	3651	0.25	3121	0.19	3122	0.59	3191	1.65	4133	1.16	3482	0.26	3481	0.47	3128	0.5	3159	0.95	2572	0.67	2573	0.51	2024	1.58	874
Alt 2 no 710 AM	10	594	15	222	1.00	1240	0.28	646	0.46	1148	1.14	1839	0.47	3156	0.59	3948	0.48	3945	0.23	4189	1.04	4745	1.17	4965	0.48	3332	1.5	3175	1.93	3657	1.53	3527	1.06	7355	0.33	6154	0.48	3488	0.25	2958	0.19	2957	0.58	3034	1.06	4085	1.15	3450	0.26	3449	0.47	3097	0.49	3171	0.94	2585	0.67	2585	0.51	2028	1.6	979

	NB		SB		State-FOaks on SB	State-FOaks on SB	Glenarm-State SB	Glenarm-State SB	Fair Oaks-Orange Grove SB	Fair Oaks-Orange Grove SB	Orange Grove-Bnd/Salonica SB	Orange Grove-Bnd/Salonica SB	Bnd/Salonica-Ave64 SB	Bnd/Salonica-Ave64 SB	Ave 64-Ave 60 SB	Ave 64-Ave 60 SB	Ave 60-Ave 57 SB	Ave 60-Ave 57 SB	Ave57-Ave 52 SB	Ave57-Ave 52 SB	Ave 52-Ave 43 SB	Ave 52-Ave 43 SB	Ave 43-I5 SB	Ave 43-I5 SB	I5-Ave 26 SB	I5-Ave 26 SB	Ave 26-Fig SB	Ave 26-Fig SB	Fig-I5 SB	Fig-I5 SB	I5-Academy SB	I5-Academy SB	Academy-Amador SB	Academy-Amador SB	S-Solano NB	S-Solano NB	Solano-I5 NB	Solano-I5 NB	I5-Fig NB	I5-Fig NB	Fig-S Fernando NB	Fig-S Fernando NB	F Fernando-Ave2/65 NB	F Fernando-Ave2/65 NB	Ave26-I5-Ave 43 NB	Ave26-I5-Ave 43 NB	Ave 43-Ave 52 NB	Ave 43-Ave 52 NB	Ave 52-Ave 57 NB	Ave 52-Ave 57 NB	Ave 57-Ave 60 NB	Ave 57-Ave 60 NB	Ave 60-Marmion NB	Ave 60-Marmion NB	Ave 60-Marmion NB	Marmion-Bridewell NB	Marmion-Bridewell NB	Bridewell-O Grove NB	Bridewell-O Grove NB	O Grove-F Oaks NB	O Grove-F Oaks NB	F Oaks-Glenarm NB	F Oaks-Glenarm NB
Alternative	Time	Throughput	Time	Throughput																																																													
Existing PM	9	820	8	270	0.87	978	0.26	865	0.39	869	0.94	1491	0.42	2462	0.53	3033	0.40	3028	0.19	3164	0.81	3532	0.92	3438	0.29	2441	0.42	2442	0.33	3031	0.24	3002	0.18	5930	0.40	9371	0.63	9221	0.24	4599	0.16	4597	0.56	4714	1.18	6506	1.10	5558	0.23	5647	0.42	5127	0.40	5136	0.78	4197	0.74	4167	0.43	3188	1.47	1527
NB 710 PM	12	535	8	203	0.91	1223	0.25	611	0.39	1084	0.94	1832	0.42	2762	0.53	3309	0.41	3258	0.21	3494	0.81	3786	0.92	3695	0.29	2836	0.43	2832	0.33	3495	0.24	3439	0.23	6259	0.72	9321	0.73	9176	0.24	4657	0.17	4657	0.59	4772	1.43	6462	1.49	5484	0.24	5552	0.44	5016	0.49	4986	1.34	3903	2.49	3647	0.45	2849	2.08	817
NB no 710 PM	11	550	8	235	0.90	1267	0.27	717	0.38	1129	0.94	1792	0.43	2713	0.54	3297	0.41	3201	0.20	3440	0.81	3748	0.92	3635	0.29	2792	0.43	2791	0.33	3444	0.24	3394	0.24	6228	0.67	9453	0.66	9287	0.24	4777	0.17	4770	0.72	4785	1.85	6422	1.74	5446	0.24	5536	0.42	5022	0.41	5111	0.78	4167	0.85	4112	0.45	3271	1.52	1055
Alt 1 710 PM	14	505	9	153	1.03	914	0.26	465	0.46	723	1.14	1337	0.47	2237	0.58	2671	0.47	2727	0.22	3059	0.97	3266	1.07	3264	0.35	2565	0.47	2564	0.39	3258	0.29	3212	0.22	6135	0.79	8958	0.89	8754	0.46	4137	0.47	4098	1.61	4095	3.24	5273	1.28	4398	0.25	4024	0.48	4029	0.48	4112	0.95	3302	0.67	3300	0.51	2539	1.56	733
Alt 1 no 710 PM	15	540	9	190	1.02	991	0.27	599	0.46	805	1.14	1335	0.47	2253	0.59	2739	0.47	2738	0.22	3046	0.97	3227	1.07	3223	0.35	2528	0.47	2529	0.39	3231	0.29	3180	0.22	6083	0.87	8494	1.05	8225	0.71	3896	0.67	3851	2.33	3798	3.82	5143	1.16	4339	0.25	4023	0.48	4025	0.48	4182	0.95	3382	0.66	3382	0.51	2746	1.65	1003
Alt 2 710 PM	13	542	9	197	1.03	991	0.25	504	0.46	834	1.14	1494	0.46	2449	0.59	2944	0.48	2972	0.23	3251	0.97	3540	1.08	3503	0.35	2729	0.47	2729	0.39	3404	0.29	3361	0.22	6208	0.71	9327	0.79	9043	0.28	4467	0.21	4393	0.81	4438	2.32	5813	1.79	4757	0.26	4737	0.47	4322	0.48	4430	0.95	3596	0.84	3569	0.53	2773	1.6	783
Alt 2 no 710 PM	14	601	9	196	1.03	1067	0.27	600	0.46	933	1.14	1468	0.47	2416	0.59	2956	0.48	2931	0.23	3192	0.97	3484	1.07	3425	0.35	2639	0.47	2638	0.39	3315	0.29	3278	0.22	6141	0.7	9363	0.78	9077	0.29	4452	0.23	4436	0.94	4458	2.65	5802	3.8	4755	0.26	4755	0.47	4346	0.48	4496	0.95	3644	0.67	3647	0.52	2865	1.66	965

APPENDIX B - VOLUMES NOT SERVED

AM	Existing 2010	No Build 2035	No Build 2035 SA	Alternative 1 2035	Alternative 1 2035 SA	Alternative 2 2035	Alternative 2 2035 SA
Vehicles not served	402	835	659	615	599	638	561
Not able to complete trip	209	249	253	247	255	201	198
Not able to enter network	193	586	405	368	344	437	363
PM							
Vehicles not served	227	655	633	1087	703	707	618
Not able to complete trip	189	263	260	136	127	293	275
Not able to enter network	38	392	373	952	576	414	344

APPENDIX C - OD DATA

Existing

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	101	2422	459	164	265	181	62	399	26	494	341	913
Solano	0	12	3	0	0	0	0	1	0	2	1	15
San Fernando	0	0	0	2	1	1	1	1	1	1	1	68
Ave 26	0	0	0	4	4	14	3	11	2	12	14	97
I-5	0	0	0	104	159	156	40	132	17	186	100	153
Ave 43	0	0	0	0	3	4	1	6	1	11	6	39
Ave 52	0	0	0	0	0	2	1	3	0	1	4	97
Via Marisol	0	0	0	0	0	0	1	7	1	9	8	40
Ave 60	0	0	0	0	0	0	0	7	1	12	5	62
Ogrove	0	0	0	0	0	0	0	0	0	0	25	67

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	143	3928	747	240	364	276	98	773	51	892	610	1304
Solano	0	7	1	0	0	0	0	1	0	1	0	22
San Fernando	0	0	0	5	2	0	2	2	0	2	5	108
Ave 26	0	0	0	12	13	9	3	10	3	10	10	190
I-5	0	0	0	154	237	245	54	89	20	175	131	588
Ave 43	0	0	0	0	5	6	2	5	1	8	6	48
Ave 52	0	0	0	0	0	7	1	9	1	11	9	61
Via Marisol	0	0	0	0	0	0	1	11	2	8	12	36
Ave 60	0	0	0	0	0	0	0	17	2	17	10	80
Ogrove	0	0	0	0	0	0	0	0	0	0	24	72

Existing

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	155	75	41	83	66	10	129	124	169	24	261	397
Foaks	0	6	11	15	3	2	4	297	3	1	5	546
Ogrove	0	0	2	2	2	1	4	400	5	1	14	717
Salonica	0	0	0	1	1	1	2	80	2	0	2	149
LaRiba	0	0	0	5	2	1	4	274	3	2	5	493
Schults	0	0	0	0	0	0	2	34	2	0	1	67
Ave 57	0	0	0	0	0	0	3	92	2	0	8	167
Ave 52	0	0	0	0	0	0	5	205	9	1	3	370
Ave 43	0	0	0	0	0	0	0	149	7	1	10	273
Figueroa	0	0	0	0	0	0	0	0	0	0	4	823
I-5	0	0	0	0	0	0	0	0	0	36	972	3176
Amador	0	0	0	0	0	0	0	0	0	0	2	191

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	110	103	64	132	68	50	39	76	87	17	119	218
Foaks	0	8	12	6	1	8	10	194	6	2	6	377
Ogrove	0	0	7	6	2	10	18	278	9	2	6	526
Salonica	0	0	0	1	0	2	5	69	4	0	1	131
LaRiba	0	0	0	0	0	5	11	183	6	0	6	346
Schults	0	0	0	0	0	2	6	44	6	0	2	87
Ave 57	0	0	0	0	0	3	3	66	3	0	5	130
Ave 52	0	0	0	0	0	0	9	160	12	2	2	303
Ave 43	0	0	0	0	0	0	0	97	10	4	5	187
Figueroa	0	0	0	0	0	0	0	0	0	0	2	582
I-5	0	0	0	0	0	0	0	0	0	20	750	2182
Amador	0	0	0	0	0	0	0	0	0	0	4	132

NB

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	181	2339	494	196	270	221	67	416	56	515	382	968
Solano	0	0	29	0	0	0	0	0	0	0	2	29
San Fernando	0	0	0	0	0	0	0	0	0	0	0	75
Ave 26	0	0	0	1	0	15	3	6	6	5	22	117
I-5	0	0	0	96	140	145	36	116	20	164	100	153
Ave 43	0	0	0	0	0	0	0	5	6	12	18	81
Ave 52	0	0	0	0	0	0	0	0	0	0	5	124
Via Marisol	0	0	0	0	0	0	0	0	0	3	18	64
Ave 60	0	0	0	0	0	0	0	0	3	10	14	102
Ogrove	0	0	0	0	0	0	0	0	0	0	41	126

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	162	3926	834	265	386	290	102	799	54	912	633	1339
Solano	0	11	14	1	4	3	2	5	5	0	9	100
San Fernando	0	0	0	0	0	0	0	0	5	0	8	43
Ave 26	0	0	0	8	16	11	3	9	7	4	18	196
I-5	0	0	0	145	233	239	52	85	23	164	135	568
Ave 43	0	0	0	0	21	7	4	3	3	3	14	63
Ave 52	0	0	0	0	0	14	0	8	4	5	17	66
Via Marisol	0	0	0	0	0	0	0	10	6	3	20	35
Ave 60	0	0	0	0	0	0	0	20	8	23	25	128
Ogrove	0	0	0	0	0	0	0	0	0	0	59	133

NB

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	130	86	46	105	73	33	125	128	181	37	273	420
Foaks	0	6	14	16	2	3	5	286	4	2	6	529
Ogrove	0	0	14	4	0	1	5	406	5	1	14	730
Salonica	0	0	0	14	1	1	2	91	2	1	2	173
LaRiba	0	0	0	17	1	3	4	281	3	2	6	509
Schults	0	0	0	0	0	0	15	33	2	0	2	68
Ave 57	0	0	0	0	0	1	14	84	2	1	8	157
Ave 52	0	0	0	0	0	0	17	216	10	2	3	392
Ave 43	0	0	0	0	0	0	0	132	13	7	16	269
Figueroa	0	0	0	0	0	0	0	0	0	1	11	924
I-5	0	0	0	0	0	0	0	0	0	43	964	3143
Amador	0	0	0	0	0	0	0	0	0	0	9	198

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	88	134	148	202	60	73	55	40	104	20	155	280
Foaks	0	10	15	8	0	11	11	204	6	4	12	429
Ogrove	0	0	23	7	0	11	18	290	7	2	10	582
Salonica	0	0	0	16	0	2	5	68	2	0	5	162
LaRiba	0	0	0	0	0	20	10	173	3	0	9	361
Schults	0	0	0	0	0	17	4	27	3	0	5	89
Ave 57	0	0	0	0	0	19	3	76	1	0	9	185
Ave 52	0	0	0	0	0	0	15	148	11	4	7	312
Ave 43	0	0	0	0	0	0	0	43	25	21	25	231
Figueroa	0	0	0	0	0	0	0	0	0	0	3	688
I-5	0	0	0	0	0	0	0	0	0	13	733	2126
Amador	0	0	0	0	0	0	0	0	0	0	4	140

NB710SA

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	138	2365	502	222	280	227	72	410	50	518	377	997
Solano	0	0	27	0	0	0	0	0	0	0	13	21
San Fernando	0	0	0	0	0	0	0	0	0	0	15	59
Ave 26	0	0	0	5	1	16	2	7	4	8	30	102
I-5	0	0	0	92	136	138	34	111	17	159	102	131
Ave 43	0	0	0	0	0	5	1	6	4	15	25	65
Ave 52	0	0	0	0	0	0	0	0	1	0	20	131
Via Marisol	0	0	0	0	0	0	0	0	4	11	28	62
Ave 60	0	0	0	0	0	0	0	0	0	2	18	39
Ogrove	0	0	0	0	0	0	0	0	0	0	63	104

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	137	3989	813	279	399	304	91	699	45	823	597	1555
Solano	0	1	29	0	0	0	0	4	0	5	27	52
San Fernando	0	0	0	0	0	0	0	0	0	2	23	105
Ave 26	0	0	0	0	0	15	2	18	3	17	45	152
I-5	0	0	0	135	230	228	56	193	25	269	169	223
Ave 43	0	0	0	0	0	0	0	3	1	17	34	69
Ave 52	0	0	0	0	0	1	0	0	0	0	25	57
Via Marisol	0	0	0	0	0	0	0	0	0	0	33	44
Ave 60	0	0	0	0	0	0	0	0	0	8	32	96
Ogrove	0	0	0	0	0	0	0	0	0	0	76	116

NB710SA

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	68	86	54	101	70	4	144	85	166	23	252	379
Foaks	0	0	13	16	4	0	6	297	4	0	9	560
Ogrove	0	0	10	2	2	0	5	403	5	0	17	746
Salonica	0	0	0	0	0	0	3	74	3	0	5	152
LaRiba	0	0	0	3	3	0	6	266	4	0	9	492
Schults	0	0	0	0	0	0	7	38	2	0	4	91
Ave 57	0	0	0	0	0	0	7	79	1	1	9	158
Ave 52	0	0	0	0	0	0	11	208	9	1	5	390
Ave 43	0	0	0	0	0	0	0	124	14	1	20	282
Figueroa	0	0	0	0	0	0	0	0	0	0	5	927
I-5	0	0	0	0	0	0	0	0	0	17	955	3101
Amador	0	0	0	0	0	0	0	0	0	0	2	158

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	5	142	130	165	77	88	70	3	122	24	148	260
Foaks	0	4	17	10	0	12	7	222	3	5	14	457
Ogrove	0	0	25	7	0	12	14	309	3	3	12	612
Salonica	0	0	0	10	0	2	0	62	0	3	6	144
LaRiba	0	0	0	0	0	19	3	162	0	0	10	333
Schults	0	0	0	0	0	14	0	33	0	3	6	94
Ave 57	0	0	0	0	0	15	0	88	0	0	11	202
Ave 52	0	0	0	0	0	0	0	137	12	9	14	313
Ave 43	0	0	0	0	0	0	0	64	17	16	22	236
Figueroa	0	0	0	0	0	0	0	0	0	0	2	697
I-5	0	0	0	0	0	0	0	0	0	9	728	2111
Amador	0	0	0	0	0	0	0	0	0	0	3	122

Alt1

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	227	2387	499	111	243	200	51	423	13	504	335	1018
Solano	0	0	38	0	0	0	0	0	0	0	0	0
San Fernando	0	0	0	2	0	11	0	1	0	0	0	59
Ave 26	0	0	0	21	1	19	3	7	0	5	0	72
I-5	0	0	0	144	126	153	36	121	6	168	77	138
Ave 43	0	0	0	0	0	11	0	0	0	0	0	4
Ave 52	0	0	0	0	0	23	0	0	0	0	0	117
Via Marisol	0	0	0	0	0	0	14	7	0	6	0	37
Ave 60	0	0	0	0	0	0	0	0	0	0	0	16
Ogrove	0	0	0	0	0	0	0	0	0	0	27	116

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	225	4052	866	202	387	292	80	678	33	773	523	1511
Solano	0	15	16	0	0	2	0	3	1	0	0	30
San Fernando	0	0	0	0	0	0	0	1	1	0	0	114
Ave 26	0	0	0	0	0	12	0	21	5	0	0	98
I-5	0	0	0	203	215	255	57	222	33	266	133	260
Ave 43	0	0	0	0	0	0	0	0	0	0	0	4
Ave 52	0	0	0	0	0	0	0	0	0	0	0	46
Via Marisol	0	0	0	0	0	0	0	4	5	0	0	56
Ave 60	0	0	0	0	0	0	0	0	0	0	0	60
Ogrove	0	0	0	0	0	0	0	0	0	0	9	185

Alt1

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	169	89	45	75	60	0	94	82	149	0	226	346
Foaks	0	34	9	10	1	0	1	198	3	0	3	405
Ogrove	0	0	39	5	3	2	5	353	6	0	16	726
Salonica	0	0	0	24	1	0	3	75	1	0	2	182
LaRiba	0	0	0	25	3	3	3	235	2	0	5	463
Schults	0	0	0	0	5	8	3	10	2	0	3	61
Ave 57	0	0	0	0	0	16	4	84	2	0	10	193
Ave 52	0	0	0	0	0	0	22	153	8	0	4	316
Ave 43	0	0	0	0	0	0	0	75	28	9	32	294
Figueroa	0	0	0	0	0	0	0	0	0	0	4	974
I-5	0	0	0	0	0	0	0	0	0	8	985	3189
Amador	0	0	0	0	0	0	0	0	0	0	1	244

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	125	184	97	114	60	62	4	59	63	1	119	226
Foaks	0	59	14	2	0	7	0	158	2	0	4	356
Ogrove	0	0	76	1	0	9	0	263	5	2	3	545
Salonica	0	0	0	21	0	6	0	54	5	0	4	146
LaRiba	0	0	0	7	2	31	0	135	4	0	6	303
Schults	0	0	0	0	0	41	0	17	3	0	2	85
Ave 57	0	0	0	0	0	44	0	95	2	0	7	237
Ave 52	0	0	0	0	0	0	0	73	26	26	19	276
Ave 43	0	0	0	0	0	0	0	12	33	20	30	211
Figueroa	0	0	0	0	0	0	0	0	0	2	3	734
I-5	0	0	0	0	0	0	0	0	0	0	751	2158
Amador	0	0	0	0	0	0	0	0	0	0	9	185

Alt1710SA

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	173	2419	492	181	261	198	61	410	11	507	353	943
Solano	0	0	61	0	0	0	0	0	0	0	0	2
San Fernando	0	0	0	18	1	8	0	0	0	0	2	45
Ave 26	0	0	0	13	1	27	4	11	0	13	18	87
I-5	0	0	0	78	111	126	29	96	0	136	76	98
Ave 43	0	0	0	0	0	26	0	0	0	0	0	0
Ave 52	0	0	0	0	0	32	0	0	0	0	4	116
Via Marisol	0	0	0	0	0	0	13	8	0	11	13	35
Ave 60	0	0	0	0	0	0	0	4	0	7	6	23
Ogrove	0	0	0	0	0	0	0	0	0	0	62	105

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	178	4075	874	152	403	310	80	673	36	805	578	1488
Solano	0	0	0	0	0	1	0	0	0	0	3	1
San Fernando	0	0	0	27	1	4	0	3	0	0	5	82
Ave 26	0	0	0	46	2	21	0	17	0	4	22	105
I-5	0	0	0	176	167	176	32	149	12	195	115	145
Ave 43	0	0	0	0	0	29	0	4	0	0	5	0
Ave 52	0	0	0	0	0	2	0	3	0	0	5	79
Via Marisol	0	0	0	0	0	0	0	34	0	0	14	18
Ave 60	0	0	0	0	0	0	0	8	0	0	7	53
Ogrove	0	0	0	0	0	0	0	0	0	0	80	112

Alt1710SA

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	90	71	37	61	51	4	92	60	123	0	188	287
Foaks	0	20	14	14	4	0	2	243	4	0	7	503
Ogrove	0	0	38	1	1	0	0	366	3	0	13	715
Salonica	0	0	0	16	2	0	0	44	4	0	5	139
LaRiba	0	0	0	19	4	0	3	211	5	0	8	434
Schults	0	0	0	0	7	0	8	9	4	0	5	77
Ave 57	0	0	0	0	0	0	12	71	5	0	13	183
Ave 52	0	0	0	0	0	0	14	150	11	0	7	324
Ave 43	0	0	0	0	0	0	0	49	35	5	40	300
Figueroa	0	0	0	0	0	0	0	0	0	0	1	972
I-5	0	0	0	0	0	0	0	0	0	0	992	3212
Amador	0	0	0	0	0	0	0	0	0	0	0	198

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	56	191	120	91	45	56	0	50	51	1	112	201
Foaks	0	43	13	0	6	9	0	178	5	0	7	389
Ogrove	0	0	53	0	7	11	1	284	8	1	7	579
Salonica	0	0	0	0	20	9	0	44	3	0	2	127
LaRiba	0	0	0	0	0	33	0	120	3	1	5	271
Schults	0	0	0	0	0	30	0	20	4	0	2	86
Ave 57	0	0	0	0	0	33	0	109	5	1	9	261
Ave 52	0	0	0	0	0	0	1	57	31	24	25	285
Ave 43	0	0	0	0	0	0	0	17	31	20	28	215
Figueroa	0	0	0	0	0	0	0	0	0	0	2	737
I-5	0	0	0	0	0	0	0	0	0	6	753	2178
Amador	0	0	0	0	0	0	0	0	0	0	3	141

Alt2

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	293	2371	529	171	273	195	49	400	17	515	348	968
Solano	0	0	0	0	0	0	0	0	0	0	0	0
San Fernando	0	0	0	0	1	3	1	1	0	0	0	69
Ave 26	0	0	0	15	2	16	8	13	0	5	2	108
I-5	0	0	0	102	130	131	38	111	8	147	70	132
Ave 43	0	0	0	0	2	7	7	10	0	7	0	55
Ave 52	0	0	0	0	0	0	0	0	0	0	0	0
Via Marisol	0	0	0	0	0	0	0	0	0	0	0	0
Ave 60	0	0	0	0	0	0	0	23	0	20	1	137
Ogrove	0	0	0	0	0	0	0	0	0	0	20	122

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	295	3943	848	275	544	243	80	660	40	700	562	1513
Solano	0	0	0	0	0	0	0	0	0	0	0	0
San Fernando	0	0	0	5	8	0	0	1	2	0	0	105
Ave 26	0	0	0	19	14	21	2	19	4	13	23	168
I-5	0	0	0	157	246	230	48	198	36	270	149	226
Ave 43	0	0	0	0	41	10	0	22	2	35	21	154
Ave 52	0	0	0	0	0	0	0	0	0	0	0	0
Via Marisol	0	0	0	0	0	0	0	0	0	0	0	0
Ave 60	0	0	0	0	0	0	0	22	4	40	15	190
Ogrove	0	0	0	0	0	0	0	0	0	0	47	120

Alt2

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	172	90	43	78	62	3	94	105	159	17	245	365
Foaks	0	28	9	12	1	1	2	235	2	0	4	447
Ogrove	0	0	23	2	1	0	3	398	4	0	15	728
Salonica	0	0	0	16	1	4	2	91	2	0	3	185
LaRiba	0	0	0	21	2	2	4	271	3	0	7	502
Schults	0	0	0	0	7	0	9	27	2	0	3	68
Ave 57	0	0	0	0	0	0	17	97	3	0	11	190
Ave 52	0	0	0	0	0	0	15	207	11	0	6	386
Ave 43	0	0	0	0	0	0	0	113	17	7	22	273
Figueroa	0	0	0	0	0	0	0	0	0	0	11	938
I-5	0	0	0	0	0	0	0	0	0	30	969	3148
Amador	0	0	0	0	0	0	0	0	0	0	9	237

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	112	130	81	145	69	53	39	63	94	12	136	242
Foaks	0	87	11	0	0	0	0	165	0	0	1	369
Ogrove	0	0	93	0	0	2	7	279	0	0	2	573
Salonica	0	0	0	13	4	4	3	60	4	0	7	151
LaRiba	0	0	0	0	3	25	6	153	4	0	9	328
Schults	0	0	0	0	5	22	1	23	4	0	5	85
Ave 57	0	0	0	0	0	28	0	88	3	0	11	214
Ave 52	0	0	0	0	0	0	7	139	14	5	10	296
Ave 43	0	0	0	0	0	0	0	25	30	24	30	227
Figueroa	0	0	0	0	0	0	0	0	0	0	7	708
I-5	0	0	0	0	0	0	0	0	0	14	739	2136
Amador	0	0	0	0	0	0	0	0	0	0	10	203

Alt2710SA

AM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	121	2400	540	293	279	193	58	419	24	518	362	959
Solano	0	0	0	0	0	0	0	0	0	0	0	0
San Fernando	0	0	0	0	1	4	2	0	0	0	4	61
Ave 26	0	0	0	0	7	18	5	11	0	11	18	98
I-5	0	0	0	40	129	130	38	107	16	148	87	120
Ave 43	0	0	0	0	5	8	3	8	0	13	12	52
Ave 52	0	0	0	0	0	0	0	0	0	0	0	0
Via Marisol	0	0	0	0	0	0	0	0	0	0	0	0
Ave 60	0	0	0	0	0	0	0	8	0	14	10	86
Ogrove	0	0	0	0	0	0	0	0	0	0	53	114

PM NB

	Solano	I-5	Figueroa	Ave 43	Ave 52	Via Marisol	Ave 60	Marmion	Bridewell	Ogrove	Foaks	Glenarm
Downtown	292	4007	834	188	476	270	61	675	40	799	601	1488
Solano	0	0	0	0	0	0	0	0	0	0	0	0
San Fernando	0	0	0	8	13	0	0	4	0	0	27	73
Ave 26	0	0	0	43	20	12	0	22	1	1	51	139
I-5	0	0	0	198	233	204	41	185	20	238	165	177
Ave 43	0	0	0	0	97	0	0	14	0	9	38	96
Ave 52	0	0	0	0	0	0	0	0	0	0	0	0
Via Marisol	0	0	0	0	0	0	0	0	0	0	0	0
Ave 60	0	0	0	0	0	0	0	12	0	1	32	104
Ogrove	0	0	0	0	0	0	0	0	0	0	114	78

Alt2710SA

AM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	85	69	37	67	54	5	102	85	134	9	205	305
Foaks	0	18	11	12	6	0	3	262	4	0	7	508
Ogrove	0	0	24	3	3	0	5	378	8	0	19	740
Salonica	0	0	0	4	1	0	5	64	4	0	6	146
LaRiba	0	0	0	11	3	0	4	251	6	0	9	476
Schults	0	0	0	0	0	0	7	20	5	0	5	66
Ave 57	0	0	0	0	0	0	10	95	5	0	13	198
Ave 52	0	0	0	0	0	0	13	205	12	0	7	395
Ave 43	0	0	0	0	0	0	0	100	23	1	27	284
Figueroa	0	0	0	0	0	0	0	0	0	0	7	944
I-5	0	0	0	0	0	0	0	0	0	4	987	3184
Amador	0	0	0	0	0	0	0	0	0	0	4	184

PM SB

	State	Ogrove	Salonica	Schults	Ave 57	Ave 52	Ave 43	I-5	Ave 26	Academy	Hill	Downtown/St Way
Glenarm	28	167	112	116	69	41	28	28	82	8	121	215
Foaks	0	40	13	0	4	9	0	196	4	2	10	414
Ogrove	0	0	43	0	1	12	8	304	8	4	11	607
Salonica	0	0	0	1	14	4	0	53	3	0	6	132
LaRiba	0	0	0	0	0	30	0	139	2	0	8	295
Schults	0	0	0	0	0	25	0	26	3	0	5	85
Ave 57	0	0	0	0	0	26	0	100	3	0	11	231
Ave 52	0	0	0	0	0	0	1	110	23	14	19	309
Ave 43	0	0	0	0	0	0	0	43	26	20	26	229
Figueroa	0	0	0	0	0	0	0	0	0	0	6	712
I-5	0	0	0	0	0	0	0	0	0	13	734	2124
Amador	0	0	0	0	0	0	0	0	0	0	8	164

REVIEW COMMENTS: SUMMARY AND RESOLUTION FORM					
Date: 7/6/12					
Arroyo Seco Parkway Corridor Partnership Plan					
EA ---------- (PN ----------)					
Name of Document Reviewed: **Arroyo Seco Parkway Corridor Partnership Plan – VISSIM Travel Time Results**					
Name/Title of Reviewer or Checker: Loren Bloomberg/CH2M HILL and Yoga Chandran/CH2m HILL			**CODE**	**A** = Comment Will Be Addressed--No Follow-up Discussion Required **B** = Need clarification to comment **C**= Disagree- Need Follow-up Discussion **D** = Delete, reviewer withdraws comment	
Comment No.	**Document, Page/Sheet No.**	**Review Comment**	**RESPONSE**		
			Response Code	**By Whom**	**Response to Review Comment**
1	**General**	The travel time results are reported to the nearest .01 minute. There is no basis for reporting simulation or field travel time to two decimal places. Whole numbers of minutes would be more appropriate.	A	Christina	incorporated
2	**General**	The "north 710" project should be labeled SR 710 and not I-710	A	Christina	incorporated
3	**General**	The implication in the report is that the VISSIM model was calibrated to existing conditions, but there is no statement to that effect. If there was, it couldn't be supported with the large differences between the field and modeled travel time. There needs to be a clear statement about the level of accuracy of the VISSIM model (say +/- 3 minutes, or whatever might be supported by the data).	A	Christina	Model was further refined. Calibrated to meet FHWA requirements to the extent possible.
4	**General**	There is a lot of copy/paste narrative in the discussion, particularly for the assessment of the "with 710" scenario. This text doesn't have a lot of value, and there doesn't appear to be a statistically significant difference in travel times for with/without 710. **Suggest deleting the sections that discuss the "with 710" scenario (or, delete the "without 710" scenario), and note that the results are consistent for the with/without.** If this has to be presented, suggest discussing the accuracy of the model runs and whether the variations seen here are within the accuracy. In other state that there is no difference between with and without 710 for either of the cases.	A	Christina	The analysis was condensed into one section for each alternative
5	**Section 3**	Second paragraph (beings "Travel times….") – specify the limits, and	A	Christina	Comment incorporated

		the exact distance. Was each direction done on the same day, or does each set include data from both 1/25 and 3/27?			
6	**Section 3**	Third paragraph (begins "In the AM…") – what does "very heavy (and slow)" mean? That language is rather casual.	A	Christina	Language was changed
7	**Section 4**	First paragraph ("This section….") – does the defined travel time section match that from the floating car runs?			yes
8	**Section 4.1**	First paragraph ("The AM peak…") – the differences between the field and VISSIM travel times are 36% and 28%. Especially since this is the only metric, how can the model be considered calibrated? Also, how do the data match at the 90% level? Is there that much variation in the field data? Same comments on the PM peak – differences are 33% and 42%. 87% is an odd CL to report. Finally, in the AM peak paragraph, the southbound AM says 16.92 minutes in the text and 16.52 in the table.	A	Christina	Please see response to comment 3
9	**Table 4-1**	Are the volumes for one hour? Why are they lower in the PM for the NB direction? Why are they so low in general – because of the O-Ds? Why is the NB about twice as high as the SB?	A	Christina	Volumes represent the vehicles that use the corridor from start to end.
10	**Section 4.2.1**	First and second paragraphs. Why are the number of vehicles for the "Without 710" scenario so much lower? There is no good explanation. The demands are should be higher.	A	Christina	Please see revised version of the report
11	**Section 4.2.1**	Why would the travel time decrease for no-build as compared to existing condition for AM NB direction? Wouldn't we expect an increase in travel time?	A	Christina	Please see revised version of the report
12	**Table 4-2**	Why did the volumes go down for the NB "without 710" scenario?	A	Christina	The overall number of trips using the corridor is higher in the future year alternatives, with the exception of the southbound direction, that shows decreases. This, plus the changes in travel patterns because of trip generation and congestion and can explain the reduction of the number of vehicles that use the corridor from start to end within the one hour period analyzed.
13	**Section 4.2.2**	Why are the number of trips reduced so much?	A	Christina	Please see response to comment 12
14	**Section 4.2.2**	The general trend shows that the travel time increasing with 710 as compared to without710. This is counter to general expectation. Can this be explained? An answer that says "it's what the model predicts" is not sufficient. It is expected that there would be either slightly better travel time or at worst case no change. Similar observations were made	A	Christina	Please see revised version of the report

		for runs including Alternatives 1 and 2. The model runs with 710 show longer travel time than those without 710.			
15	**Table 4-3**	The last three "with 710" volumes went down even though the SB AM speed went up. This does not seem consistent.	A	Christina	Travel patterns and volumes are different for each scenario, the mix entering the parkway can affect traffic in different ways
16	**Section 4.3.2**	First paragraph – it says that the delay has increased (4th line), but that's not true – it went down for both. Also, in the second paragraph, there is a reference to the AM peak – should be PM.	A	Christina	Please see revised version of the report
17	**Table 4-7**	Why did the NB PM volume go down so much?	A	Christina	Please see response to comment 12
18	**Section 4.4.2**	First and second paragraph - it says that the delay has increased slightly for both AM and PM, but that is incorrect. Also, in the second paragraph, there is a reference to the AM peak – should be PM.	A	Christina	Please see revised version of the report
19	**Section 5.1**	Second bullet – should be merge, not merger	A	Christina	Corrected
20	**Section 5.2 and 5.2**	Last paragraph – the point that there are no real differences between "with" and "without" 710 is a good one, and should be emphasized earlier. However, this contradicts (somewhat) the earlier discussion about the differences in travel times/volumes. As noted in the fourth "General" comment, it would be best to eliminate these comparisons.	A	Christina	Comment incorporated
21	**Section 6**	Second line – what is "provide character attributes"?	A	Christina	Text was revised

Arroyo Seco Parkway Corridor Partnership Plan

Cultural Resources Element

August 2012

Prepared by

Cardno ENTRIX
Shaping the Future

Cardno ENTRIX
200 1st Ave West, Seattle, WA 98119
Tel 206-269-0104 Fax 206-269-0098 Toll-free 800 368 7511
www.cardnoentrix.com

Prepared for

Caltrans, District 7
SCAG (Southern California Council of Government).

Contributors

Kimberly Demuth	Project Manager
Jennifer Flathman	Architectural Historian
Michelle Sadlier	Architectural Historian
Rachel Tamigniaux	Project Coordinator
Joel Hancock	GIS Specialist

TABLE OF CONTENTS

Section 1 Introduction 1
1.1 Purpose of Report 1
1.2 Project Overview 1
1.3 Participating Agencies and Groups 3
Section 2 Regulations 4
2.1 Environmental 4
2.1.1 Federal 4
2.1.1.1 National Historic Preservation Act (NHPA) 4
2.1.1.2 National Environmental Policy Act (NEPA) 5
2.1.1.3 U.S. Department of Transportation Act, Section 4(f) 5
2.1.2 State 6
2.1.3 Local 6
2.1.3.1 City of Los Angeles, Historic-Cultural Monument Ordinance 6
2.1.3.2 City of South Pasadena 6
2.1.3.3 City of Pasadena 6
2.2 Preservation 7
2.3 Safety 7
Section 3 Character defining features 9
3.1 Character Defining Features Definition 9
3.2 Steps to Identify Character Defining Features 9
3.3 Use of Character Defining Features in Treatment, Mitigation, and Programmatic Agreements 10
3.4 Examples of Character Defining Features of the Parkway 10
3.4.1 Figueroa Street Tunnels 10
3.4.2 Avenue 43 Bridge and Access Road 15
3.5 Recommendations 19
Section 4 Treatment 21
4.1 Definition 21
4.2 Role in a Programmatic Agreement 22
4.3 Process for Developing Treatment Plans 22
4.4 Elements to be Included in a Treatment Plan 25
4.5 Examples of Appropriate Treatment Methods for the Parkway 25

4.5.1 Figueroa Street Tunnels 25
4.5.2 Avenue 43 Bridge and On/Off Ramps 28
4.6 Recommendations 34
Section 5 Mitigation 35
5.1 Definition 35
5.2 Role in a Programmatic Agreement 35
5.3 Examples of Proposed Mitigation for the Parkway 36
5.3.1 Figueroa Street Tunnels 36
5.3.2 Avenue 43 Bridge and On/Off Ramps 36
5.4 Recommendations 37
Section 6 Programmatic Agreement 38
6.1 Introduction 38
6.2 Parties Involved in a PA 38
6.3 Elements of a PA 39
6.3.1 Whereas Clauses 39
6.3.2 Stipulations 40
6.3.3 Signature Blocks 40
6.3.4 Appendices/Attachments 40
Section 7 Conclusion 45
Section 8 References 46

Appendix A List of Definitions
Appendix B List of Acronyms
Appendix C Reference Sources Appropriate for the Treatment of Historic Properties
a) Standards for Preservation
b) Standards for Rehabilitation
c) Standards for Restoration
d) Standards for Reconstruction
Appendix D 2004-2007 Programmatic Agreement
Appendix E The Section 106 Process

LIST OF FIGURES

Figure 1 Map showing the Historic Arroyo Seco Parkway in red 2
Figure 2 Drawing showing significant features of the Figueroa Street Tunnel (HAER Collection) . 11
Figure 3 Aerial View of tunnels No. 1 & 2, South Portals, Facing North (HAER Collection)..... 12
Figure 4 Detail of lantern originally used in the Figueroa Street Tunnels (HAER Collection) 13
Figure 5 Detail view of Tunnel No. 2, South Portals, Facing Northeast (HAER Collection)..... 14
Figure 6 Arroyo Seco Parkway Southbound exit lane at Avenue 43 (Martha Benedict, 2012)..... 15
Figure 7 Avenue 43 Bridge and Light fixtures Avenue 43 (Martha Benedict, 2012)..... 16
Figure 8 Concrete arches supporting the 43 Avenue Bridge (HAER Collection) 16
Figure 9 View of northbound Avenue 43 on and off ramp utilizing a short bridge across Arroyo Seco, facing east (HAER collection)..... 17
Figure 11 Aerial View showing the horseshoe shaped on ramp (Google Earth)..... 19
Figure 12 Non-historic "Rubble" Concrete Retaining Walls at North On/Off Ramp (Martha Benedict, 2012) 20
Figure 13 Path and Bench Avenue 43 northbound on/off ramp (Martha Benedict, 2012)..... 20
Figure 14 PA Implementation Plan Using Treatment Plan 24
Figure 15 View of Figueroa Street Tunnels with graffiti (Cardno ENTRIX 2011) 26
Figure 16 Avenue 43 Southwest Bridge at Carlota Street showing fencing (Martha Benedict, 2012) 29
Figure 17 Signage at Southbound Avenue 43 on-off ramp (Martha Benedict, 2012) 30
Figure 18 PA Development Process 42
Figure 19 PA Implementation Plan..... 43

SECTION 1 INTRODUCTION

1.1 Purpose of Report

This report was prepared by Cardno ENTRIX to provide guidance to the California Department of Transportation (Caltrans) on the development and use of a programmatic agreement (PA) for the long-term management of the Arroyo Seco Parkway Parkway as part of the Arroyo Seco Parkway Historic District (Parkway). As an appendix to the Corridor Partnership Plan prepared for Caltrans by IBI Group, this report provides an overview of the history of the Parkway, corridor planning, information on regulations regarding preservation and safety, a discussion of character defining features, suggestions for the development of treatment measures, and examples of recommended mitigation measures. The report also provides information on how these recommendations would be incorporated into a PA. To guide Caltrans in the development of a PA, an overview of the process for developing a PA including parties to be involved and sample flow charts is included in this report. Although the Parkway is comprised of many contributing resources, the Figueroa Street Tunnels and the Avenue 43 Bridge and On/off ramps are used in Sections 2, 3 and 4 to illustrate examples of important preservation strategies that could be reflected in the final list of character defining features, treatment plan, and PA.

1.2 Project Overview

Dedicated in 1940, the Parkway laid the groundwork for the California Freeway system, connecting the Southern California communities of Los Angeles and Pasadena through the historic landscape of the Arroyo Seco. This route was reclassified from a “freeway” to a “historic parkway” in 1993. In 2002, the Arroyo Seco Parkway was designated as a National Scenic Byway (NSB). The Historic Arroyo Seco Parkway (State Route 110) extends generally from US101 Freeway in downtown Los Angeles to East Glenarm Street in the City of Pasadena (Figure 1).

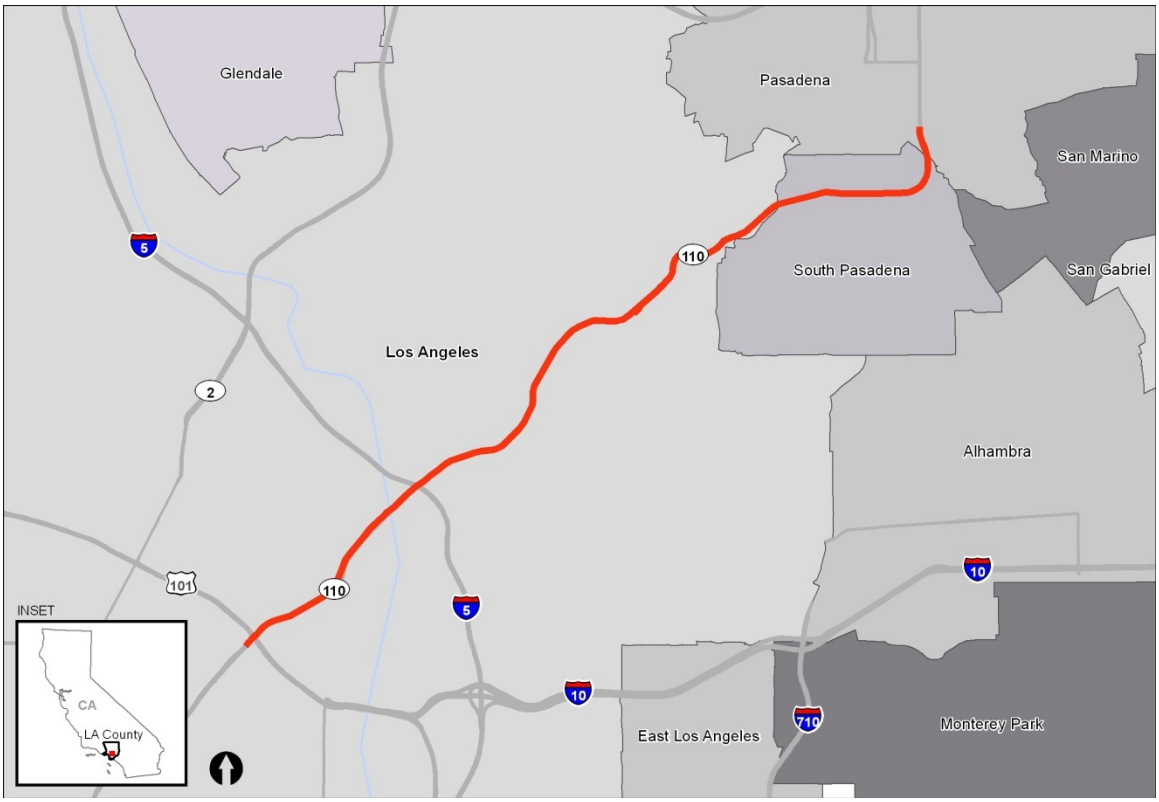


Figure 1 Map showing the Historic Arroyo Seco Parkway in red

The Parkway corridor's unique mix of historic, cultural, natural, and recreational qualities led to its designation as a National Scenic Byway but the diversity of features also poses challenges to its long-term management. Several entrance and exit ramps and other features of the historic Parkway do not meet current Federal Highway Administration (FHWA) or state design standards. Changes to these features must be balanced with regulations regarding preserving historically significant resources.

The FHWA's National Scenic Byway Program requires the managing agency (Caltrans) to develop a Corridor Management Plan (CMP). In 2004 a team of consultants, with the assistance of communities along the corridor and in consultation with regulating agencies, prepared a draft CMP. The current work undertaken by the project team aims to address additional transportation and environmental issues. This will be incorporated into an overall plan called a Corridor Partnership Plan (CPP), which replaces the CMP. The final CPP will provide strategies to preserve, restore, and maintain the Byway's intrinsic qualities, as well as address issues of roadway safety, mobility, tourism and economic development within the Arroyo Seco Parkway corridor.

The Arroyo Seco Parkway was formally determined eligible for listing on the National Register of Historic Places (NRHP) in the 1980s. A Historic American Engineering Record (HAER) study was prepared for the Parkway in 1999. It was designated a National Historic Civil Engineering Landmark in 1999 by the American Society of Civil Engineers. In addition to the draft CMP, Caltrans has since prepared a nomination to the NRHP for the Arroyo Seco Parkway Historic District in 2008. The NRHP nomination was approved by the Keeper of the National Register and simultaneously listed on the California Register of Historical Resources in 2011. The nomination

describes the historic development, significance, and contributing resources of the Parkway and associated resources including the Arroyo Seco flood control channel.

Caltrans will use information included in the NRHP nomination as a basis for long-term planning for the Parkway. The information in the nomination should be supplemented by more detailed surveys to prepare a complete list of character defining features and comprehensive treatment plans for the identified contributing resources of the Parkway. These additional surveys will also be an important part of the environmental review process that will be required under federal, state, and local regulations. These regulations are discussed in more detail in Section 2.

1.3 Participating Agencies and Groups

Caltrans has worked with a number of agencies, preservation advocates, and community groups to develop strategies for the long-term management of the Parkway. Community groups who have been interested and active in the process include the Highland Park Heritage Trust, Los Angeles Conservancy, Pasadena Heritage, South Pasadena Preservation Foundation. During the nomination process, notification and communication was provided to the other agencies who own or manage features of the Arroyo Seco Parkway Historic District including the County of Los Angeles, City of Los Angeles, and the City of South Pasadena.

For the development of the final CPP and the environmental process leading to the PA, Caltrans should continue to work closely with these organizations and agencies. In addition to working with these groups, Caltrans will consult with FHWA, the California State Historic Preservation Office and federally recognized Indian tribes with a consulting party interest in the project area.

SECTION 2 REGULATIONS

2.1 Environmental

2.1.1 Federal

A number of federal laws address the protection of historic properties. Analysis of expected effects to built environment resources are primarily addressed the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and Section 4(f) of The Department of Transportation (DOT) Act of 1966. Depending upon the magnitude of the undertaking, Caltrans may be required to prepare documentation to show compliance with these laws and regulations. For a multi-use linear feature like the Parkway, a PA can be an effective tool to streamline the process for complying with these regulations.

2.1.1.1 National Historic Preservation Act (NHPA)

Any project, activity, or program that is permitted, licensed, approved, or funded in whole or in part by a federal agency must comply with Section 106 of the NHPA. Federal agencies are required to take into account the effect of their actions on historic properties listed in or eligible for the NRHP. Under 36 CFR Part 800.8, federal agencies are specifically encouraged to coordinate compliance with Section 106 and the NEPA process. Further information on this process is provided in Appendix E.

The NRHP, created under the NHPA, is the federal list of historic, archaeological, and cultural resources worthy of preservation. Resources listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, prehistory, architecture, archaeology, engineering, and culture. The NRHP is maintained and expanded by the National Park Service (NPS) on behalf of the Secretary of the Interior. The California Office of Historic Preservation (in Sacramento) administers the statewide NRHP program under the direction of the State Historic Preservation Officer (SHPO). To guide the selection of properties included in the NRHP, the NPS has developed the NRHP Criteria for Evaluation. The criteria are standards by which every property that is nominated to the NRHP is judged. Significance in American history, architecture, archaeology, and culture is possible in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling and association, and meet one of the following Criteria (36 CFR 60.4):

- Criterion A: The property is associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: The property is associated with the lives of a person or persons significant in our past; or
- Criterion C: The property embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or

- Criterion D: The property has yielded, or may be likely to yield, information important in prehistory or history.

The Parkway was listed on the NRHP as a historic district under Criteria A, B, and C. The historic district is recognized under Criterion A in the areas of transportation planning in the Los Angeles Basin and roadway construction, Los Angeles to Pasadena. The Parkway is also significant under Criterion B for its association with Los Angeles City Engineer Lloyd Aldrich who was the dominant figure throughout the planning and construction of the 8.2 miles of roadway, from 1933 to 1953. The Parkway is also significant under Criterion C in the area of engineering, for the application of innovative and original highway engineering design in Los Angeles, 1938-1953.

Any federal "undertaking" involving the Parkway will be required to consider effects, on the Parkway historic district under Section 106 of the NHPA using the criteria for assessment of adverse effects in 36 CFR Part 800.5(a) (1). In addition to effects resulting directly from a specific undertaking, the agency must also consider whether there would be cumulative effects to the resource. Such effects include those that would occur over time from a project or as a result of the combined effect of several projects implemented in the vicinity of the historic property.

2.1.1.2 National Environmental Policy Act (NEPA)

The intent of NEPA is to protect the natural and built environment, including historic properties, from adverse effects resulting from federal actions. Before a federal agency may proceed with a proposed action, an environmental evaluation must be made to determine whether the action may have a significant effect on the environment. Effects on historic properties are usually assessed in coordination with the process established under Section 106 of the NHPA.

NEPA requires that agencies evaluate the degree to which an action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for the NRHP. Properties that are listed in or eligible for listing in the NRHP are defined as "historic properties" (See 36 CFR 800.16(l)). NEPA requires federal agencies to evaluate the significance of potential project-related effects, including both direct and indirect effects upon historic properties. NEPA also requires federal agencies to consider whether cumulative effects would impact historic properties.

2.1.1.3 U.S. Department of Transportation Act, Section 4(f)

Section 4(f) (23 CFR Part 774) of the U.S. Department of Transportation (USDOT) Act of 1966, as amended (49 USC 1653[f]), defines impacts of USDOT agency projects (including projects funded or permitted by the agency) to be the "use" of certain types of resources, including "historic sites."

Agencies, including FHWA, cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites that are listed in or eligible for listing in the NRHP unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land; and
- The action includes all possible planning to minimize harm to the property resulting from use (FHWA 2009).

Under Section 4(f), a historic site is significant if it is a historic property (i.e. a property listed in or eligible for the NRHP). Historic properties are considered 4(f) resources that are subject to the provisions of 23 CFR Part 774.

An analysis of impacts on the Parkway under Section 4(f) would be required for any projects involving FHWA funding.

2.1.2 State

The protection of historical resources in California is addressed through the regulatory compliance with the *California Environmental Quality Act* (CEQA). The CEQA guidelines define a significant historical resource as "a resource listed in or eligible for listing in the California Register of Historical Resources" (CRHR) (Public Resources Code Section 5024.1; 14 CCR 4852). The CRHR also includes properties which have been determined eligible for listing in, or are listed in the NRHP therefore an analysis of impacts under CEQA would be required for projects involving the Parkway.

2.1.3 Local

2.1.3.1 City of Los Angeles, Historic-Cultural Monument Ordinance

Historic Preservation Overlay Zones (HPOZ's)

Significant character defining features of Historic Preservation Overlay Zones are found adjacent to the Parkway. These include streetscapes, neighborhoods, parks, utility poles, street lights and all elements that comprise a cohesive environment, reflective of an historic district with high integrity. Since a stretch of the Arroyo Seco Parkway right-of-way goes through the Highland Park-Garvanza HPOZ, treatment of the features within these areas must be reviewed by the Highland Park-Garvanza HPOZ Board. In addition, should any listed Los Angeles Historic-Cultural Monuments be highlighted as projects in this plan, review by the Cultural Heritage Commission of the City of Los Angeles will be necessary.

2.1.3.2 City of South Pasadena

The Parkway passes through a portion of the City of South Pasadena. In addition to the Parkway, the City of South Pasadena has several historic districts and individual landmarks that could be impacted by actions for the Parkway. The Cultural Heritage Commission of the City of South Pasadena should be consulted regarding proposed actions for the Parkway.

2.1.3.3 City of Pasadena

The Parkway also passes through a portion of the City of Pasadena. Like the City of South Pasadena, the City of Pasadena has several historic districts and individual landmarks that could be impacted by actions for the Parkway. As a result, the Historic Preservation Commission of the City of Pasadena should also be consulted regarding proposed actions for the Parkway.

2.2 Preservation

Future management of the Parkway will be guided by the CPP. The CPP will incorporate best practices regarding the preservation of historic properties. These best management practices focus on maintaining the integrity of the character defining features of the contributing resources of the historic property. Caltrans should also complete treatment plans for all of the contributing resources to the historic district. Using the recommendations of the treatment plans, Caltrans should focus on preserving the Parkway features and avoiding or minimizing effects on the contributing resources through repairs in-kind, use of compatible materials, and minimal changes to the layout and configuration of Parkway elements.

Although Caltrans will strive to avoid and minimize effect, there may be unavoidable adverse effects to the Parkway. Measures to mitigate these adverse effects would be specified in the PA. As not all project details have been finalized, the PA would also provide language for how effects would be identified and how mitigation measures would be developed for future activities involving the Parkway. More information on character defining features, treatment methods, and mitigation is provided in Sections 2, 3 and 4 of this report.

The Secretary of the Interior has developed Standards for the Treatment of Historic Properties. The treatment methods discussed in Section 3 of this document are based upon these standards. The NPS has also developed Preservation Briefs pertaining to materials and features commonly found in historic properties. These Briefs and Standards also serve as best management practices for historic properties. More information on the Preservation Briefs is included in Section 3 and Appendix C of this report. Construction activities on the Parkway that do not meet these Standards would likely be considered adverse effects and requires mitigation.

2.3 Safety

The future management of the Parkway is also guided by standards to promote safety. These standards include transportation standards as defined by the FHWA and by the American Association of State Highway and Transportation Officials (AASHTO).

The California State Historic Building Code (SHBC) also provides guidance on how resources should be managed to maintain a balance between protecting the character defining features of a historic property and ensuring public safety. The authority for use of the SHBC is vested in Sections 18950 through 18961 of the Health and Safety Code. Section 18954 states that the enforcing agency of every city, county or responsible agency shall apply the provisions of alternative codes, engineering standards, building standards, and building regulations adopted by the SHBC Board pursuant to Section 18959.5 in permitting repairs, alterations and additions necessary for the preservation, restoration, rehabilitation, moving or continued use of an historical resource.

In order to provide for interpretation of the provisions of the State Historical Building Code, the State Historical Building Safety Board was established to act as a review body to state and local agencies or any affected party. Caltrans is required to apply the alternative regulations adopted by

the SHBC Board pursuant to Section 18959.5 in permitting repairs, alterations, and additions necessary for the preservation, restoration, rehabilitation, moving, or continued use of the Parkway.

SECTION 3 CONTRIBUTING RESOURCES AND CHARACTER DEFINING FEATURES

3.1 Character Defining Features Definition

The Parkway Historic District is comprised of numerous elements from both the historic and the contemporary period including the roadway surfaces, light fixtures, tunnels, bridges, and on/off ramps and the Arroyo Seco channel. Not all of these elements are owned and fully managed by Caltrans. There are 44 resources identified in the NRHP nomination as resources that contribute to the significance of the Parkway. The NRHP nomination also identified 14 resources as non-contributing (Calpo and Lee 2008). Resources are considered contributing if they retain the ability to convey their association with the significance of the Parkway as well as through their integrity. Although new features may be added to facilitate ongoing use, contributing resources must also retain features that are associated with their historic use or period of significance.

As discussed in Section 2, integrity is comprised of multiple factors including location, design, setting, material, workmanship, feeling and association. Depending on the criterion for which the resource is eligible for the NRHP, certain factors may have greater weight in determining whether the resource would be contributing and whether it retains its integrity. For example, a feature significant for its association with an event under Criterion A would be less likely to be considered to have lost its integrity if the materials were altered than if it was eligible as an example of architecture under Criterion C.

Each of the contributing resources identified in the NRHP has attributes that visually contribute to the identity of the resource itself and of the overall Parkway. Referred to as “character defining features”, their preservation is essential to maintaining the unique qualities of the resource and the overall integrity of the Parkway. Character defining features include the shape, massing, materials, craftsmanship, and decorative details of the resource, as well as encompassing the surrounding site and environment. For instance, the roadway itself is considered a contributing resource of the Parkway. In addition to material attributes such as the paving and guardrails, more intangible elements including the vistas and speed of the traffic on the road are also considered character defining as they help convey the quality of the resource during its period of historic use.

3.2 Steps to Identify Character Defining Features

Some of the character defining features associated with the contributing resources of the Parkway are described in the NRHP nomination form. This list will need to be expanded as further analysis of the Parkway occurs during the environmental review process and to prepare a final treatment plan for the Parkway’s contributing resources.

An architectural historian meeting the Secretary of the Interior’s Professional Qualifications Standards (36 CFR Part 61) should prepare a detailed inventory of the each contributing resource. This inventory should describe the resource including its current setting, dimensions, materials, and construction details. Attributes such as light fixtures, signage, landscaping, and street furniture

should be identified. The inventory should also note any significant features that have been removed or added. By identifying character defining features during the environmental review process, or establishing a process for the ongoing definition of the features under the PA, Caltrans will be able to ensure that the integrity of the individual resources and the overall Parkway are maintained.

3.3 Use of Character Defining Features in Treatment, Mitigation, and Programmatic Agreements

Once Caltrans develops the final list of character defining features for the contributing resources of the Parkway, it will serve as the basis for the development of treatment plans for the ongoing preservation of the resource. In the event that a proposed project is determined to have an adverse effect on a contributing resource, then measures to minimize and mitigate the effects would be developed. Measures to minimize should focus on protecting character defining features from further effects. By comparison, mitigation measures are developed when significant adverse effects will occur.

Where possible, mitigation measures should focus upon specific character defining features of the resources that would be adversely affected by the project. For example, if a project requires the maintenance of a hand rail then minimization efforts would focus on using cleaners that would not damage the existing hand rail's surface. However, if the project requires replacing a handrail to meet current safety code, a possible mitigation measure would be to select a new handrail with similar materials and pattern of balustrade. In general, treatment measures would not be defined in a PA but mitigation measures for known adverse effects would be. The PA would also define a process for developing and agreeing upon new mitigation measures in the event of an adverse effect.

3.4 Examples of Character Defining Features of the Parkway

The Parkway is formed of a wide range of historic structures whose character contributes to the overall significance of this complex heritage resource. For illustrative purposes, the following discussion uses two example resources to highlight the type of information that should be included in the final inventory of character defining features for the Parkway.

3.4.1 Figueroa Street Tunnels

Incorporated into the Parkway in 1931, the Figueroa Street Tunnels (Figures 2-5) were built to cut through Elysian Park in Los Angeles near the Los Angeles River, The system is comprised of four tunnels. The first three tunnels were constructed in 1931 and carry a 40-foot roadway with four lanes of traffic, a five-foot sidewalk on one side, and an 18-inch guardrail on the other. These tunnels are uniform in width and height at 46 ½ feet and 28 ¼ feet. The interiors of the tunnels are lined with tile wainscoting.

Added in 1935, the fourth tunnel is the longest at 755 feet. Pedestrian subways at Solano Avenue provide pedestrian access to the nearby park grounds. Stairways at the frontage road allow hikers to reach Elysian Park.

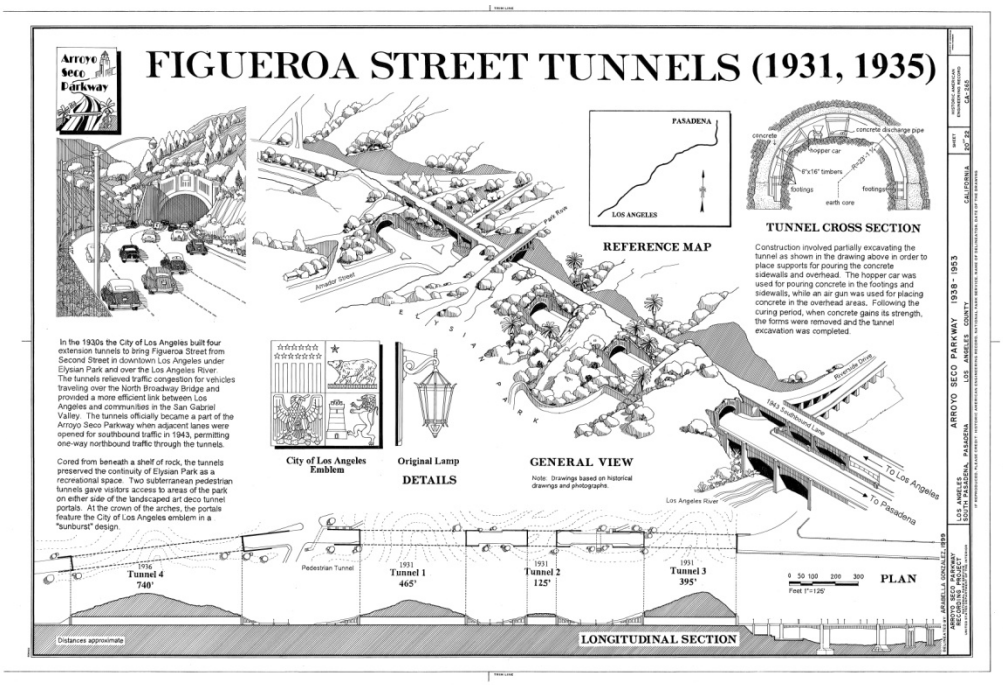


Figure 2 Drawing showing significant features of the Figueroa Street Tunnel (HAER Collection)

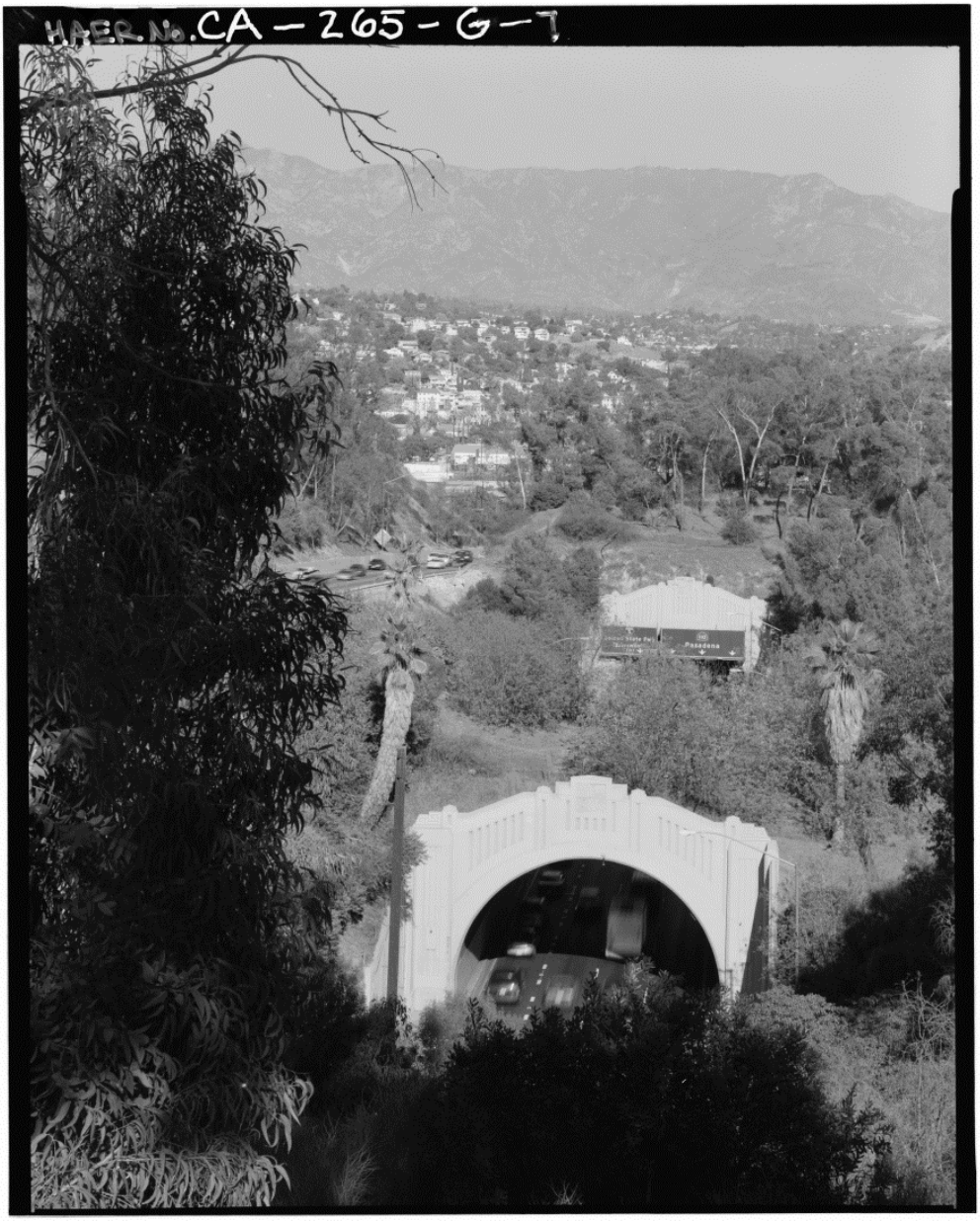


Figure 3 Aerial View of tunnels No. 1 & 2, South Portals, Facing North (HAER Collection)

The exteriors of the tunnels feature identical art deco ornamentation incorporated into the concrete. The open arch is flanked by engaged pilasters incised with narrow rectangles. The framework above the arch rises to a shallow peak. This framework includes narrow rectangular openings that surround the seal of the City of Los Angeles. The tunnels also originally featured lanterns and interior eye drop lamps (Figure 4).

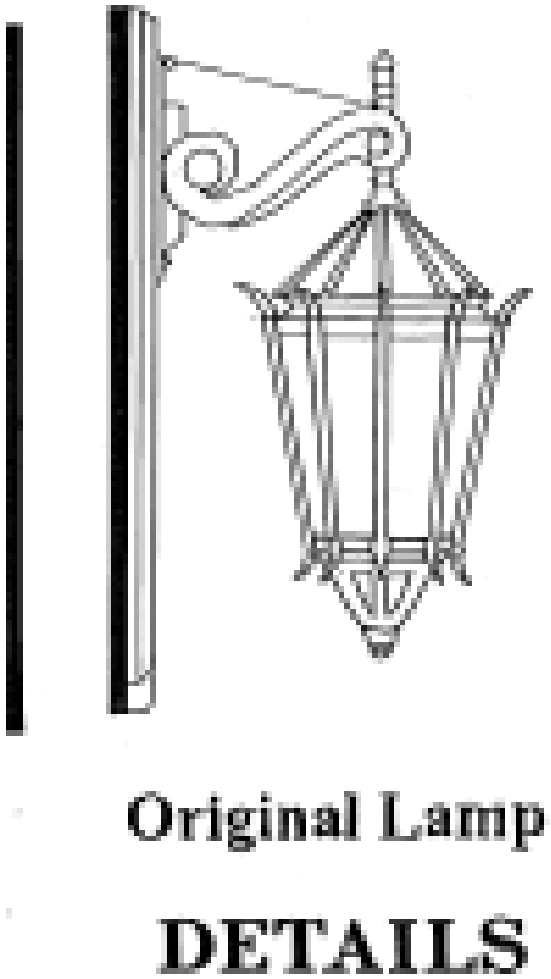


Figure 4 Detail of lantern originally used in the Figueroa Street Tunnels (HAER Collection)

Figure 5 Detail view of Tunnel No. 2, South Portals, Facing Northeast (HAER Collection)

Character defining features which visually express the age and significance of the tunnels include the:

- Location;
- Length;
- Width;
- Height;
- Sidewalk;
- Guard rail;
- Interior concrete finish;

- Art Deco style ornamentation (Figure 5);
- Wainscoting; and
- Interior Light fixtures.

These features should be addressed in the final inventory and treatment plan developed for the tunnels.

3.4.2 Avenue 43 Bridge and Access Road

The portion of the Parkway at Avenue 43 contains many contributing resources including its bridges and on/ramps. Some of these existing features originate from the initial construction of the Parkway, while others were added in the 1940s. Many features added at a later date have achieved significance in their own right for visually representing significant phases of the Parkway's construction and use; these elements and structures are also considered contributing resources.

Figure 6 Arroyo Seco Parkway Southbound exit lane at Avenue 43 (Martha Benedict, 2012)

Avenue 43 Bridge

The current Avenue 43 Bridge (Figure 6) replaced the original 1925 bridge that was damaged in the flood of 1938. Opened in 1940, the three-span, reinforced concrete girder structure is 24 feet in width. The bridge extends 64 feet across the Parkway and Arroyo Seco channel with clear spans of 51 feet, 53 feet and 69 feet. The pierced concrete railing was retained from the original bridge for use in the new structure. The Avenue 43 concrete bridge poles carry their original Westinghouse Senior Octagonal brass lanterns with spurs (Figure 7). Mounted on tall Art Deco bases, the fluted poles have a slightly flaring column capital and banding with stepped octagonal pedestals, one short and the other tall.

Figure 7 Avenue 43 Bridge and Light fixtures Avenue 43 (Martha Benedict, 2012)

Figure 8 Concrete arches supporting the 43 Avenue Bridge (HAER Collection)

Character defining features of the Avenue 43 bridge over the Parkway include the:

- Light fixtures;
- Width;
- Length;
- Concrete arches and girders (Figure 8); and
- Pierced concrete railing.

Southwest Access Road and Bridge

Other features associated with the Avenue 43 Bridge include the access road and short bridge across the channel on which vehicles currently enter and exit the Parkway from the southwest (Figures 9 & 10).

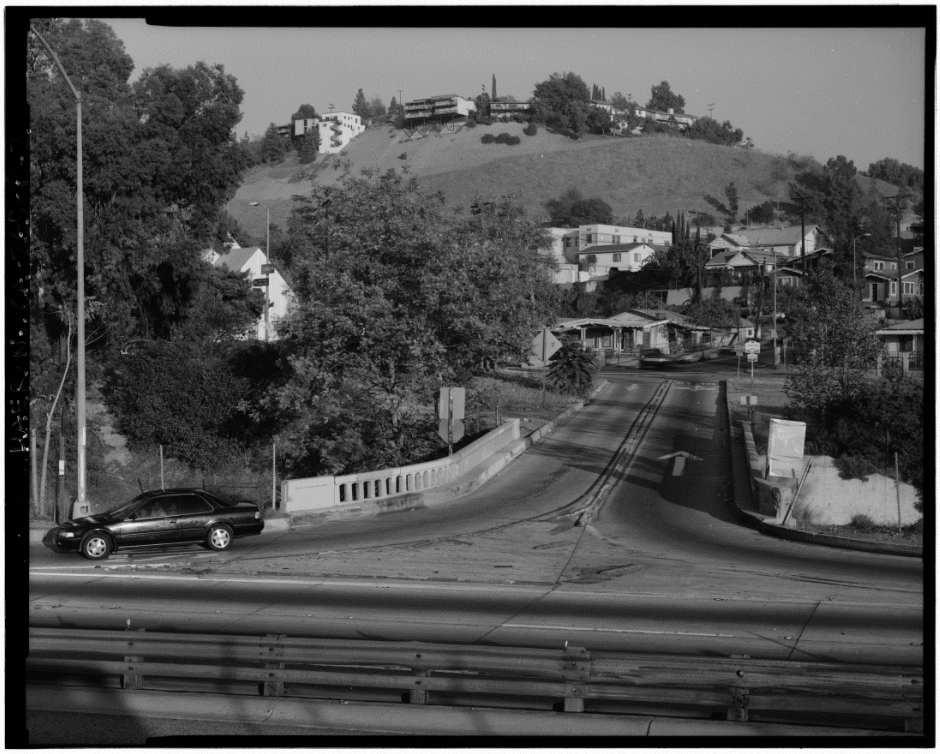


Figure 9 View of northbound Avenue 43 on and off ramp utilizing a short bridge across Arroyo Seco, facing east (HAER collection)

Figure 10 View of Avenue 43 Southwest Access Road and Bridge across Arroyo Seco facing southeast (HAER collection)

Character defining features of the Southwest access road and bridge include the:

- Width;
- Length;
- Concrete arches and girders;
- Pierced concrete railing; and
- Plaque with date inscribed.

Northwest On/Off Ramp

The horseshoe configuration of the northwest (southbound) on/off ramp is a distinctive element of the Parkway. Character defining features of this portion of this on/off ramp include:

- Location;
- Paving material;
- Landscaping; and
- Horseshoe configuration (Figure 11).

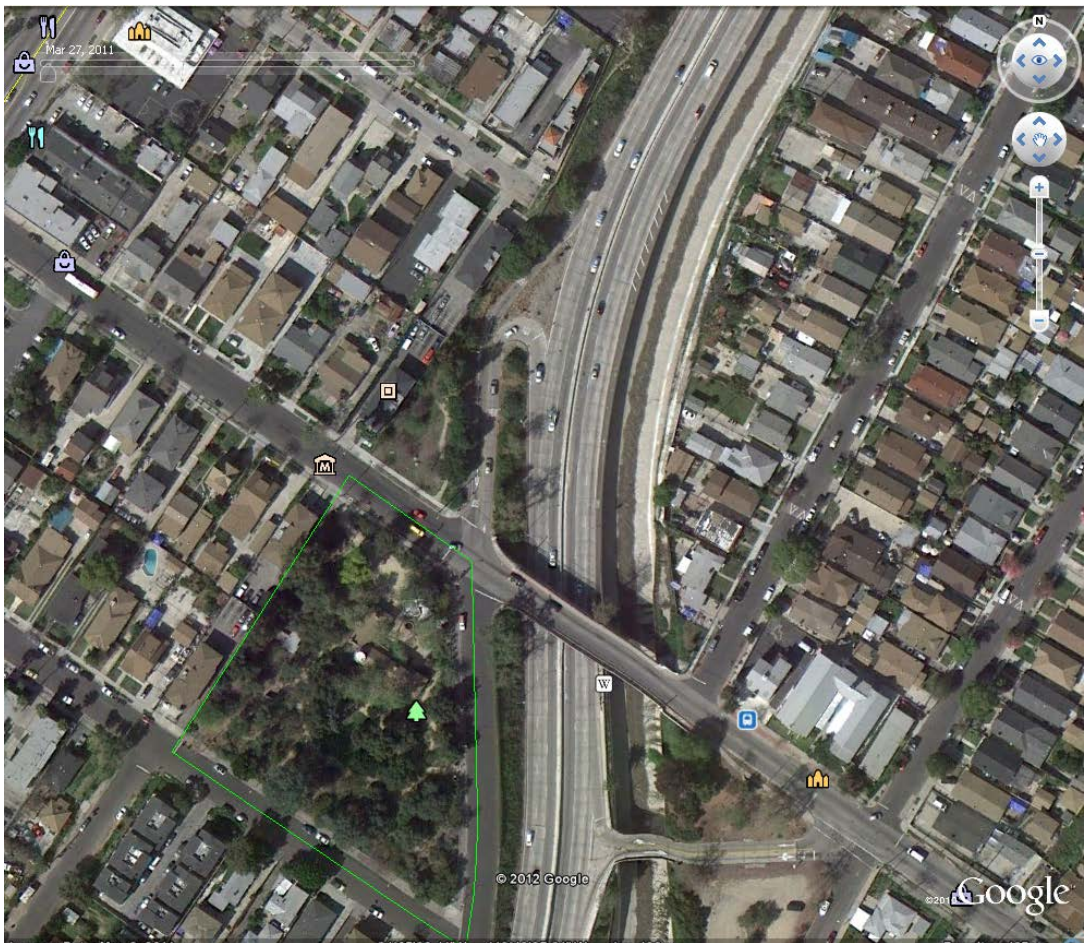


Figure 11 Aerial View showing the horseshoe shaped on ramp (Google Earth)

In addition to the contributing resources described in the NRHP nomination, this portion of the Parkway also retains examples of elements found throughout the Parkway including the "rubble" concrete retaining walls, benches, and pathways (Figure 12-13). These types of elements should be identified in the final Parkway inventory and addressed in detail in treatment plans for each contributing resource.

3.5 Recommendations

Recommendation 3.5.1: Complete a thorough inventory of the character defining features for each of the approximately 70 contributing resources identified in the treatment plan.

Recommendation 3.5.2: Expand the list of previously identified character defining features noted in the treatment plan if they are identified in the above inventory process. Potential features which may be identified include landscape design features and historic plant selections.

Recommendation 3.5.3: Expand the list of contributing resources should new information become available as a result of the inventory of contributing resources.

Recommendation 3.5.4: Conduct and/or update an integrity assessment of all of the Parkway's contributing historic resources.

Figure 12 Non-historic "Rubble" Concrete Retaining Walls at North On/Off Ramp (Martha Benedict, 2012)

Figure 13 Path and Bench Avenue 43 northbound on/off ramp (Martha Benedict, 2012)

SECTION 4 TREATMENT

Once Caltrans completes the inventory of character defining features, the agency will need to work with its partners to establish treatment methods for each contributing resource. These methods would be agreed upon in a treatment plan and would provide guidelines to architectural historians, planners, architects, landscape architects and engineers for important elements to consider in planning for the long-term management of the Parkway. Further information on sample treatment plans can be found in Appendix C.

4.1 Definition

Treatment methods are actions that are applied to a contributing resource of a historic property to ensure its preservation. The Secretary of the Interior has identified four standards for the treatment of historic properties (see Appendix C). These treatments include:

- Preservation – treatments employed to keep a historic resource in use in its current function (typically maintenance activities).This strategy emphasizes retention of historic fabric through conservation, maintenance, and repair. For example, removing graffiti from a handrail using a cleaning product appropriate to the material from which the handrail is constructed.
- Rehabilitation – treatments employed that emphasize retention of historic fabric and repair but allows greater latitude for replacement due to deterioration or facilitate a compatible use. For example, the height of the handrail does not meet current safety codes. A recommended rehabilitation treatment measure would be to retain as much of the existing handrail as possible and either add a new section at the base or top to bring the handrail to the required height.
- Restoration – treatments employed to return a historic element back to use or to its original condition. In this method, non-historic features may be removed or missing features may be reconstructed to more accurately convey the appearance and use of a property at a particular period of time. For example, the handrails on a pedestrian bridge were replaced in the 1980s. In an effort to return the pedestrian bridge to its appearance at the time of its 1940s construction, the 1980s handrails would be replaced with replicas of the 1940s handrails.
- Reconstruction- treatments to depict through new construction the form, features, and details of a non-surviving site, landscape, building, structure, or object. For example, a bridge was built in the 1930s with concrete handrails. In the 1970s the handrails were replaced with steel rails. In 2013, the handrails are damaged beyond repair in a storm. To reconstruct the bridge to its original 1930s appearance, the handrails are rebuilt using concrete in a pattern based exactly on the original specification.

In addition to using the above treatment methods, other strategies may be employed to help convey a sense of the original character or showcase unusual architectural details of a historic

property. The following strategies are generally employed as mitigation when the preferred treatment methods are not possible:

- Reuse – methods employed when a historic element can no longer be used in its original function. For example, the handrail cannot be modified to meet current safety requirements for pedestrian bridges but is suitable for use as handrail in another location. The handrail would be removed and reused in a different location.
- Salvage – method employed when a historic element can no longer be used as a functional element but can be employed as part of street furniture or an interpretive display. For example, the handrail would be removed and used to form a base on which an interpretive plaque is mounted.

Treatment methods for a multi-use, linear feature like the Parkway should balance maintaining the character defining features of the resource with safety concerns associated with its planned and future use. Preservation will be the preferred treatment method for all Parkway resources; however, different treatment methods may be adopted for specific portions of the Parkway based upon their level of integrity and planned use.

4.2 Role in a Programmatic Agreement

Treatment methods would typically not be defined in a PA; nevertheless, the PA might stipulate that a Treatment Plan would be developed and adhered to for any proposed changes to particular historic elements. The PA might also specify the procedure to follow if an acceptable treatment method cannot be agreed upon. Additionally, the PA could reference routine maintenance activities such as cleaning that are covered in the treatment plan and would therefore not require review and consultation with the SHPO and other consulting parties. Figure 14 provides a visual representation of the way a treatment plan assists the implementation of a PA.

4.3 Process for Developing Treatment Plans

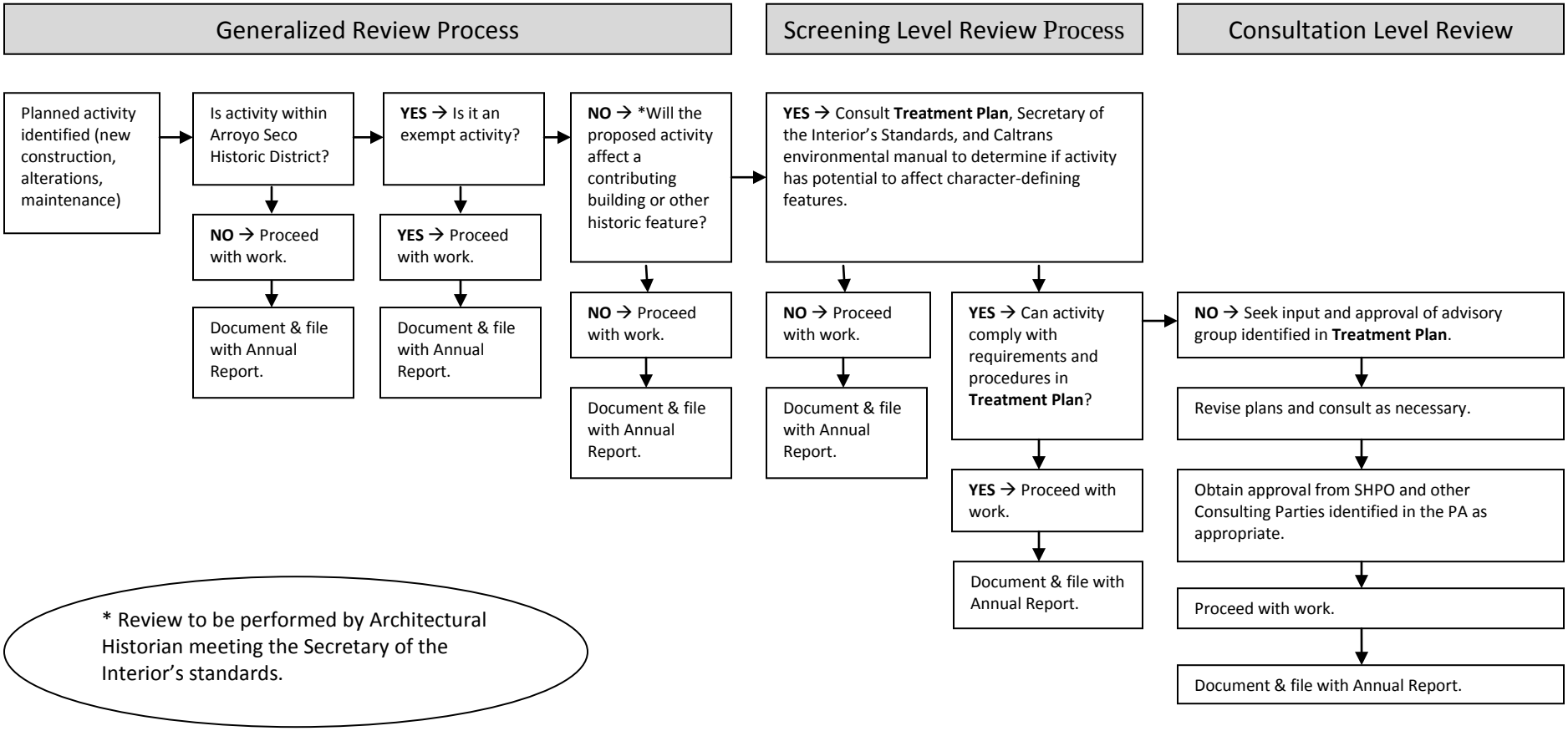
Caltrans will need to work with its partners to develop a final treatment plan. Although this process can be initiated at any time, the document will be more robust if the full inventory of character defining features is complete and if Caltrans is far enough along in its environmental review process that it has identified potential projects in the Parkway corridor that will have significant impacts on contributing resources.

The treatment plan should be authored by an architectural historian meeting the Professional Qualifications Standards and should include the feedback and recommendations of the Caltrans maintenance and planning staff. Input from consulting parties and other groups with knowledge of the Parkway resources should also be incorporated into the document. Caltrans should consider hosting design charettes to discuss proposed treatment plans for areas where there will be extensive changes to a contributing resource.

The contributing resources of the Parkway have varying levels of integrity and may result in different treatment method being established for each resource. Each contributing resource should have its own section in the treatment plan. In addition, Caltrans may develop specialized lists of

treatment recommendations for elements found in multiple areas of the Parkway, such as the rubble walls and light fixtures. These recommendations would supplement those established for the larger associated contributing resource. An example of this is the rubble walls found in the vicinity of Avenue 43. When initiating any changes to this area, planners, architects, and maintenance crews should consult the treatment plan for both Avenue 43 and the Rubble Walls.

Figure 14 PA Implementation Plan Using Treatment Plan



24

4.4 Elements to be Included in a Treatment Plan

Although each contributing resource will have unique requirements for treatment, there are aspects of a treatment plan that should be established for all contributing resources including:

- Condition assessment based upon inventory of character defining features;
- Long-term treatment standard that will be applied to the resource– i.e., preservation, rehabilitation, restoration, or reconstruction;
- Examples of proposed projects that may be undertaken in the portion of the Parkway that would affect the contributing resource;
- Design guidelines;
- Safety and traffic calming measures;
- Maintenance program;
- Monitoring program;
- List of exempt procedures;
- Review procedures for non-exempt activities; and
- Documentation requirements and standards

4.5 Examples of Appropriate Treatment Methods for the Parkway

In order to provide a consistent, appropriate approach to the management and long-term use of the Parkway, Caltrans should prepare a full treatment plan based upon detailed studies of the significance and current condition of the Parkway.

Using the two example resources introduced in Section 2, suggested methods that could be incorporated into a complete treatment plan for the Figueroa Street Tunnel and the Avenue 43 Bridge and On/Off Ramps are discussed below. These suggestions are intended to serve as examples for how treatment plans would be included in a larger management strategy for the Parkway that includes the use of a PA. As the planning process for the Parkway proceeds, the suggestions should be adjusted to incorporate the current conditions of resources and design concepts.

4.5.1 Figueroa Street Tunnels

The Figueroa Street Tunnel system is one of the most intact features in the Parkway system, with many of its character defining features in more or less original condition or only minimally altered. The tunnels, pedestrian subways, and stairs retain their location, design, setting, and workmanship. Although electroliers are missing, the interior lighting has been altered, and the structures have been subject to acts of vandalism (Figure 15), much of the integrity of materials has been retained.

Figure 15 View of Figueroa Street Tunnels with graffiti (Cardno ENTRIX 2011)

Particularly when considering the loss of integrity of other Parkway features, the high degree of integrity of the tunnels suggests that the most appropriate treatment methods would be:

- *Preservation* of the remaining character defining features to minimize alterations; and
- *Restoration* of features that may have been altered or removed.

The PA should specify the importance of this complex contributing resource and the commitment by Caltrans to preservation and restoration as the primary treatment method to be employed for the tunnels. The following list of suggestions contains elements that should be included in the final treatment plan developed by Caltrans for the Figueroa Street Tunnels:

Condition assessment
This table is an example of a condition report for character defining features, in this case associated with the Figueroa Street Tunnels. This information is in addition to the chart and description of contributing resources developed for the NRHP nomination.

FIGUEROA STREET TUNNELS*

Character Defining Feature	Original Feature	Current Condition	Preservation Strategy	Safety Concern
Wainscot	Yes	Good	Preserve	No
Concrete finish	Yes	Good	Preserve	No
Interior Light Fixtures	Yes		Preserve	No
Exterior Ornamentation	Yes	Good	Preserve	No
Guard rail	Yes	Good	Preserve	No
Sidewalk	Yes	Good	Preserve	No

*Information presented in the table is intended as an example and should not be considered a complete list.

Treatment Recommendations: Preserve through repairs, use of in-kind materials and appropriate methods and restore missing elements

Treatment should focus on the preservation of existing features through repairs, replacement in-kind of missing tiles, hand rails, and other elements. Other important treatment strategies are to restore missing elements of the tunnels by recasting and installing replicas of the original interior and exterior light fixtures.

Design guidelines

The following guidelines should be used by maintenance staff for routine repairs and architects, engineers, and planners for incorporation into long-term planning. These guidelines are presented as suggestions and should be expanded and finalized based upon discussion with maintenance staff, consulting parties, and SHPO.

Paving Materials

The existing paving materials should be retained.

Signage

A signage plan should be developed for all interpretive materials to be used in Elysian Park and in the pedestrian subways. The signs should be wood or metal.

Wainscoting

The existing white tile wainscoting should be retained. Repairs to the wainscoting should be made using the same tiles. If the existing tiles are no longer commercially available, then a supplier should be identified to manufacture tiles in a similar color, shape, and size.

Light fixtures

Existing fixtures should be retained.

Fixtures that replicate those originally used on the exterior of the tunnel should be installed.

Safety and Traffic Calming
A lower speed limit should be established to improve safety in the area.

Monitoring Program
The tunnels should be monitored every six months by an architectural historian or maintenance staff with specialized training in preservation. This monitoring program should include inspecting the tunnels for cracks in the concrete, damage to the tile wainscoting and guardrail, and graffiti. If there is evidence of cracking, a structural engineer should be consulted.

Maintenance Schedule
Caltrans will perform regular maintenance on the tunnels. All maintenance will be performed in accordance with design guidelines and use approved products. Maintenance staff should receive specialized training on the character defining features of the tunnel and the use of require equipment. Caltrans maintenance staff should consult *Preservation Brief 15, Preservation of Historic Concrete* for recommendations on cleaning and restoring the concrete. If cleaning is required due to graffiti or other damage, non-abrasive cleaning methods should be employed as recommended in *Preservation Brief 38, Removing Graffiti from Historic Masonry* and *Preservation Brief 1, Cleaning and Water Repellant Treatments for Historic Masonry*.

Exempt procedures
The following activities are examples of routine procedures that could be exempt from review:

- Mowing;
- Tree pruning;
- Cleaning using approved cleaning method;
- Replacing light bulb with approved bulb; and
- Patching pavement using approved paving material.

The complete exempt procedures list should include requirements for who would carry out the maintenance, what equipment and products may be used, and how the work will be documented.

Advisory board
An advisory board consisting of members of the community, design professionals, and Caltrans staff will review all proposed changes to the tunnels. If the advisory board cannot agree on the appropriate strategies the SHPO will be consulted for a final determination.

Currently proposed changes to features
None at this time.

4.5.2 Avenue 43 Bridge and On/Off Ramps

Although it retains its integrity and eligibility as a contributing resource to the Parkway, the Avenue 43 Bridge and on/off ramp system has changed over time. Some of these features, such as the rebuilt Avenue 43 Bridge are newer but are significant as examples of later construction techniques employed by the Parkway engineers and as visual representations of the evolution of the Parkway in response to the development of the region. There have also been some alterations that are

visually distracting, such as the addition of chain link fencing intended to improve safety (Figure 16), repairs to concrete in a manner that detracts from its historic appearance, and the installation of signage (Figure 17).

The nature of this portion of the Parkway suggests a number of improvements. At present, it provides significant safety challenges due to the current configuration of the on/off ramp, concerns which should be addressed. At the same time, with its proximity to community resources, the area provides an opportunity to enhance connections to residents and other users of the area.

Figure 16 Avenue 43 Southwest Bridge at Carlota Street showing fencing (Martha Benedict, 2012)

Figure 17 Signage at Southbound Avenue 43 on-off ramp (Martha Benedict, 2012)

Based upon its integrity and the current needs to accommodate traffic and safety, appropriate treatment methods for the features associated with the Avenue 43 Bridge would be:

- *Rehabilitation* of the resource with as many character defining features as possible preserved through maintenance and repairs in kind; and
- Allow for carefully managed changes that promote ongoing and continued use.

Development of context sensitive solutions that preserve character defining features while promoting safety will be an essential part of the planning process. These goals should be articulated in the PA. The following list of suggestions addresses elements that should be included in the final treatment plan developed by Caltrans for the resources at Avenue 43:

Condition assessment
This example table describes the current condition of the character defining features associated with the Avenue 43 Bridge and On/Off Ramps. This information is in addition to the chart and description of contributing resources developed for the NRHP nomination.

AVENUE 43 BRIDGE*

Character Defining Feature	Original Feature	Current Condition	Preservation Strategy	Safety Concern
Wainscot	Yes	Good	Preserve	No
Concrete finish	Yes	Good	Preserve	No
Interior Light Fixtures	Yes	Good	Preserve	No
Exterior Ornamentation	Yes	Good	Preserve	No
Guard rail	Yes	Good	Preserve	No
Sidewalk	Yes	Good	Preserve	No

*Information presented in the table is intended as an example and should not be considered a complete or final list.

NORTH ON/OFF RAMP*

Character Defining Feature	Original Feature	Current Condition	Preservation Strategy	Safety Concern
Horseshoe configuration	Yes	Excellent	Preserve	Yes
Paving Materials	Yes	Fair	Restore	No
Landscaping	Yes	Fair	Restore	No

*Information presented in the table is intended as an example and should not be considered a complete or final list.

SOUTHWEST ACCESS ROAD AND BRIDGE*

Character Defining Feature	Original Feature	Current Condition	Preservation Strategy	Safety Concern
Plaque	Yes	Good	Preserve	No
Pierced concrete railing	Yes	Good	Preserve	No
Concrete arches and girders	Yes	Good	Preserve	No
Chain link fencing	No	Good	Replace with more compatible material	Yes

*Information presented in the table is intended as an example and should not be considered a complete or final list.

Treatment Standard: Preserve through use of in-kind and compatible materials

In focusing on preservation and rehabilitation, the treatment plan should focus on the use of in-kind materials for all necessary repairs. *Preservation Brief 15, Preservation of Historic Concrete* should be consulted regarding recommended techniques for fixing cracks and other repairs.

Avoid Alterations
Alterations should be avoided to the character defining features of the bridge and on and off ramps such as the concrete railing, girders, paving materials, and light fixtures. Alterations to the configurations of the on/off ramps that are required for safety or to promote community access should follow the recommendations in *the Secretary of the Interior Standards for Rehabilitation*. Changes to these features may require finding a balance between these recommendations and current safety standards. Proposed alterations should be reviewed with the advisory board early in the design process to avoid changes to the character defining features.

Design guidelines
The following guidelines should be used for both routine repairs and provided to architects, engineers, and planners for incorporation into long-term planning. These guidelines are presented as suggestions; they should be expanded and finalized in discussion with maintenance staff, consulting parties, and SHPO.

Paving Materials
The existing paving materials should be retained.

Signage
A signage plan should be developed for all interpretive materials. The signs should be wood or metal,

Light fixtures
Existing fixtures should be retained. Damaged light fixtures should be replaced with an identical fixture. Fixtures added to the area including the pedestrian paths near the Lummis property should be compatible to the existing features of the bridge. Caltrans should identify a manufacturer and review the proposed design with the review board.

Guard rails
Retain existing concrete guard rail
If necessary add secondary reflective guard rail in front of existing rails.

Safety and Traffic calming
Establish a lower speed limit to improve safety in the area.

Monitoring Program
The bridges, on/off ramps, and access roads at Avenue 43 will be monitored at least annually. Monitoring will be performed by an architectural historian or a member of the maintenance staff who has received specialized training in preservation. This monitoring will inspect the character defining features for graffiti and other damage. If there is evidence of cracking a structural engineer should be consulted.

Maintenance Schedule
Caltrans will perform regular maintenance on the features in the vicinity of Avenue 43. Maintenance will be performed by crews who have received training on the use of appropriate methods for historic properties and who have reviewed the treatment plans.

Exempt procedures
The following activities are examples of routine procedures that could be exempt from review:

- Mowing;
- Tree pruning;
- Cleaning using approved cleaning method;
- Replacing light bulbs with approved bulb; and
- Patching pavement using approved paving material.

The complete exempt procedures list should include requirements for who would carry out the maintenance, what equipment and products may be used, and how the work will be documented.

Advisory board
An advisory board consisting of members of the community, design professionals, and Caltrans staff will review all proposed changes to the Avenue 43 features. If the advisory board cannot agree on the appropriate strategies the SHPO will be consulted for a final determination.

Currently Proposed Changes to Features
One option that is being considered is reconfiguring the on/off ramps to the Parkway near Avenue 43. This proposal would include removing the existing horseshoe on and off ramp on the northwest corner of Avenue 43 and adding a new northbound off ramp so that the existing on/off ramp functions exclusively as an onramp. The proposal entails the installation of a dedicated off ramp on the north side of the bridge and on ramp on the south side of the bridge. Other options being considered include adding pedestrian paths. These changes would help Caltrans meet current safety goals and foster connections to the neighborhood but would also result in a significant alteration to the integrity of the resource.

Caltrans should present the design concept to the advisory board early in the process for review. The design should focus upon retaining as many of the existing character defining features as possible by retaining the existing bridge over the Parkway, the southwest access road and bridge, and the existing rubble walls. The reconfigured northbound off ramp should be paved with the same material as that used in other features in the vicinity of Avenue 43. A compatible light fixture should be identified for use in the proposed pedestrian paths. Interpretive materials should be installed to enhance awareness of the history of the Parkway and the surrounding communities. A secure location should be established to store light fixtures and other elements that could be damaged during the construction process.

Although focused on rehabilitation of the overall feature, some of the work proposed for Avenue 43 would likely be considered an adverse effect and require mitigation. If the design is sufficiently developed at the time the environmental document is prepared, the required mitigation could be stipulated in the PA. If plans have not been fully developed, a process should be incorporated into the PA to involve appropriate parties in a review and discussion process about recommended mitigation.

4.6 Recommendations

Recommendation 4.6.1: Target revisions to the existing treatment plan by providing detailed comments on what is lacking in the current document.

Recommendation 4.6.2: Prioritize the list of historic resources in terms of significance to the character of the Parkway and current condition assessment. The list should include but not be limited to all individual examples of contributing resources:

- Buildings and building complexes;
- Engineering features;
- Roadways;
- Bridges;
- Tunnels;
- On-off ramps;
- Safety features;
- Walls, railings and fencing;
- Landscape and planting features;
- Channels;
- Lighting features; and
- Signage.

Recommendation 4.6.3: In priority order, outline the appropriate treatment method for each contributing resource based on the inventory of character defining features as noted in Recommendations 3.8.1, 3.8.2, 3.8.3, and 3.8.4. Treatment methods should include preservation maintenance.

Recommendation 4.6.4: Establish a timeline for implementing prioritized treatment of historic resources.

Recommendation 4.6.5: Incorporate the development of the treatment plan and other long-term planning for the Parkway into the environmental review process concurrent with Section 106 and development of the PA.

SECTION 5 MITIGATION

5.1 Definition

A multi-use, linear historic property in a densely populated area like the Parkway may be affected differently by many projects. Effects can be short or long-term. Short-term effects such as noise, dust, and temporary disruptions to access may result from road work. Long-term effects can include the alteration of a character defining feature of a contributing resource to meet current safety concerns. Effects may also be direct such as replacing a guardrail or repaving the road surface. Indirect effect would include changes to the visual setting or the introduction of noise from construction. There can also be cumulative effects when multiple projects impact a resource. Even small changes that if considered individually would not have a significant effect but when applied repeatedly over time can result in cumulative effects. Under CEQA, NEPA, and Section 106, effects, whether cumulative or individual, are reviewed to determine if they would adversely affect the resource. Under these regulations, a project is determined to adversely affect a historic property if it alters the characteristics that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property.

By developing comprehensive lists of character defining features and treatment plans that focus upon preservation and rehabilitation of the contributing features, Caltrans will be able to avoid many adverse effects to the Parkway. Considering preservation and the retention of historic fabric early on in the design process will also limit many potential effects. However, even with the most careful planning there can be some unavoidable adverse effects to Parkway features that will require mitigation.

Mitigation often takes the form of creating specialized documentation on a historic resource such as measured drawings or large format photographs. However, as there has already been extensive documentation performed on the Parkway including a HAER study, additional types of mitigation would need to be developed. Mitigation should be targeted to either preserving the adversely affected resource or enhancing public knowledge of that resource. Occasionally, “offsite” mitigation may be employed. This type of mitigation often takes the form of providing funding for general education or preservation funds that are not specifically tied to the resource. Offsite mitigation is generally performed if the resource is already well documented, is located in an isolated area where there would be limited value to the development of interpretive or public education materials, or fits into a larger program of preservation targeted to the community impacted by the project.

5.2 Role in a Programmatic Agreement

If unavoidable adverse effects are identified at the time of the development of the PA, the specific mitigation may be included in the PA. However, due to the multi-use, linear nature of the Parkway, many activities will not be identified in advance but a process for addressing these issues can be included in the PA. When adverse effects are anticipated or considered likely, the PA will specify the parties who should be involved in developing the mitigation, the process in the event of a disagreement, and parties to be responsible for reporting on the required mitigation. Additionally,

procedures for documentation and review of specific activities that would occur regularly can be specified in the PA so that extensive consultation under Section 106 can be streamlined.

5.3 Examples of Proposed Mitigation for the Parkway

By working closely with the community in advance to review design plans and develop treatments for the contributing resources of the Parkway where preservation is the focus, it may be possible to avoid many adverse effects. The following examples are provided as possible mitigation strategies in the event that it is not possible to avoid adverse effects.

5.3.1 Figueroa Street Tunnels

Due to the Figueroa Street Tunnels' high level of integrity and central role in the engineering history of the Parkway, project planning should focus on avoiding all but the most necessary changes. If there are adverse effects to this resource, they would need to be mitigated following extensive discussion with the SHPO and other consulting parties. Mitigation should focus on the specific aspect of the tunnel that would be affected by project activities; however, the following are potential mitigation measures that might be appropriate:

- Recasting the original light fixtures;
- Preparing expanded documentation on the interior of the tunnels; and
- Preparing an exhibition for use in the nearby communities on the history of the tunnel and their important engineering features.

As there are currently no changes planned for the Figueroa Street Tunnels, mitigation cannot be specified in the PA, but the document could include the thresholds for actions requiring mitigation.

5.3.2 Avenue 43 Bridge and On/Off Ramps

The safety concerns associated with the bridge and on/off ramp at the Avenue 43 Bridge make it likely that there would be significant changes to the resources in this area of the Parkway. By following the treatment plans and reviewing changes with the SHPO and other consulting parties it may be possible to avoid adverse effects, but the following suggestions are provided as possible examples of mitigation for features associated with this portion of the Parkway. Although there is documentation on this portion of the Parkway, there is less detail compared with other areas. Therefore, an update to the HAER materials might also be recommended as mitigation. Depending on the effect, appropriate mitigation could also include:

- Use of similar materials for all new elements;
- Installation of similar paving treatments;
- Employing light fixtures that replicate those currently in use on the bridge;
- Creating a fund to pay for the maintenance of the remaining historic features;
- Development of interpretive materials for use in the proposed recreational areas or at the Lummis House (a historic property located adjacent to the bridge); and
- Preparation of a video for use on community web sites.

5.4 Recommendations

Recommendation 5.4.1: In proceeding with the environmental process and design plans for the Parkway, focus on activities that will limit changes to the Parkway and minimize the need for mitigation.

Recommendation 5.4.2: Incorporate mitigation recommendations into a PA to prepare for unavoidable adverse effects.

Recommendation 5.4.3: Identify parties to be involved in developing and reporting on the mitigation addressed in the PA.

Recommendation 5.4.4: Determine the process in the event of a disagreement between parties in developing the mitigation.

Recommendation 5.4.5: Streamline consultation under Section 106 by specifying procedures for documentation and review of specific activities in the PA that would occur regularly.

SECTION 6 PROGRAMMATIC AGREEMENT

6.1 Introduction

A PA is a legally binding document which outlines the process by which an agency will meet its environmental compliance responsibilities on a project or, in this case, a specific resource. It identifies the process for consultation, review and compliance with Section 106 of the NHPA. It is the overriding document for identifying the level of effect under Section 106. In contrast with a Memorandum of Agreement, a PA outlines a process that deviates from a standard Section 106 compliance process, typically by addressing issues where the effects of an undertaking are not known in advance and therefore it is not possible to define agreements regarding mitigation.

The PA is also a useful tool for addressing complex resources where the effects of an undertaking are associated with a linear resource type or are regional in focus. A good PA is also effective at outlining agreed-upon approaches to routine management activities for all parties. As these conditions apply to the Arroyo Seco Corridor, a PA would be an appropriate approach for formally identifying how Caltrans and all responsible agencies will satisfy Section 106 compliance as it manages this historically significant resource with multiple ownership and management issues. Caltrans would initiate the development of the PA as part of its environmental process once a specific Section 106 undertaking or anticipated set of undertakings is identified.

6.2 Parties Involved in a PA

The Arroyo Seco Parkway Historic District encompasses resources owned and operated by various agencies, with Caltrans responsible for the Arroyo Seco Parkway itself, Los Angeles County for the Arroyo Seco channel, various local agency or combination of agency ownership/management on features like the bridges, overpasses and tunnels.
The PA is developed by the agency with the responsibility for the undertaking under Section 106. As part of the consultation responsibilities under Section 106, the agency should work with key stakeholders to identify issues and responsibilities for addressing potential effects from the undertaking. These key stakeholders, or consulting parties, may also sign the PA. Consulting parties will include signatories (those who have delegated responsibilities under the PA), invited signatories (those invited to sign), or concurring parties (those who agree to abide by the terms of the PA). Some of the agencies who should be consulted in the development of a comprehensive PA for the Arroyo Seco Parkway Historic District include:

- Caltrans;
- FHWA;
- SHPO;
- Advisory Council on Historic Preservation (ACHP -optional, not required);
- The City of Los Angeles;
- The City of South Pasadena;
- The City of Pasadena;

- Metropolitan Transportation Authority (METRO); and
- Los Angeles County.

The Section 106 process requires that the agency seek input from members of the public. The agency can demonstrate that they have met this goal by including non-agency consulting parties, particularly groups interested in the Arroyo Seco Corridor, including:

- The National Scenic Byways Program (Byway Leader);
- Scenic Arroyo Seco;
- Arroyo Seco Foundation;
- Los Angeles Conservancy;
- Highland Park Heritage Trust;
- S Pasadena Preservation Foundation;
- Pasadena Heritage; and
- Citizens Committee to Save Elysian Park.

Caltrans is also required under Section 106 to consult on proposed undertakings with Indian tribes who may be interested in the project area. If the project crosses tribal land the tribe would be signatory to the PA, otherwise they would be a concurring party. Caltrans should identify Arroyo Seco stakeholders early in the process of preparing the document so that their issues can be addressed in the Section 106 process and during the environmental process, and they can be included as consulting parties at the most appropriate stages of the development of the PA.

6.3 Elements of a PA

Because each PA is unique to its project or resource, there is no template which works in all cases. However, as a legal document, a PA should include two main elements:

- Information on the project in the “Whereas Clauses”; and
- Direction on how the project will be managed in a “Stipulations” section.

6.3.1 Whereas Clauses

This initial section provides key baseline information on the project that will be covered by the PA. Each Whereas Clause should clearly define one aspect covered by the PA, such as the undertaking itself, the resource and its boundaries or area of potential effect (APE). Responsible agencies and statutory authorities – as well as the legal authority for their actions – should be identified here. Consultation with SHPO, ACHP and other stakeholders should be documented in this section as well. Another key part of the “Whereas Clause” section is to identify signatories and concurring parties. This section should conclude with reference to the stipulations which are addressed next.

6.3.2 Stipulations

This section – often the most substantial part of the document – details the agreed actions to be taken by the signatories of the PA. Many of the stipulations in a PA relating to the Parkway should focus upon how the CPP and the treatment plan will be utilized and what activities may be required to supplement those plans. Details on exemptions from agency and SHPO review should be included as well as what are defined as standard treatments. Some examples of issues relating to the Parkway that would be covered in the PA include:

- Process for annual review;
- Process for dispute resolution;
- Process for documenting compliance with procedures for exempt activities;
- Process for seeking stakeholder input;
- Qualifications for staff working on typical projects;
- Required training programs;
- Timing for reviews and updates to the treatment plan; and
- Data management.

6.3.3 Signature Blocks

Once the final draft has been agreed upon, all signatory parties and concurring parties must sign the document. This section should be organized at the end of the main document so that it can be easily distributed to all to sign. It should include each signatory's affiliation, name and title with dedicated space for each signature and signature date. If both signatory parties and concurring parties are involved, there should be a clearly defined section for each.

6.3.4 Appendices/Attachments

This section provides any additional information which supports the actions outlined in the PA, including relevant regulations and policy, as well as such specifically-defined aspects as resource exemptions and standard treatments. Any addenda to the original agreement, including new signature blocks, would also be included here.

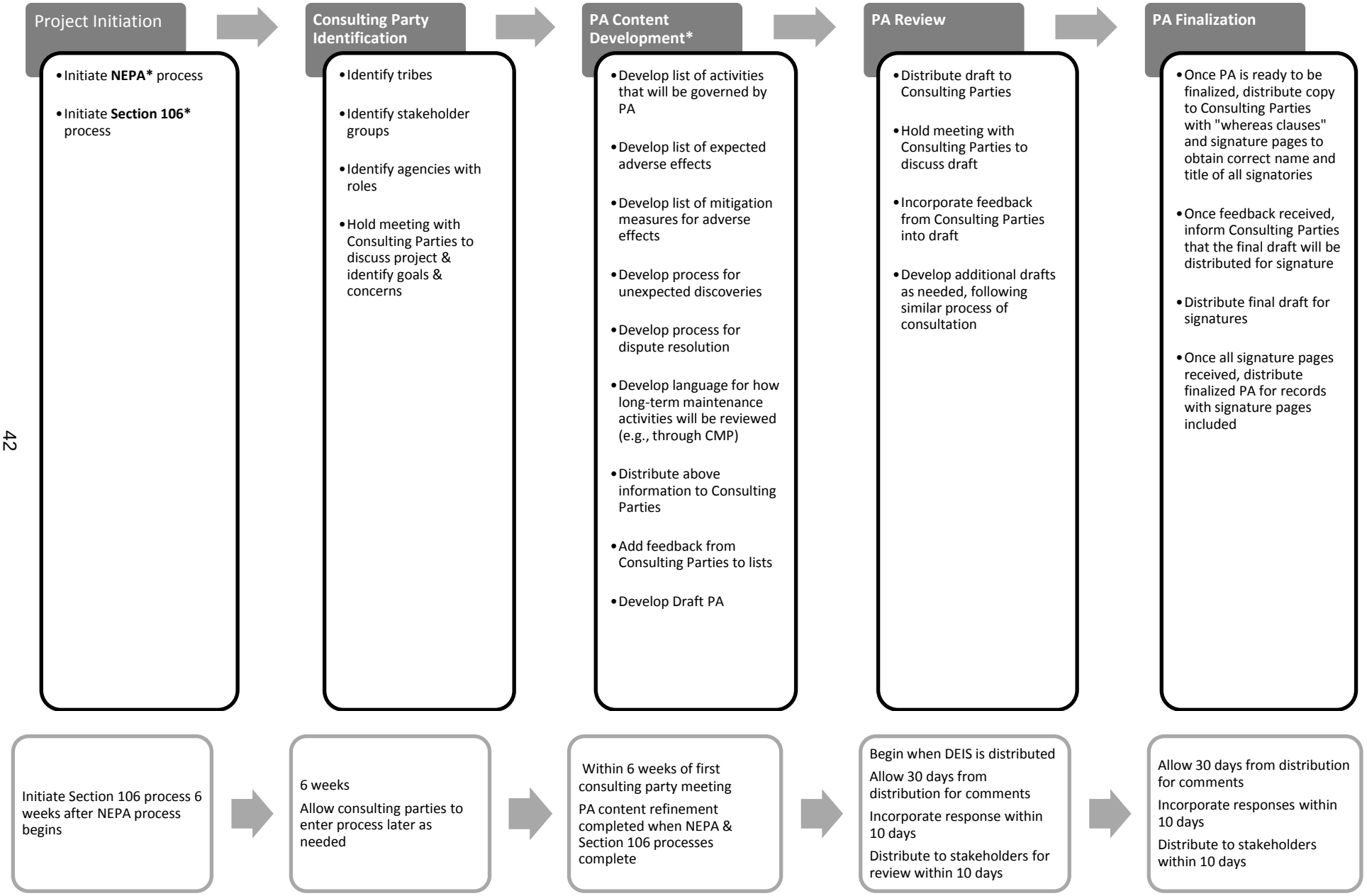
Caltrans already has a general PA (see Appendix D), which was signed in 2003 and revised in 2007: *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California.* The signatory parties for the general PA are FHWA, CA SHPO, ACHP and Caltrans. Directors from 12 Caltrans districts are concurring parties. While not specific to the Arroyo Seco Corridor, this PA addresses many issues facing this resource and should be treated as a complementary document

When a PA is prepared for the Arroyo Seco Corridor, it should address site-specific concerns not already covered under the existing PA with a particular focus on how Caltrans will develop appropriate Treatment Plans to satisfy its Section 106 obligations for the majority of activities

relating to the ongoing management of the Parkway as well as other agencies with ownership will do so as well.

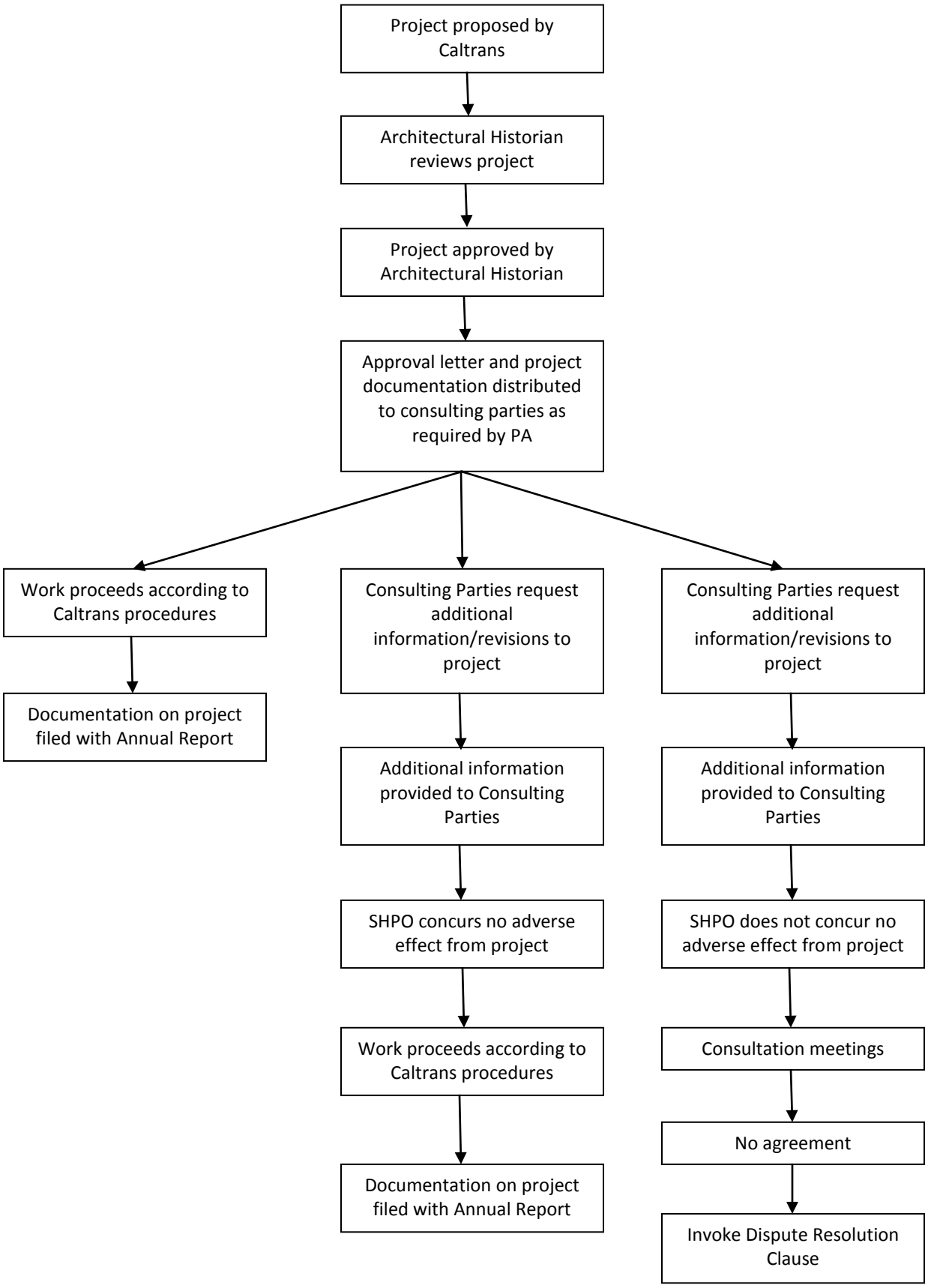
The development and implementation of a PA take time and careful planning. Below are two charts to assist Caltrans staff in managing process of creating and putting into effect a PA for the Parkway. Figure 18 provides an overview of the process of developing a PA including a sample timeline while Figure19 presents a typical process utilized to implement the PA for proposed work.

Figure 18 PA Development Process



* Develop lists of contributing resources, non-contributing resources, ranking of features, and types of effects. These will inform the process of developing the PA, particularly in the Content Development phase.

Figure 19 PA Implementation Plan



In developing and implementing an effective PA for the Arroyo Seco Parkway, Caltrans will have a legal document which guides and supports its management of this complex historic resource. The integration of the document with other relevant guidance and existing agreements will be important to ensuring that it serves as a robust legal and administrative tool. Involving interested agencies and organizations is equally crucial to ensuring that those with a stake in the long-term maintenance of the Arroyo Seco Parkway as a heritage resource have an appropriate role as well as a voice in the process.

SECTION 7 CONCLUSION

As the primary owner of the land within the Parkway, Caltrans has obligations under multiple regulations, including Section 106 of the NHPA, to manage the Parkway in a way that maintains the integrity of this significant historic property and contributes to its ongoing use within the community. In this stewardship role, Caltrans has successfully developed a NRHP nomination that resulted in the listing of the resource on the NRHP and CRHR, initiated work on a CPP, and worked closely with the community to solicit their input into management strategies. As it completes the environmental review process, Caltrans will continue to work closely with consulting parties and other community groups to:

- Finalize the inventory of character defining features;
- Complete the treatment plans; and
- Complete a PA.

These documents will establish a clear framework for ongoing communications, streamlined review, and management of this important community resource. With these processes in place it will be possible to develop context sensitive solutions that preserve character defining features while promoting safety.

SECTION 8 REFERENCES

American Association of State Highway and Transportation Officials. 2010. The Road to Livability: How State Departments of Transportation Are Using Road Investments to Improve Community Livability. April 21, 2010.

American Association of State Highway and Transportation Officials. 2005. Handbook on Integrating Land Use Considerations into Transportation Projects to Address Induced Growth. Prepared by ICF Consulting, Fairfax, Virginia, March 2005.

California Department of Transportation. 2004a. Arroyo Seco Parkway Corridor Management Plan. Working draft for public agency and stakeholder review, February 12, 2004, Prepared by the National Trust for Historic Preservation, Rural Heritage/Historic Roads Program.

California Department of Transportation. 2004b. Arroyo Seco Parkway Corridor Management Plan: A Rehabilitation and Preservation Plan for Southern California's Most Historic Road. Working draft, February 5, 2004.

California Department of Transportation. 2003. State Route 163 Management Plan. Prepared by Caltrans in Reponse to Recommendations of the SR-163 Safe and Scenic Advisory Committee, April 2003.

California Department of Transportation. 2001. Routhe 710 Historic Houses Condition Assessment Report. Recorded by G. Scott, P. Boghosian, K. Ewing, C. Harbert, and A. Morrison, January 30, 2001.

National Park Service. 2011a. Arroyo Seco Parkway Historic District National Register of Historic Places Registration Form. U.S. Department of the Interior.

National Park Service. 2011b. U.S. Highway 66 in California National Register of Historic Places Multiple Property Documentation Form. U.S. Department of the Interior.

National Park Service. 1999. Arroyo Seco Parkway Historic American Engineering Record (HAER No. CA-265). U.S. Department of the Interior.

State of California. 2007. California Historical Building Code, California Code of Regulations, Title 24, Part 8.

APPENDIX A

LIST OF DEFINITIONS

The following set of definitions will apply to all uses of these terms in relation to historic property management for the Arroyo Seco Parkway.

Character Defining Feature

Attributes that contribute to the identity of the resource including shape, massing, materials, craftsmanship, decorate details, site, and environment.

Consultation

The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process. The Secretary of the Interior's *Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act* provides further guidance on consultation.

Adverse Effect

Alteration to the characteristics of a historic property qualifying it for inclusion in, or eligibility for, the NRHP.

Effect: (Direct and Indirect)

A. A **direct effect** (also known as a "direct impact") is caused by the action and occurs at the same time and place.

B. An **indirect effect** (also known as an "indirect impact" or "secondary effect") is caused by the action and occurs later in time or farther removed in distance, but is still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Environmental Review

An environmental review is a process that evaluates the potential impacts or effects of a project for compliance with federal, state, and local regulations that govern issues relating to cultural resources, air and water quality, and economic issues.

Historic Property

Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP. The term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe that meet NRHP criteria.

Mitigation

An action taken in response to an effect. May include avoidance, minimization of alteration, or data recovery.

Professional Architectural Historian

An individual who meets the U.S. Department of Interior (1997) Preservation Professional Qualification Standards for Architectural History.

Programmatic Agreement

A document that records the terms and conditions agreed upon to resolve potential adverse effects of a Federal agency program, complex undertaking, or other situations.

Significance

An assessment of the relative importance of a particular cultural resource. Here significant sites are defined as those meeting the criteria for listing in the NRHP.

Treatment Plan

A document that describes how contributing resources in a historic property will be cared for. This document is useful when an agency assumes long-term responsibility for a resource.

Undertaking

This term, found within Section 106 of the NHPA, is defined as an action that can result in changes in the character or use of historic properties, if such properties are located within the area to be affected by the action (as a part of Section 106 of NHPA). A federal undertaking entails: (1) a project, activity, or program carried out by or on behalf of a federal agency; (2) a project wholly or partially carried out with federal financial assistance; (3) a project requiring a federal permit, license or approval; or (4) a project subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.

APPENDIX B
LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
CEQA	California Environmental Quality Act
CPP	Corridor Partnership Plan
DOT	Department of Transportation
FHWA	Federal Highway Administration
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NSB	National Scenic Byway
PA	Programmatic Agreement
SHPO	State Historic Preservation Officer

APPENDIX C
REFERENCE SOURCES APPROPRIATE FOR THE TREATMENT OF HISTORIC PROPERTIES

The Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68) 1995
As described by the National Park Service (NPS)'s Technical Preservation Services division, the Secretary of the Interior's Standards "promote historic preservation best practices that will help to protect our nation's irreplaceable cultural resources" (http://www.nps.gov/tps/standards.htm).

The Standards offer four approaches to the treatment of historic properties—preservation, rehabilitation, restoration, and reconstruction. These are described below. Guidelines for each of the approaches are also available from the NPS: (http://www.nps.gov/history/hps/tps/standguide/index.htm).

a) Standards for Preservation

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

(http://www.nps.gov/tps/standards/four-treatments/treatment-preservation.htm)

b) Standards for Rehabilitation

Rehabilitation projects must meet the following Standards to qualify as "certified rehabilitations" eligible for the 20% tax credit for historic preservation. The Guide

The Standards are applied to projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

http://www.nps.gov/tps/standards/rehabilitation.htm

c) Standards for Restoration

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

http://www.nps.gov/tps/standards/four-treatments/treatment-restoration.htm

d) Standards for Reconstruction

1. Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
2. Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.
3. Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
5. A reconstruction will be clearly identified as a contemporary re-creation.
6. Designs that were never executed historically will not be constructed.

http://www.nps.gov/tps/standards/four-treatments/treatment-reconstruction.htm

National Park Service Preservation Briefs

Further guidance on appropriate treatment of historic properties is available through the NPS's series of Preservation Briefs. Some of the Briefs which may be of use on the Arroyo Seco site include:

6. Dangers of Abrasive Cleaning to Historic Buildings (http://www.nps.gov/history/hps/tps/briefs/brief06.htm)
15. The Preservation of Historic Concrete (http://www.nps.gov/history/hps/tps/briefs/brief15.htm)
25. The Preservation of Historic Signs (http://www.nps.gov/history/hps/tps/briefs/brief25.htm)
38. Removing Graffiti from Historic Masonry (http://www.nps.gov/history/hps/tps/briefs/brief38.htm)
42. The Maintenance, Repair and Replacement of Historic Cast Stone (http://www.nps.gov/history/hps/tps/briefs/brief42.htm)

Sample Treatment Plans

The following roadway resources have existing treatment plans – both stand-alone and as part of a master plan – which can be consulted as example documents:

The Merritt Parkway (Connecticut Department of Transportation)

- Merritt Parkway Guidelines for Genearl Maintenance and Transportation Improvements, June 1994
- A Landscape Master Plan for the Merritt Parkway, October 1994
- Merritt Parkway Conservation and Restoration Plan: Bridge Restoration Guide, May 2002

Blue Crab Scenic Byway (Lower Eastern Shore Heritage Committee)

- Blue Crab Scenic Byway Corridor Management Plan, December 2004

Route 66 (in Oklahoma) (Archaeological Research, Inc.)

- Oklahoma Route 66 Management Plan, February 2003

Historic Bridges of Virginia (Virginia Transportation Research Council)

- A Management Plan for Historic Bridges in Virginia, January 2001

APPENDIX D
2004-2007 PROGRAMMATIC AGREEMENT

PROGRAMMATIC AGREEMENT AMONG THE FEDERAL HIGHWAY ADMINISTRATION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE CALIFORNIA DEPARTMENT OF TRANSPORTATION REGARDING COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT, AS IT PERTAINS TO THE ADMINISTRATION OF THE FEDERAL-AID HIGHWAY PROGRAM IN CALIFORNIA

TABLE OF CONTENTS

PROGRAMMATIC AGREEMENT 1
STIPULATIONS 1
I. APPLICABILITY 1
II. DEFINITIONS 2
III. PROFESSIONAL QUALIFICATIONS STANDARDS 2
IV. CONSULTATION WITH INDIAN TRIBES 2
V. PARTICIPATION OF OTHER CONSULTING PARTIES AND THE PUBLIC 3
VI. ALLOCATION OF FHWA AND CALTRANS ACTIONS UNDER THIS AGREEMENT 3
VII. UNDERTAKINGS EXEMPT FROM REVIEW 4
VIII. IDENTIFICATION AND EVALUATION OF POTENTIAL HISTORIC PROPERTIES 4
IX. FINDINGS OF EFFECT 5
X. ASSESSMENT OF EFFECTS 6
XI. RESOLUTION OF ADVERSE EFFECTS 8
XII. PHASED APPROACH TO IDENTIFICATION, EVALUATION, AND FINDINGS OF EFFECT 9
XIII. NATIVE AMERICAN HUMAN REMAINS AND RELATED CULTURAL ITEMS 9
XIV. CURATION 9
XV. POST-REVIEW DISCOVERIES 9
XVI. DOCUMENTATION 10
XVII. ADMINISTRATIVE STIPULATIONS 10

ATTACHMENTS:

1. CALTRANS PROFESSIONALLY QUALIFIED STAFF STANDARDS
2. SCREENED UNDERTAKINGS
3. AREA OF POTENTIAL EFFECTS DELINEATION
4. PROPERTIES EXEMPT FROM EVALUATION
5. ENVIRONMENTALLY SENSITIVE AREAS
6. STANDARD TREATMENT OF ARCHAEOLOGICAL SITES: DATA RECOVERY PLAN

PROGRAMMATIC AGREEMENT

WHEREAS, the Federal Highway Administration (FHWA), under the authority of 23 USC 101, implements the Federal-aid Highway Program (Program) in the state of California by funding and approving state and locally sponsored transportation projects that are administered by the California Department of Transportation (Caltrans); and

WHEREAS, the California Division Administrator, FHWA, is the "Agency Official" responsible for ensuring that the Federal-aid Highway Program in the state of California complies with Section 106 of the National Historic Preservation Act, as amended (NHPA), and codified at its implementing regulations, 36 CFR Part 800, and effective January 11, 2001; and

WHEREAS, FHWA has determined that implementation of the Program in California may have an effect upon properties included in or eligible for inclusion in the National Register of Historic Places (NRHP), hereafter referred to as historic properties, and has consulted with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) pursuant to 36 CFR 800.14(b); and

WHEREAS, pursuant to the consultation conducted under 36 CFR 800.14(b), the signatories have developed this Programmatic Agreement (Agreement) in order to establish an efficient and effective program alternative for taking into account the effects of the Program on historic properties in California and for affording ACHP a reasonable opportunity to comment on undertakings covered by this Agreement; and

WHEREAS, FHWA has notified the public and federally recognized Indian tribes with ancestral lands in California (Indian tribes) about this Agreement, has requested their comments, and has taken any comments received into account; and

WHEREAS, Caltrans has participated in the consultation and has been invited to be a signatory to this Agreement;

NOW, THEREFORE, FHWA, the SHPO, ACHP, and Caltrans agree that the Program in California shall be carried out in accordance with the following stipulations in order to take into account the effects of the Program on historic properties in California and that these stipulations shall govern compliance of the Program with Section 106 of the NHPA until this Agreement expires or is terminated.

STIPULATIONS

FHWA, in consultation and cooperation with Caltrans, shall ensure that the following measures are carried out:

I. APPLICABILITY

A. This Agreement shall apply to all FHWA undertakings administered under its Program in California for which FHWA is the lead agency, including transportation enhancement projects and Federal-aid emergency relief projects, which are defined in 23 CFR 688, as well as all actions that require a federal approval or permit, whether or not federal funds have been committed to the action. FHWA may choose to use 36 CFR 800.12 in lieu of 23 CFR 688 for emergency undertakings implemented within 30 days or for rare instances of emergency undertakings not included in 23 CFR 688.

B. This Agreement shall not apply to undertakings that occur on or affect tribal lands as defined in Section 301(14) of the NHPA. For such undertakings, FHWA shall follow the procedures in 36 CFR Part 800.

C. Other federal agencies may issue permits and otherwise provide assistance for undertakings covered by this Agreement, and in such circumstances, FHWA as lead federal agency may request that such agencies fulfill their Section 106 responsibilities in coordination with FHWA by using applicable provisions of this Agreement.

D. This Agreement does not negate or supersede any agreements between Caltrans and Indian tribes in effect at the time the Agreement is executed, nor does it negate or supersede any agreement documents executed between or among FHWA, the SHPO, ACHP, or Caltrans pursuant to 36 CFR Part 800.

II. DEFINITIONS

For purposes of this Agreement, the definitions provided in 36 CFR 800.16(a) through (y) inclusive shall apply.

III. PROFESSIONAL QUALIFICATIONS STANDARDS

All actions prescribed by this Agreement that involve the identification, evaluation, analysis, recording, treatment, monitoring, or disposition of historic properties, or that involve the reporting or documentation of such actions in the form of reports, forms, or other records, shall be carried out by or under the direct supervision of a person or persons who meet the Secretary of the Interior's Professional Qualifications Standards as set forth in Attachment 1 to this Agreement. Hereinafter, such persons shall be referred to as Professionally Qualified Staff (PQS). However, nothing in this stipulation may be interpreted to preclude FHWA or Caltrans or any agent or contractor thereof from using the services of persons who are not PQS, as long as their activities are overseen by PQS.

IV. CONSULTATION WITH INDIAN TRIBES

A. FHWA shall retain ultimate responsibility for complying with all federal requirements pertaining to direct government-to-government consultation with Indian tribes. Notwithstanding any other provision of this stipulation, FHWA shall honor the request of any Indian tribe for direct government-to-government consultation regarding an undertaking covered by this Agreement.

1. To provide for an effective and efficient consultation process, however, Caltrans is authorized by FHWA to carry out consultation with Indian tribes for undertakings covered by this Agreement. Each Caltrans District Director, and where Caltrans deems it appropriate, the Caltrans Director, shall ultimately be responsible for ensuring that any Caltrans consultation with Indian tribes authorized hereunder complies with this stipulation.

a. Caltrans shall conduct this consultation in a manner that is respectful of tribal sovereignty and that recognizes and respects the government-to-government relationship between Indian tribes and FHWA.

b. Caltrans shall ensure that consultation with Indian tribes is initiated early in the project planning process to identify cultural, confidentiality, or other concerns and to allow adequate time for consideration of such concerns.

c. Caltrans shall ensure that consultation continues with Indian tribes throughout the Section 106 compliance process prescribed by this Agreement whenever such tribes express a concern about an undertaking or about historic properties that may be affected by an undertaking.

V. PARTICIPATION OF OTHER CONSULTING PARTIES AND THE PUBLIC

A. Consulting Parties

Consulting parties shall be identified pursuant to, and their participation in undertakings covered under this Agreement shall be governed by, 36 CFR 800.2(c)(5) and 800.3(f).

B. Public Involvement

Public involvement in planning and implementation of undertakings covered by this Agreement shall be governed by FHWA's and Caltrans' environmental compliance procedures, as set forth in the Caltrans Environmental Handbook, Caltrans Project Development Procedures Manual, FHWA's technical advisories, and similar and subsequent guidance documents. Public involvement and the release of information hereunder shall be consistent with 36 CFR 800.2(d)(1-2), 800.3(e), and 800.11(c)(1 and 3) and Section 6254.10 of the California Government Code.

VI. ALLOCATION OF FHWA AND CALTRANS ACTIONS UNDER THIS AGREEMENT

A. Consistent with the requirements of 36 CFR 800.2(a) and 800.2(c)(4), FHWA remains legally responsible for ensuring that the terms of this Agreement are carried out and for all findings and determinations made pursuant to this Agreement by Caltrans under the authority of FHWA.

B. Actions under 36 CFR 800.3 through 800.5

Under the authority of FHWA, Caltrans may carry out the following steps with respect to undertakings covered by this Agreement. Each Caltrans District Director, or where Caltrans may deem it appropriate, the Caltrans Director, shall be responsible for the following actions:

1. Determine whether the proposed federal action is an undertaking as defined in 36 CFR 800.16(y).

2. Determine under 36 CFR 800.3(a) whether the undertaking is a type of activity that has the potential to affect historic properties.

3. Determine under 36 CFR 800.3(c) and (d) whether the undertaking may occur on or has the potential to affect historic properties on tribal lands as defined in Section 301(14) of the NHPA.

4. Solicit public comment and involvement, as described in 36 CFR 800.3(e).

5. Identify additional consulting parties, including Indian tribes, as described in 36 CFR 800.3(f), and invite them to participate in the undertakings covered by this Agreement.

6. Request expedited consultation as described in 36 CFR 800.3(g).

7. Determine under 36 CFR 800.4 the undertaking's Area of Potential Effects (APE), identify and evaluate properties within the APE in order to determine their eligibility for the NRHP, and determine whether historic properties may be affected by the undertaking.

8. Apply the criteria of adverse effect as described in 36 CFR 800.5 and propose No Adverse Effect findings where imposing the Standard Conditions set forth in Stipulation X.B.2 will avoid adverse effects.

C. Actions under 36 CFR 800.5(b) through 800.6

1. When Caltrans proposes a finding of No Adverse Effect without conditions or a finding of No Adverse Effect with conditions other than the Standard Conditions set forth in Stipulation X.B.2, Caltrans shall proceed in accordance with Stipulation X.B.1.

2. When Caltrans proposes a finding of Adverse Effect, Caltrans shall proceed in accordance with Stipulation X.C. When the terms of Stipulation X.C apply, FHWA, in consultation with Caltrans, shall comply with 36 CFR 800.6(a)(2) and 800.6(c)(2-3).

VII. UNDERTAKINGS EXEMPT FROM REVIEW

In consultation with the other signatories in this Agreement, FHWA has identified classes of undertakings that will be addressed in accordance with Attachment 2 to this Agreement. The undertakings classified in Attachment 2 as Screened Undertakings will require no further review under this Agreement when the steps set forth in Attachment 2 have been satisfactorily completed and when it is thereupon determined that no condition of the undertaking necessitates further review pursuant to this Agreement.

VIII. IDENTIFICATION AND EVALUATION OF POTENTIAL HISTORIC PROPERTIES

A. Area of Potential Effects

Caltrans PQS shall determine and document the APE for undertakings covered by this Agreement in accordance with Attachment 3 to this Agreement. Nothing in this paragraph or in Attachment 3 shall preclude Caltrans from consulting with FHWA and/or SHPO on determining and documenting an APE.

B. Identification

Caltrans shall identify historic properties that may be located within an undertaking's APE in accordance with 36 CFR 800.4(a)(2-4) and 36 CFR 800.4(b). Identification of historic properties may follow the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716), and should be consistent with SHPO guidance, FHWA guidance, and any other guidance, methodologies, agreements, or protocols that FHWA, Caltrans, and the SHPO agree should be used to identify historic properties.

C. Evaluation

1. Properties Exempt from Evaluation: Attachment 4 to this Agreement lists the properties that the signatories agree shall be exempt from evaluation so long as all terms and conditions set forth in Attachment 4 are satisfactorily met. All other identified properties shall be evaluated in accordance with Stipulation VIII.C.2.

2. Evaluating Identified Properties: Caltrans shall evaluate the historic significance of identified properties in accordance with 36 CFR 800.4(c)(1). Such evaluation may use SHPO guidance, FHWA guidance, or any other guidance, methodologies, agreements, or protocols that FHWA, Caltrans, and the SHPO agree should be used to determine whether identified properties are historic properties.

3. Special Consideration for Certain Archaeological Properties: If archaeological properties within an undertaking's APE are protected from any potential effects by establishment and effective enforcement of an Environmentally Sensitive Area (ESA), as described in Attachment 5 to this Agreement, the signatories agree that Caltrans may consider such properties to be NRHP eligible for the purposes of that undertaking without conducting subsurface testing or surface collection. Caltrans shall consult with

Indian tribes or other interested parties that may attach religious or cultural significance to the historic property to determine if the site has values that may qualify it as NRHP eligible under Criteria A, B, or C in addition to, or instead of, Criterion D. The assumption of NRHP eligibility permitted hereunder shall not extend to other undertakings whose APE includes the archaeological property, unless the signatories through consultation agree otherwise.

4. Previously Evaluated Properties: When previously evaluated properties are identified within an undertaking's APE, Caltrans shall review those previous evaluations. The passage of time, changing perceptions of significance, new information, incomplete or erroneous prior evaluation, and errors of fact warrant such review and may cause Caltrans to re-evaluate the properties. Indian tribes shall be consulted in the review and re-evaluation process when properties to which those tribes may attach religious or cultural significance are involved.

5. Consulting the SHPO: Caltrans shall submit determinations of NRHP eligibility made hereunder and supporting documentation to the SHPO for comment in accordance with 36 CFR 800.4(c)(2), with concurrent submittal to FHWA.

a. If the SHPO has not responded to Caltrans within 30 days after receipt, Caltrans may either extend the review period in consultation with the SHPO or proceed to the next step prescribed by this Agreement, based upon Caltrans' determination of NRHP eligibility. Confirmation of date of receipt as the basis for determining the 30-day review period may be provided through the SHPO database, a mail delivery receipt, or written or documented oral communication from the SHPO.

b. Agreements regarding the NRHP eligibility of properties evaluated hereunder, and any disagreements pertaining thereto, shall be governed by 36 CFR 800.4(c)(2), except that in the event of a disagreement, Caltrans shall promptly notify FHWA, whereupon Caltrans, FHWA, the SHPO, and any Indian tribe that is a consulting party shall consult to resolve the disagreement in accordance with a mutually acceptable time frame. If the disagreement is resolved, Caltrans shall proceed in accordance with those requirements of this Agreement that apply to the resolution. If the disagreement is not resolved or if a mutually acceptable time frame to resolve the disagreement is not reached, it shall be referred by FHWA to the Keeper of the National Register.

6. Notifying Indian tribes: When Caltrans has been in consultation with an Indian tribe on the NRHP eligibility of a property, Caltrans shall notify the tribe of the eligibility determination concurrent with submittal to SHPO and provide documentation to the tribe, unless the tribe has indicated it does not wish to receive such documentation.

IX. FINDINGS OF EFFECT

A. Finding of No Historic Properties Affected, Pursuant to 36 CFR 800.4(d)(1)

1. Where Caltrans has consulted with Indian tribes or other consulting parties concerning historic properties, Caltrans shall consult with those Indian tribes or other consulting parties on the potential effects of the undertaking. Caltrans shall take their views into account in making its findings.

2. If Caltrans finds either that no historic properties are present, or that historic properties are present but the undertaking will have no effect on them, Caltrans shall document and retain records of that finding in accordance with Stipulation XVI. Caltrans shall notify any consulting parties cited in Stipulation IX.A.1 of the finding and make documentation available to them unless they have indicated that they do not wish to receive such documentation. Following satisfactory completion of the steps prescribed herein, no further review pursuant to this Agreement is required.

B. Finding of Historic Properties Affected

If Caltrans finds there are historic properties that may be affected by the undertaking, Caltrans shall apply the Criteria of Adverse Effect in accordance with Stipulation X.

X. ASSESSMENT OF EFFECTS

A. Application of Criteria

Caltrans shall apply the Criteria of Adverse Effect set forth in 36 CFR 800.5(a)(1) to findings made pursuant to Stipulation IX.B, taking into account views provided by consulting parties or the public. When Indian tribes attach religious or cultural significance to identified historic properties, Caltrans shall apply the criteria in consultation with those tribes, unless the tribes request direct government-to-government consultation with FHWA pursuant to Stipulation IV.A.

B. Finding of No Adverse Effect

Caltrans may propose a finding of No Adverse Effect if none of the undertaking's anticipated effects meet the Criteria of Adverse Effect under 36 CFR 800.5(a)(1), or if Caltrans imposes conditions that will avoid all adverse effects to historic properties.

1. Finding of No Adverse Effect Without Standard Conditions:

a. When Caltrans proposes a No Adverse Effect finding other than a finding of No Adverse Effect with the Standard Conditions specified in Stipulation X.B.2, Caltrans shall submit its proposed finding and supporting documentation to FHWA for review. If FHWA agrees with the proposed finding, FHWA shall consult the SHPO pursuant to 36 CFR 800.5(c), and Caltrans shall concurrently provide documented notification of the finding to any consulting parties that have expressed views regarding potential effects to historic properties, including a request that any comments be directed to FHWA within 30 days of receipt of notification.

b. If the SHPO agrees with the No Adverse Effect finding made hereunder, the undertaking shall not be subject to further review under this Agreement. Unless FHWA and the SHPO have agreed to extend the 30-day time frame for SHPO review specified in 36 CFR 800.5(c), failure of the SHPO to comment within this time frame may be deemed by FHWA to constitute SHPO concurrence in the No Adverse Effect finding. Documentation of date of receipt as the basis for determining the 30-day review period may be provided through the SHPO database, a mail delivery receipt, or written or documented oral communication from the SHPO.

2. Finding of No Adverse Effect with Standard Conditions:

a. When an undertaking or an undertaking's effects are limited to rehabilitation of buildings, structures, objects, districts, or landscapes that are historic properties, or when historic properties or properties considered to be eligible pursuant to Stipulation VIII.C.3 will be protected by designation and enforcement of ESAs, Caltrans may impose the following Standard Conditions as appropriate to avoid adverse effects to historic properties:

(i) Historic properties will be rehabilitated in accordance with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68); or

(ii) Properties will be protected by designation of ESAs, as described in Attachment 5 to this Agreement.

(iii) If the property is considered eligible for values that qualify it as eligible under Criteria A, B, or C in addition to, or instead of, Criterion D as a result of consultation described in Stipulation VIII.C.3, Caltrans will consult with those Indian tribes or other interested parties that attach religious or cultural significance to the property to determine whether an ESA will adequately protect those other values without other conditions or mitigations. The results of that consultation will determine whether a finding of No Adverse Effect with Standard Conditions applies. If conditions other than or in addition to an ESA are developed to avoid adverse effects, Caltrans and FHWA will propose a finding of No Adverse Effect pursuant to Stipulation X.B.1. If adverse effects cannot be avoided, Caltrans and FHWA will propose a finding of Adverse Effect pursuant to Stipulation X.C.1 and consult to resolve those effects pursuant to Stipulation XI.

b. When the foregoing Standard Conditions are imposed by Caltrans, Caltrans shall concurrently provide FHWA, the SHPO, and any consulting parties, as appropriate, with documented notification of the finding of No Adverse Effect in accordance with Stipulation XVI. Thereupon, the undertaking shall not be subject further review under this Agreement.

C. Finding of Adverse Effect

Where adverse effects cannot be avoided pursuant to Stipulation X.B, or for any other reason, Caltrans shall propose to FHWA a finding of Adverse Effect and shall submit to FHWA documentation supporting the proposed finding.

1. If FHWA agrees with the proposed finding, FHWA shall consult the SHPO pursuant to Stipulation XI. Caltrans, on behalf of FHWA, shall notify consulting parties and interested members of the public, as appropriate, of the finding and shall assist FHWA with the resolution of those adverse effects pursuant to Stipulation XI.

2. When an undertaking affects archaeological properties listed in or eligible for listing in the NRHP exclusively under Criterion D of the NRHP criteria, Caltrans shall concurrently notify FHWA, the SHPO, and consulting parties, as appropriate, of the proposed finding of Adverse Effect with documentation supporting that finding in accordance with Stipulation XVI. These parties shall have 30 days following receipt of notification to comment to FHWA on the proposed finding. Unless FHWA and the SHPO have agreed to extend the applicable time frame, failure of the SHPO to comment within this time frame may be deemed by FHWA to constitute SHPO concurrence in the Adverse Effect finding. Documentation of date of receipt as the basis for determining the 30-day review period may be provided through the SHPO database, a mail delivery receipt, or written or documented oral communication from the SHPO. Caltrans shall assist FHWA with the resolution of adverse effects pursuant to Stipulation XI.

D. Resolving Disagreements Regarding Assessment of Effects

1. Disagreements that may arise under the terms of Stipulation X shall be addressed in accordance with the process set forth as follows for purposes of and under the authority of this Agreement:

a. FHWA shall consult with the SHPO or any consulting party for no more than 30 days to resolve the disagreement. If at any time during this consultation period, FHWA determines that the disagreement cannot be resolved through such consultation, FHWA shall request ACHP to review the disagreement and FHWA's proposed resolution. In addition, an Indian tribe that attaches religious or cultural significance to an identified historic property may specify the reason for its disagreement within the 30-day consultation period and directly request ACHP to review the disagreement. Within 15 days following receipt of FHWA's or an Indian tribe's request, ACHP will exercise one of the following options:

(i) Advise FHWA that ACHP concurs in FHWA's proposed response to the disagreement whereupon FHWA will respond to the disagreement accordingly; or

(ii) Provide FHWA with recommendations, which FHWA will take into account in reaching a final decision regarding its response to the disagreement; or

(iii) Notify FHWA that the disagreement will be referred for comment pursuant to 36 CFR 800.7(c)(4) and proceed to refer the disagreement and comment. In this event, the agency head shall take the resulting comment into account in accordance with 36 CFR800.7(c)(4) and Section 110(1) of the NHPA. FHWA's responsibilities under this Agreement that are not the subject of the disagreement shall remain unchanged.

b. Should ACHP not exercise one of the foregoing options within 15 days after receipt of all pertinent documentation, FHWA may assume ACHP's concurrence in its proposed response to the disagreement.

c. FHWA shall take into account any ACHP recommendation or comment and any comments from the SHPO or any consulting party in reaching a final decision regarding the disagreement.

d. FHWA shall provide the SHPO and any consulting parties with a written copy of its final decision regarding resolution of any disagreement addressed hereunder. Thereafter, FHWA may proceed in accordance with the terms of its resolution.

e. FHWA's resolution of any disagreement addressed hereunder shall be conclusive.

XI. RESOLUTION OF ADVERSE EFFECTS

A. FHWA, with the cooperation and assistance of Caltrans, shall consult pursuant to 36 CFR 800.6(a) and 800.6(b)(1) to resolve adverse effects that may result from undertakings covered by this Agreement. In complying with 36 CFR 800.6, FHWA may consult with Caltrans, and as a result of such consultation, FHWA may direct Caltrans to implement under FHWA authority certain actions prescribed in 36 CFR 800.6. When such actions include proposals to conduct data recovery on historic properties significant exclusively under Criterion D of the NRHP criteria pursuant to Stipulation X.C.2, the data recovery proposal may be developed in accordance with Attachment 6 to this Agreement.

B. Nothing in this stipulation shall preclude FHWA from reversing at any time for reasonable cause any decision allowing Caltrans to implement under FHWA authority certain actions prescribed in 36 CFR 800.6.

C. Nothing in this stipulation shall override or supersede the requirement of Stipulation IV.A that a tribe may request direct government-to-government consultation with FHWA.

D. Notwithstanding any other provision of this stipulation, FHWA must agree to any resolution of adverse effects proposed pursuant to this stipulation. Such agreement shall be evidenced by FHWA's execution of a Memorandum of Agreement pursuant to 36 CFR 800.6(c).

E. If FHWA, the SHPO, and Caltrans are unable to agree on measures to resolve the adverse effects of an undertaking pursuant to this stipulation, they shall invite ACHP to participate in the resolution process pursuant to 36 CFR 800.6(b)(2). If the parties agree to a resolution, they shall execute a Memorandum of Agreement. If the parties fail to agree to measures to resolve the adverse effects, FHWA, the SHPO, or ACHP may terminate consultation pursuant to 36 CFR 800.7(a). Upon termination, the signatories shall comply with the remaining requirements of 36 CFR 800.7.

XII. PHASED APPROACH TO IDENTIFICATION, EVALUATION, AND FINDINGS OF EFFECT

Consistent with 36 CFR 800.4(b)(2) and 800.5(a)(3), FHWA, in consultation with Caltrans, may approve the phasing of identification, evaluation, and application of the criteria of adverse effect for undertakings covered by the Agreement. Upon FHWA approval, and as specific aspects or locations of an alternative are refined or access gained, Caltrans shall proceed with the identification and evaluation of historic properties and with application of the criteria of adverse effect in accordance with applicable provisions of this Agreement.

XIII. NATIVE AMERICAN HUMAN REMAINS AND RELATED CULTURAL ITEMS

A. Treatment on Non-Federal Lands

If human remains or associated grave artifacts are encountered during archaeological surveys or excavations or during construction activities, Caltrans shall follow California Health and Safety Code 7050.5 and Public Resources Code Section 5097.98. Caltrans shall consult with the most likely descendants, as identified by the California Native American Heritage Commission, to reach agreement on the sensitive and dignified treatment and disposition of Native American human remains and associated grave artifacts.

B. Treatment on Federal Lands

For anticipated excavations on federal land, Caltrans shall apply for a permit under the Archaeological Resource Protection Act of 1979 (ARPA) (16 U.S.C. 470cc) and under Section 3(C) of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3002).

XIV. CURATION

A. Collections from Federal Lands

Caltrans shall make every reasonable effort to ensure that cultural materials and records resulting from excavation or surface collection pursuant to this Agreement conducted on federal lands are curated in accordance with 36 CFR 79, Curation of Federally-owned and Administered Archaeological Collections (September 12, 1990) 55 FR 37616 (36 CFR Part 79), and California Guidelines for the Curation of Archeological Collections (May 7, 1993) (CAC), or as may be stipulated in any agreement document pertaining to an undertaking covered by this Agreement.

B. Collections from Non-Federal Lands

Caltrans shall make every reasonable effort to ensure that to the extent permitted under Sections 5097.98 and 5097.991 of the California Public Resources Code, cultural materials and records resulting from excavations or surface collections on non-federal land are curated in accordance with 36 CFR 79 and the CAC or as outlined in an agreement document pertaining to the undertaking covered by this Agreement.

XV. POST-REVIEW DISCOVERIES

A. Planning for Subsequent Discoveries

When Caltrans' identification efforts in accordance with Stipulation VIII.B indicate that historic properties are likely to be discovered during implementation of an undertaking, Caltrans shall include in any finding of No Adverse Effect or Memorandum of Agreement a plan for treatment of such properties,

should they be discovered. Caltrans shall consult with Indian tribes or Native American groups that may attach religious or cultural significance to potentially affected properties and take their concerns into account in developing the plan. Implementation of the plan as originally proposed, or modified as necessary owing to the nature and extent of the properties discovered, will resolve any adverse effects of the undertaking on such properties.

B. Discoveries Without Prior Planning

1. If a plan for subsequent discoveries is not in place, and an undertaking affects a previously unidentified property or affects a known historic property in an unanticipated manner, Caltrans shall promptly stop construction activity in the vicinity of the property and implement all reasonable measures needed to avoid, minimize, or mitigate further harm to the property.

2. Caltrans shall notify FHWA, the SHPO, and if appropriate, Indian tribes or Native American groups that may attach religious or cultural significance to the affected property, or the federal agency if federal lands are involved, within 48 hours of the discovery. The notification shall at a minimum include the information specified in 36 CFR 800.13(b)(3), and if applicable, (c). Should any of the notified parties respond within 72 hours of the notification, Caltrans shall take into account their recommendations and may carry out appropriate actions or consult further with any commenting parties. Caltrans shall determine the time frame for such further consultation. Following the conclusion of further consultation, Caltrans shall take all comments received into account and may carry out appropriate actions. Failure of any notified party to respond within 72 hours of their receipt of the notification shall not preclude Caltrans from proceeding with appropriate actions.

3. If a National Historic Landmark is affected pursuant to Stipulation XV, Caltrans shall include the Secretary of the Interior and the ACHP in the notification process.

XVI. DOCUMENTATION

A. All documentation that supports findings and determinations made under this Agreement shall be consistent with 36 CFR 800.11 and shall be in accordance with the Caltrans Environmental Handbook, Volume 2, and its subsequent revisions or editions and with attachments to this Agreement. Documentation prepared by local agencies or their consultants in support of such findings shall be submitted to Caltrans for review and approval by Caltrans PQS. Caltrans shall transmit all documentation cited herein to FHWA and the SHPO as stipulated by this Agreement. Caltrans shall not transmit to FHWA or the SHPO any documentation that has not been reviewed and approved by Caltrans PQS. Following such review and approval, Caltrans may transmit the documentation to FHWA or the SHPO.

B. All documentation prepared under this Agreement shall be kept on file at Caltrans and made available to consulting parties and the public as stipulated by this Agreement, consistent with applicable confidentiality requirements.

XVII. ADMINISTRATIVE STIPULATIONS

A. Resolving Objections

1. Should any signatory party object in writing to FHWA regarding the manner in which the terms of this Agreement are carried out, FHWA will immediately notify the other signatory parties of the objection and proceed to consult with the objecting party to resolve the objection. FHWA will honor the request of any other signatory party to participate in the consultation and will take any comments provided by such parties into account. FHWA shall establish a reasonable time frame for such consultation.

2. If the objection is resolved through consultation, FHWA may authorize the disputed action to proceed in accordance with the terms of such resolution.

3. If after initiating such consultation, FHWA determines that the objection cannot be resolved through consultation, FHWA, with the cooperation of Caltrans, shall forward all documentation relevant to the objection to the ACHP, including FHWA's proposed response to the objection. Within 30 days after receipt of all pertinent documentation, ACHP shall exercise one of the following options:

a. Advise FHWA that ACHP concurs in FHWA's proposed response to the objection, whereupon FHWA will respond to the objection accordingly; or

b. Provide FHWA with recommendations, which FHWA shall take into account in reaching a final decision regarding its response to the objection; or

c. Notify FHWA that the objection will be referred for comment pursuant to 36 CFR 800.7(a)(4) and proceed to refer the objection and comment. In this event, FHWA shall ensure that the Agency Official is prepared to take the resulting comments into account in accordance with 36 CFR 800.7(c)(4).

4. Should ACHP not exercise one of the foregoing options within 30 days after receipt of all pertinent documentation, FHWA may assume ACHP's concurrence in its proposed response to the objection.

5. FHWA shall take into account any ACHP recommendation or comment and any comments from the other signatory parties to this Agreement in reaching a final decision regarding the objection. FHWA's responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.

6. FHWA shall provide all other signatory parties to this Agreement with a written copy of its final decision regarding any objection addressed pursuant to Stipulation XVII.

7. FHWA may authorize any action subject to objection under items 1-6 of Stipulation XVII.A to proceed, provided the objection has been resolved in accordance with the terms of items 1-6 of Stipulation XVII.A.

8. At any time during implementation of the terms of this Agreement, should any member of the public raise an objection in writing pertaining to such implementation to any signatory party to this Agreement, that signatory party shall immediately notify FHWA. FHWA shall immediately notify the other signatory parties in writing of the objection. Any signatory party may choose to comment on the objection to FHWA. FHWA shall establish a reasonable time frame for this comment period. FHWA shall consider the objection, and in reaching its decision, FHWA will take all comments from the other parties into account. Within 15 days following closure of the comment period, FHWA will render a decision regarding the objection and respond to the objecting party. FHWA will promptly notify the other parties of its decision in writing, including a copy of the response to the objecting party. FHWA's decision regarding resolution of the objection will be final. Following issuance of its final decision, FHWA may authorize the action subject to dispute hereunder to proceed in accordance with the terms of that decision.

B. Amendment

1. Any signatory party to this Agreement may at any time propose amendments, whereupon all signatory parties shall consult to consider such amendment pursuant to 36 CFR 800.6(c)(7) and 800.6 (c)(8). This Agreement may be amended only upon written concurrence of all signatory parties.

2. Each attachment to this Agreement may be individually amended through consultation of the signatory parties without requiring amendment of the Agreement, unless the signatory parties through such consultation decide otherwise.

C. Termination

1. Only signatory parties may terminate this Agreement. If this Agreement is not amended as provided for in Stipulation XVII.B, or if any signatory party proposes termination of this Agreement for other reasons, the party proposing termination shall notify the other signatory parties in writing, explain the reasons for proposing termination, and consult with the other parties for no more than 30 days to seek alternatives to termination.

2. Should such consultation result in an agreement on an alternative to termination, the signatory parties shall proceed in accordance with that agreement.

3. Should such consultation fail, the signatory party proposing termination may terminate this Agreement by promptly notifying the other parties in writing.

4. Should this Agreement be terminated, then FHWA shall either consult in accordance with 36 CFR 800.14(b) to develop a new Agreement or request the comments of ACHP pursuant to 36 CFR 800.

5. Beginning with the date of termination, FHWA shall ensure that until and unless a new Agreement is executed for the actions covered by this Agreement, such undertakings shall be reviewed individually in accordance with 36 CFR 800.4-800.6.

D. Review and Reporting

1. FHWA, the SHPO, and ACHP may review activities carried out pursuant to this Agreement. Caltrans shall facilitate this review by compiling specific categories of information to document the effectiveness of the Agreement and by making this information available to FHWA, the SHPO, and ACHP in the form of a written report. Categories of information shall include, but are not limited to, a summary of actions taken under the Agreement, including all findings and determinations, accomplishments, estimated time and cost savings, public objections, and inadvertent effects or foreclosures. The range and type of information included by Caltrans in the written report and the manner in which this information is organized and presented must be such that it facilitates the ability of the reviewing parties to assess accurately the degree to which Agreement and its manner of implementation constitute an efficient and effective program alternative under 36 CFR 800, and to determine whether this Agreement should remain in effect, and if so, whether and how it should be improved through appropriate amendment.

2. Caltrans shall prepare the written report of these findings annually for the first five (5) years following execution of the Agreement. The initial report shall be prepared following completion of the first full State fiscal year under this Agreement. Caltrans shall submit the annual reports to FHWA, the SHPO, and ACHP no later than three (3) months following the end of the State fiscal year for the first five years. Thereafter, biennial reports shall be prepared in alternate years, and submitted no later than three (3) months following the end of the second fiscal year, unless the signatory parties agree to amend the reporting schedule.

3. Caltrans shall provide notice to the public that the report herein prescribed is available for public inspection and ensure that potentially interested members of the public are made aware of its availability and that the public may comment to signatory parties on the report. FHWA and Caltrans, in consultation with the SHPO and ACHP, shall identify the specific recipients of the public notice herein described.

4. At the request of any other signatory party to this Agreement, FHWA shall ensure that one or more meetings are held to facilitate review of, and comment on, the report to address questions and issues, or to resolve adverse comments.

5. In conjunction with the review of the reports prepared by Caltrans pursuant to Stipulation XVII.D, the signatory parties shall consult to review the overall effectiveness and benefits of the Agreement, determine if its requirements are being met, decide if amendments to the Agreement are warranted, review the reporting format and categories for adequacy, and identify any other actions that may be needed in order to take into account the effects of the Program on historic properties in California.

E. Confidentiality

All parties to this Agreement acknowledge that information about historic properties, prospective historic properties, or properties considered historic for purposes of this Agreement are or may be subject to the provisions of Section 304 of NHPA and Section 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of sensitive information, and having so acknowledged, will ensure that all actions and documentation prescribed by this Agreement are, where necessary, consistent with the requirements of Section 304 of the NHPA and Section 6254.10 of the California Government Code.

F. Duration of this Agreement

This Agreement shall remain in effect for a period of ten (10) years after the date it takes effect and shall automatically expire and have no further force or effect at the end of this ten-year period unless it is terminated prior to that time. No later than six months prior to the expiration date of the Agreement, FHWA shall initiate consultation to determine if the Agreement should be allowed to expire automatically or whether it should be extended for an additional term, with or without amendments, as the signatory parties may determine. Unless the signatory parties unanimously agree through such consultation on an alternative to automatic expiration of this Agreement, this Agreement shall automatically expire and have no further force or effect in accordance with the timetable stipulated herein.

G. Effective Date of this Agreement and of Additional Attachments and Amendments

This Agreement shall take effect January 1, 2004, following execution by FHWA, the SHPO, ACHP, and Caltrans. Additional attachments or amendments to this Agreement shall take effect on the dates they are fully executed by FHWA, the SHPO, ACHP, and Caltrans.

Execution and implementation of this Agreement evidence that FHWA has afforded ACHP a reasonable opportunity to comment on the Program and its individual undertakings in California, that FHWA has taken into account the effects of the Program and its individual undertakings on historic properties, and that FHWA has complied with Section 106 of the NHPA and 36 CFR 800 for the Program and its individual undertakings.

SIGNATORY PARTIES

Federal Highway Administration

By: _____ Date: 10/6/03
Gary Hamby, California Division Administrator

California State Historic Preservation Officer

By: _____ Date: 10/6/03
Dr. Knox Mellon, State Historic Preservation Officer

Advisory Council on Historic Preservation

(for) By: _____ Date: 12/30/03
John M. Fowler, Executive Director

California Department of Transportation

By: _____ Date: 10-1-03
Jeff Morales, Director

CONCURRING PARTIES:

California Department of Transportation, District 1

By: _____ Date: 9/17/03
District Director

California Department of Transportation, District 2

By: _____ Date: 9/17/03
District Director

California Department of Transportation, District 3

By: Jody E. Tonnigan Date: 9/17/03
District Director

California Department of Transportation, District 4

By: _____ Date: 9-17-03.
District Director

California Department of Transportation, District 5

By: _____ Date: 9/17/03

District Director

California Department of Transportation, District 6

By: Joseph M. Fernandez Date: 9/17/03
District Director

California Department of Transportation, District 7

By: [illegible] Date: 9/17/03
District Director

California Department of Transportation, District 8

By: Arte E. Mayer Date: 9/17/03
District Director

California Department of Transportation, District 9

By: [illegible] Date: 17 SEP 03
District Director

California Department of Transportation, District 10

By: Mark Leja Date: 9/17/03
District Director

California Department of Transportation, District 11

By: [illegible] Date: 9/17/03
District Director

California Department of Transportation, District 12

By: Cindy Zuon Date: 9-17-03
District Director
CH

ATTACHMENT 1

CALTRANS PROFESSIONALLY QUALIFIED STAFF STANDARDS

All cultural resources studies carried out by Caltrans or its consultants must be conducted by or under the direct supervision of individuals who meet the Secretary of the Interior's Professional Qualifications Standards for the relevant field of study. The standards are designed to ensure program quality and satisfy federal mandates associated with compliance with Section 106 of the National Historic Preservation Act.

Caltrans meets these standards by certifying its cultural resources staff as Professionally Qualified Staff (PQS). In order to take full advantage of the provisions of this Agreement, Caltrans PQS must meet the standards in the appropriate field. Those not fully qualified as archaeological Principal Investigators (PI) or Principal Architectural Historians (PAH) may accomplish many important tasks with oversight, generally in the form of peer review or under direct supervision by qualified staff. The Chief of the Cultural and Community Studies Office in the Headquarters Division of Environmental Analysis is responsible for certifying the qualifications of all Caltrans PQS. Minimum qualifications are listed below for cultural resources staff conducting various tasks.

ARCHAEOLOGICAL QUALIFICATIONS STANDARDS

Archaeological Crew Member

Qualified to participate in archaeological surveys and excavations under the direction of a qualified Lead Archaeological Surveyor or higher. Minimum qualifications:

- A minimum of six weeks of supervised field training (including at least three weeks each of excavation and field survey) in time blocks of at least one week duration (field school or equivalent)

and

- A minimum of two upper division college courses in archaeology.

Lead Archaeological Surveyor

Qualified to conduct and report archaeological surveys, and to prepare other compliance documents, with peer review provided by a qualified Prehistoric or Historical Archaeology PI to ensure document quality. Minimum qualifications:

- A bachelor's degree in anthropology with emphasis in archaeology or closely related discipline (such as history or earth sciences) and subsequent coursework in archaeology (a minimum of four upper division or graduate courses in archaeology required)

and

- At least six months of professional archaeological experience in California or Great Basin, including at least 12 weeks of California field survey experience

and

- Demonstrated ability to organize and conduct archaeological surveys, complete site record forms, and report on survey findings dealing with both prehistoric and historical archaeological resources.

Co-Principal Investigator—Prehistoric Archaeology

Qualified as a Construction Monitor, PI for Extended Phase I studies, and Co-PI for Phase II and III excavations for work involving prehistoric archaeological resources, under the direction of a Prehistoric Archaeology PI. May author proposals, reports for Extended Phase I studies, and other compliance documents, with peer review from a Prehistoric Archaeology PI to ensure document quality. Minimum qualifications:

- Qualification as a Lead Archaeological Surveyor for Caltrans

and

- At least 12 months of professional experience or specialized training in prehistoric archaeology, including: 1) at least 10 weeks of California or Great Basin excavation experience under the supervision of a Prehistoric Archaeology PI; 2) at least four weeks of supervised laboratory experience on collections from prehistoric California or Great Basin sites; and 3) at least four weeks of excavation experience in a supervisory capacity on prehistoric California or Great Basin sites

and

- Demonstrated ability to carry archaeological research to completion, as evidenced by the timely completion of an excavation report or comparable study involving a prehistoric site or sites

and

- Understanding of the Section 106 process and familiarity with cultural resources policies, procedures, and goals, as demonstrated in reports and/or past performance.

Co-Principal Investigator—Historical Archaeology

Qualified as a Construction Monitor and as Co-PI for Extended Phase I, Phase II, and Phase III excavations involving historical archaeological resources under the direction of a Historical Archaeology PI. May author reports that evaluate historical archaeological resources where no excavation is required to reach a conclusion about their eligibility and other compliance documents. That work must be peer reviewed by a Historical Archaeology PI to ensure document quality. Minimum qualifications:

- Qualification as a Lead Archaeological Surveyor for Caltrans

and

- At least 12 months of professional archaeological experience or specialized training dealing with historic-period resources including: 1) at least 10 weeks of excavation experience under the supervision of a Historical Archaeology PI; 2) at least four weeks of supervised laboratory experience on collections from historic sites; and 3) at least four weeks of excavation experience in a supervisory capacity on historic sites

and

- Demonstrated familiarity with California or Western U.S. history, documentary research, and oral history, as evidenced by upper division course work or a major research report or publication based on original research

and

- Demonstrated ability to carry archaeological research to completion, as evidenced by the timely completion of an evaluation or excavation report addressing a historic-period site or sites

and

- Understanding of the Section 106 process and familiarity with cultural resources policies, procedures, and goals, as demonstrated in reports and/or past performance.

Principal Investigator—Prehistoric Archaeology

Fully qualified under the Secretary of the Interior's standard for prehistoric archaeology to conduct all types of studies, including Extended Phase I, Phase II, and Phase III excavations, involving prehistoric

archaeological resources and traditional cultural properties or cultural landscapes of a prehistoric or ethnographic nature. May author proposals, reports for Extended Phase I, II, and III studies, and other compliance documents, with peer review to ensure document quality. May conduct consultant oversight and contract management. Minimum qualifications:

- Graduate degree in anthropology, archaeology, or cultural resources management with an emphasis in prehistoric archaeology, as evidenced by appropriate coursework

  and
- At least 16 months of professional archaeological experience involving prehistoric sites, including a minimum of one year of field experience, as follows: 1) at least 24 weeks of fieldwork under the supervision of a Prehistoric Archaeology PI, of which at least 12 weeks must be excavation work; 2) at least eight weeks of laboratory experience on collections from California or Great Basin sites supervised by a Prehistoric Archaeology PI; and 3) at least 20 weeks of field work in a supervisory capacity, of which at least eight weeks must be on California or Great Basin sites

  and
- Demonstrated ability to carry out archaeological research to completion, as evidenced by the completion of a thesis, dissertation, or other comparable major study focusing on a prehistoric site or sites

  and
- Ability to carry out the more complex and difficult aspects of the Section 106 process

  and
- Understanding of Caltrans cultural resources policies, procedures and goals, as demonstrated in reports and/or past performance

  and
- Familiarity with Caltrans cultural resources contracting policies and procedures.

Principal Investigator—Historical Archaeology

Fully qualified under the Secretary of the Interior's standard for historical archaeology to conduct all types of studies, including Extended Phase I, Phase II, and Phase III excavations, involving historical archaeological resources and historic-period traditional cultural properties or cultural landscapes. May author proposals, reports for Extended Phase I, II, and III studies, and other compliance documents, with peer review to ensure document quality. May conduct consultant oversight and contract management. Minimum qualifications:

- Graduate degree in anthropology, archaeology, cultural resources management, or a closely related field with an emphasis in historical archaeology, as evidenced by a minimum of 12 upper division semester units (or equivalent) in history and the theory and methods of historical archaeology, or equivalent knowledge as shown in a thesis or dissertation or major report evaluating historical archaeological properties

  and
- At least 16 months of professional archaeological experience involving historical sites, including a minimum of one year of field experience, as follows: 1) at least 12 weeks of fieldwork under the supervision of a Historical Archaeology PI, of which at least 6 weeks must be excavation work; 2) at least 4 weeks of laboratory experience on collections from California sites, supervised by a Historical Archaeology PI; and 3) at least 20 weeks of field work in a supervisory capacity, of which at least eight weeks must be on California sites

  and
- Demonstrated familiarity with California or Western U.S. history, documentary research, and oral history techniques, as evidenced by upper division course work or a major research report or publication based on original research

and

- Demonstrated ability to carry out archaeological research to completion, as evidenced by the completion of a thesis, dissertation, or other comparable major study focusing on a historic-period site or sites

and

- Ability to carry out the more complex and difficult aspects of the Section 106 process

and

- Understanding of Caltrans cultural resources policies, procedures, and goals, as demonstrated in reports and/or past performance

and

- Familiarity with Caltrans cultural resources contracting policies and procedures.

ARCHITECTURAL HISTORIAN QUALIFICATIONS STANDARDS

Architectural Historian

Qualified to evaluate historic properties, other than archaeological resources. May prepare evaluation reports for all types of non-archaeological resources and other compliance documents, with peer review by a Principal Architectural Historian to ensure document quality. Minimum qualifications:

- A graduate degree in architectural history, art history, architecture, or a closely related field, with a concentration in American architecture; or a graduate degree in American history, public history, historic preservation, American studies, or a closely related field; or a bachelor's degree in one of the above disciplines, plus 12 months of full-time related professional experience in research, writing, teaching, interpretation, or other related professional activity

and

- Demonstrated ability to apply the practices of architectural history in the identification, evaluation, and documentation of historic properties in California or the United States; or demonstrated familiarity with U.S. history, documentary research, and oral history techniques, as evidenced by upper division course work or a major research report or publication based on original research

and

- Demonstrated ability to carry historical research to completion, as evidenced by the timely completion of a major research report or publication based on original research

and

- Understanding of the Section 106 process and familiarity with cultural resources policies, procedures, and goals, as demonstrated in reports and/or past performance.

Principal Architectural Historian

Fully qualified under the Secretary of the Interior's standard for architectural historians. Able to conduct all types of studies involving historic-period resources, including traditional cultural properties and cultural landscapes, other than archaeological properties. May author evaluation reports and other compliance documents, with peer review to ensure document quality. May conduct consultant oversight and contract management. May determine applicability of Environmentally Sensitive Areas as described in Attachment 5. Minimum qualifications:

- A graduate degree in architectural history, art history, architecture, or a closely related field, with a concentration in American architecture; or a graduate degree in American history, public history, historic preservation, American studies, or a closely related field, and at least 24 months of full-time related professional experience in research, writing, teaching, interpretation, or other

related professional activity; or a bachelor's degree in one of the above disciplines, plus 24 months of full-time related professional experience in research, writing, teaching, interpretation, or other related professional activity

and

- Demonstrated ability to apply the practices of history or architectural history in the identification, evaluation, and documentation of historic properties in California or the United States; or demonstrated familiarity with U.S. history, documentary research, and oral history techniques, as evidenced by upper division course work or a major research report or publication based on original research

and

- Demonstrated ability to carry historical research to completion, as evidenced by the timely completion of a thesis, dissertation, or other comparable major study consisting of the design and execution of a historical study concerning a historic-period property or properties

and

- Ability to carry out the more complex and difficult aspects of the Section 106 process

and

- Understanding of Caltrans cultural resources policies, procedures, and goals, as demonstrated in reports and/or past performance

and

- Familiarity with Caltrans cultural resources contracting policies and procedures.

ATTACHMENT 2

SCREENED UNDERTAKINGS

Screened undertakings are those undertakings that have the potential to affect historic properties, but following appropriate screening, may be determined exempt from further review or consultation under this Agreement.

The Caltrans PQS is responsible for screening those individual undertakings that are included within the classes of screened undertakings listed below to determine if those individual undertakings require further consideration, or if they may be determined exempt from further review or consultation under the terms of this Agreement, as prescribed by Stipulation VII.

The undertaking will not qualify as exempt from further review if conditions must be imposed on the undertaking to ensure that potential historic properties would not be affected.

All features of the undertaking, including the identification of mandatory storage, disposal, or borrow areas and construction easements, must be identified prior to the screening process. If additional features are added to a screened undertaking, the undertaking must be rescreened.

This Attachment applies only when the federal undertaking is limited exclusively to one or more of the activities listed below. Additional Section 106 review will be required, following the steps outlined in Stipulation VIII of the Agreement, if the Caltrans PQS determines that the undertaking has potential to affect historic properties.

Classes of Screened Undertakings:

1. Pavement reconstruction, resurfacing, shoulder backing, or placement of seal coats.
2. Minor widening of less than one-half-lane width, adding lanes in the median, or adding paved shoulders.
3. Channelization of intersections or addition of auxiliary lanes.
4. Establishment of chain control areas, park-and-ride lots, or maintenance pullouts.
5. Minor modification of interchanges and realignments of on/off ramps.
6. Minor utility installation or relocation.
7. Installation of noise barriers.
8. Addition of bicycle lanes or pedestrian walkways.
9. Storm damage repairs, such as culvert clearing or repair, disposal or stockpile locations, shoulder reconstruction, or slide or debris removal.
10. Repair of the highway and its facilities.
11. Modification of existing features, such as slopes, ditches, curbs, sidewalks, driveways, dikes, or headwalls, within or adjacent to the right of way.
12. Minor operational improvements, such as culvert replacements and median or side-ditch paving.
13. Addition or replacement of devices, such as glare screens, median barriers, fencing, guardrails, safety barriers, energy attenuators, guide posts, markers, safety cables, ladders, lighting, hoists, or signs.
14. Removal or replacement of roadway markings, such as painted stripes, raised pavement markers, thermoplastic tape, or raised bars, or installation of sensors in existing pavements.

15. Abandonment, removal, reconstruction, or alteration of railroad grade crossings or separations or grade crossing protection.
16. Minor alteration or widening of existing grade separations where the primary function and utility remain unaltered.
17. Additions or alterations to existing buildings, such as work on or in office or equipment buildings, maintenance stations, warehouses, roadside rests, minor transit facilities, weigh and inspection stations, toll facilities, or state-owned rentals.
18. Restoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health and safety.
19. Any work on Category 5 bridges that are less than 50 years of age, including rehabilitation or reconstruction.
20. Modification of traffic control systems or devices utilizing existing infrastructure, including installation, removal, or modification of regulatory, warning, or informational signs or signals.
21. Installation of freeway surveillance or ramp metering equipment.
22. Replacement of existing highway signs.
23. Removal or control of outdoor advertising.
24. Projects that eliminate non-fixed hazards, such as removal of objects on roadway, traffic accident cleanup, hazardous waste removal, or fire control.
25. Establishment, replacement, or removal of landscaping, vegetation, or irrigation systems on state or local public property, including highway and local roads rights of way and building sites.
26. Construction or repair of fish screens or ladders, springs, waterholes, or stream channels (e.g., clearing of debris from streams, ditches, or culverts).
27. Right-of-way activities such as hardship acquisition or acquisition of scenic or conservation easements.
28. Joint or multiple use permits with other agencies or encroachment permits.
29. Preliminary engineering tests, such as seismic, geologic, or hazardous materials testing, that involve buildings or structures or require trenching or ground boring.

The Screening Process:

The screening process may include one or more of the following procedures. The process is not limited to the procedures below, nor are all these procedures required for all undertakings. Screening should be appropriate to the specific complexity, scale, and location of the undertaking:

- Literature/records review to determine potential for involvement of historic properties.
- Consultation with Indian tribes who may attach religious or cultural significance to properties within the project area, as appropriate for the scope of the undertaking.
- Field review of project area.
- Review of detailed project plans.
- Consultation with local Native American groups, local historical societies, or knowledgeable informants, as appropriate for the scope of the undertaking.
- Review of aerial photographs, Caltrans photologs, historic maps, or as-built records.
- Review of right-of-way, assessment parcel, or ownership data.

Based on the outcome of the screening process, the Caltrans PQS may determine that individual undertakings are exempt from further review when there is no potential to affect historic properties.

The CE-Section 106 Checklist and/or a memo to the project planner for inclusion in the project file constitute the documentation necessary to complete the Section 106 process for screened undertakings determined exempt from further review, and no further review or consultation will be necessary.

ATTACHMENT 3

AREA OF POTENTIAL EFFECTS DELINEATION

In accordance with stipulations VI.B.7 and VIII.A, Caltrans, under the authority of FHWA, will establish the Area of Potential Effects (APE) for undertakings covered by this Agreement. The Caltrans PQS and project manager are jointly responsible for describing and establishing an APE and will sign any maps or plans that define or redefine an APE.

When the guidelines below are followed, specific consultation with the SHPO regarding APE and level of effort will typically not be necessary. Consultation with the SHPO may be needed for large and complex undertakings, when there are issues of access for inventory and evaluation, when there are concerns over delineating whole properties, or when there is public controversy such as potential for litigation, concerns expressed by outside parties, or issues related to Native American consultation.

As defined in 36 CFR 800.16(d), an APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." An APE therefore depends on an undertaking's potential for effects. Effects to be considered may include, but are not limited to, physical damage or destruction of all or part of a property; physical alterations; moving or realigning a historic property; isolating a property from its setting; visual, audible, or atmospheric intrusions; shadow effects; vibrations; and change in access or use.

An APE delineates the boundaries within which it can be reasonably expected that a proposed undertaking has the potential to affect historic properties, should any be present. It may be the right of way itself, or an area either more or less than the right of way, depending on the scope and design of the undertaking.

An APE may extend well beyond the right of way. It must include all construction easements, such as slope and drainage easements, stormwater detention basins, off-site biological mitigation sites requiring ground disturbance, and mandatory borrow and disposal sites. It may include project-related activity areas such as utility relocations, access roads, equipment storage areas, or conservation or scenic easements.

An APE addresses indirect effects when warranted. Indirect effects may extend beyond the right of way to encompass visual, audible, or atmospheric intrusions; shadow effects; vibrations from construction activities; or change in access or use. Delineation of an indirect APE must be considered carefully, particularly for potential audible and visual effects, taking into account proximity and use of adjoining properties, the surrounding topography, and other aspects of a property's setting.

1. Noise: When considering potential noise effects, there must be a reasonable basis for predicting an effect based on an increase over existing noise level. Noise effects should be considered when a project would result in a new through lane or a substantial change in vertical or horizontal alignment.
2. Visual: Highways on new alignments, multi-level structures, or elevated roadways are considered to have potential for visual effects if they could be out of character with or intrude upon a historic property or isolate it from its setting. Projects for improvement or expansion of existing transportation facilities that will not substantially deviate from existing alignment or profile are not expected to involve visual impacts. If circumstances indicate potential for visual effects, consultation with the SHPO may be warranted.

Different APEs may be established for archaeological and built properties:

1. For archaeological properties, an APE is typically established based on an undertaking's potential for direct effects from ground-disturbing activities. On occasion, archaeological sites may also have qualities that could be affected indirectly.

2. Buildings, structures, objects, districts, traditional cultural properties, and cultural landscapes are more likely to be subject to indirect, as well as direct, effects, thus an APE for the built and cultural environment is usually broader than an archaeological APE in order to include the potential for such effects. For instance, the first row of potential properties beyond the right of way may be subject to such effects and thus included in an indirect APE when warranted.

In delineating the APE, consideration must always be given to the undertaking's potential effects on a historic property as a whole. If any part of a property may be affected, the APE will generally encompass the entire property, including the reasonably anticipated or known boundaries of archaeological sites. However, it is rarely necessary to extend an APE to include entire large districts or landscapes, large rural parcels, extensive functional systems, or long linear features if potential effects on the whole would clearly be negligible.

The guiding principle on delineating an APE is that it should be commensurate with, and provide for, an appropriate level of effort to take into account an undertaking's potential for effects on historic properties.

While an APE will generally encompass an entire property, physical intrusion such as testing of archaeological sites must be focused on areas subject to reasonably foreseeable effects of the undertaking and should be guided by a project- or site-specific research design. Areas of an archaeological site that are unlikely to be affected by an undertaking should not be tested unless compelling reasons to conduct such testing are provided in the research design.

Whenever an undertaking is revised (e.g., design changes, utility relocation, or additional off-site mitigation areas), Caltrans PQS will determine if the changes require modifying the APE. If an APE proves to be inadequate, Caltrans is responsible for informing consulting parties in a timely manner of needed changes. The APE shall be revised commensurate with the nature and scope of the changed potential effects.

In order to encourage consideration of historic properties early in the planning and design of an undertaking, Caltrans PQS may designate a study area for use in conducting historical studies until an APE can be delineated. A study area should encompass all land that could potentially be included in the final APE. Establishing a study area is especially pertinent to those undertakings subject to a phased identification and evaluation process.

ATTACHMENT 4

PROPERTIES EXEMPT FROM EVALUATION

Section 106 regulations require a "reasonable and good faith effort" to identify historic properties (36 CFR 800.4[b][1]). The procedures in this attachment concentrate Caltrans efforts on properties that have the potential to be historic properties.

A property should be evaluated only if Caltrans PQS reasonably determine that the property has a demonstrable potential for historic significance. Evidence of such potential consists of associations with significant historic events or individuals (criteria A or B); engineering, artistic, design, or aesthetic values (Criterion C); information value (Criterion D); the presence of community concerns; or inclusion as a potential contributing element within a larger property requiring evaluation, such as a historic or cultural landscape, traditional cultural property, or historic district.

This attachment defines categories of properties that do not warrant evaluation pursuant to Stipulation VIII. C.1. Exempted properties may be documented, if documentation is warranted, at a level commensurate with the nature of the property (e.g., Primary Record form, Location Map, Memo to File, or GIS cultural database).

ARCHAEOLOGICAL PROPERTIES (PREHISTORIC AND HISTORICAL)

Only Caltrans PQS or consultants who meet the Caltrans Archaeological Qualification Standards (Attachment 1) for Lead Archaeological Surveyor and above are authorized to determine that the archaeological property types or features listed below may be exempted from evaluation, and in some cases, may not warrant recordation. Professional judgment should be used as to the level of identification effort. This exemption process does not include archaeological sites, traditional cultural properties, or other cultural remains or features that may qualify as contributing elements of districts or landscapes.

Archaeological Property Types and Features Exempt from Evaluation:

- Isolated prehistoric finds consisting of fewer than three items per 100 square meters
- Isolated historic finds consisting of fewer than three artifacts per 100 square meters (e.g., several fragments from a single glass bottle are one artifact)
- Refuse scatters less than 50 years old (scatters containing no material that can be dated with certainty as older than 50 years old)
- Features less than 50 years old (those known to be less than 50 years old through map research, inscribed dates, etc.)
- Isolated refuse dumps and scatters over 50 years old that lack specific associations
- Isolated mining prospect pits
- Placer mining features with no associated structural remains or archaeological deposits

ARCHITECTURAL AND HISTORICAL PROPERTIES

Certain architectural and historical property types are exempt from evaluation; additional types may be exempt from evaluation after review by a qualified Architectural Historian.

Architectural and Historical Property Types Exempt from Evaluation:

Historical Property Types 1, 2, and 3 will not require evaluation, except as noted. Only Caltrans PQS or consultants who meet the Caltrans Professional Qualifications Standards (Attachment 1) for Architectural Historian and above or Lead Archaeological Surveyor and above are authorized to determine which

architectural and historical properties fall under Property Types 1, 2, or 3 and are therefore exempt from evaluation.

Property Type 1: Minor, ubiquitous, or fragmentary infrastructure elements

Note: The following list does *not* apply to properties 50 years old or older that could be potentially important, nor does it apply to properties that may contribute to the significance of larger historic properties such as districts or cultural landscapes.

Water Conveyance and Control Features:

- natural bodies of water providing a water source, conveyance, or drainage
- modified natural waterways
- concrete-lined canals less than 50 years old and fragments of abandoned canals.
- roadside drainage ditches and secondary agricultural ditches
- small drainage tunnels
- flood storage basins
- reservoirs and artificial ponds
- levees and weirs
- gates, valves, pumps, and other flow control devices
- pipelines and associated control devices
- water supply and waste disposal systems

Recent Transportation or Pedestrian Facilities:

- railroad grades converted to other uses, such as roads, levees, or bike paths
- light rail systems, including shelters, benches, and platforms
- bus shelters and benches
- airstrips and helicopter landing pads
- vista points and rest stops
- toll booths
- truck scales and inspection stations
- city streets, alleys, and park strips
- sidewalks, curbs, berms, and gutters
- bike paths, off-road vehicle trails, equestrian trails, and hiking trails
- parking lots and driveways

Highway and Roadside Features:

- isolated segments of bypassed or abandoned roads
- retaining walls
- curbs, gutters, and walkways
- highway fencing, soundwalls, guard rails, and barriers
- drains and culverts, excluding culverts assigned a Caltrans bridge number
- cattle crossing guards
- roadside, median, and interchange landscaping and associated irrigation systems
- street furniture and decorations
- signs and reflectors
- parking meters
- street lighting and controls
- traffic lights and controls

- highway operation control, maintenance, and monitoring equipment
- telecommunications services, including towers, poles, dishes, antennas, boxes, lines, cables, transformers, and transmission facilities
- utility services, including towers, poles, boxes, pipes, lines, cables, and transformers
- oil and gas pipelines and associated control devices

Adjacent Features:

- fences, walls, gates, and gateposts
- isolated rock walls and stone fences
- telephone booths, call boxes, mailboxes, and newspaper receptacles
- fire hydrants and alarms
- markers, monuments, signs, and billboards
- fragments of bypassed or demolished bridges
- temporary roadside structures, such as seasonal vendors' stands
- pastures, fields, crops, and orchards
- corrals, animal pens, and dog runs
- open space, including parks and recreational facilities
- foundations and mapped locations of buildings or structures more than 50 years old with few or no associated artifacts or ecofacts, and with no potential for subsurface archaeological deposits
- building and structure ruins and foundations less than 50 years old.

Movable or Minor Objects:

- movable vehicles
- stationary vehicles less than 50 years old or moved within the last 50 years
- agricultural, industrial and commercial equipment and machinery
- sculpture, statuary, and decorative elements less than 50 years old or moved within the last 50 years.

Property Type 2: Buildings, structures, objects, districts, and sites less than 30 years old

Properties less than 30 years old may be exempted from evaluation. If the age of a property is not readily discernible the date of construction may be confirmed by checking assessor's records or other sources, such as USGS quadrangle maps or building permits, or by consulting a qualified Architectural Historian.

Property Type 3: Buildings, structures, objects, districts, and sites so altered as to appear less than 30 years old

Substantially altered properties that appear to be contemporary structures may be exempted from evaluation. A qualified Architectural Historian should review altered properties if they are listed in a local survey of historical properties, or if the extent of alterations or the age of a property is not readily discernible.

Architectural and Historical Property Types Exempt from Evaluation After Review by Qualified Architectural Historians:

Historical Property Types 4, 5, and 6, described below, may be exempted from evaluation after review by one of the following qualified professionals: Caltrans Architectural Historians or Principal Architectural Historians, or Caltrans consultants who have been certified as meeting Caltrans architectural historian professional standards.

Property Type 4: Buildings, structures, objects, districts, and sites 30 to 50 years old

Properties between 30 and 50 years old may be exempted from further evaluation. Consideration will be given to properties that may have achieved exceptional significance within the last 50 years, in accordance with National Register Bulletin 22.

Property Type 5: Buildings, structures, and objects moved within the past 50 years

Properties which have been moved are not usually eligible for the National Register, with the exceptions noted in "Criteria Consideration B: Moved Properties" of National Register Bulletin 15. Therefore properties that were moved within the past 50 years may be exempted from evaluation. Properties moved more than 50 years ago shall be formally evaluated, unless they also qualify as property types exempted from evaluation (e.g., a building moved before its period of significance but which has since lost integrity through alterations). Caltrans qualified Architectural Historians have discretion to identify and evaluate properties moved less than 50 years ago when there is demonstrable evidence to indicate that such identification and evaluation are warranted.

Property Type 6: Altered buildings, structures, objects, districts, and sites that appear to be more than 30 years old

Properties more than 30 years old that have been substantially altered may be exempted from evaluation. Such properties may include roads and highways with associated features other than bridges, and railroads with associated features other than buildings or bridges. However, altered properties should be documented if they are listed in a local survey of historical properties or if eligibility conclusions might be controversial.

ATTACHMENT 5

ENVIRONMENTALLY SENSITIVE AREAS

Environmentally Sensitive Areas (ESAs) are locations of identified archaeological sites or other properties within the APE that are to be protected by avoidance or by restrictions on Caltrans activities. ESAs typically use fencing, flagging, signing, or monitoring to protect properties from direct physical damage by project activities.

Because ESAs protect properties from direct rather than indirect effects, they are rarely applied to non-archaeological properties. ESAs may be applied to built environment properties only when deemed appropriate by a Principal Architectural Historian.

Archaeological and cultural sites may have values other than information potential under Criterion D. ESAs may be applied to sites with cultural values that qualify them as eligible under Criteria A, B, or C in addition to, or instead of, Criterion D only where the ESA protects those values from all adverse effects. That determination must be made by a Principal Investigator in the applicable discipline (Prehistoric or Historical Archaeology), and as appropriate, after consultation with Indian tribes or interested parties that may attach religious or cultural values to the property.

Stipulation VIII.C.3 provides that archaeological sites protected by ESAs established and enforced in accordance with this Attachment may, for the purposes of a specific undertaking, be considered eligible without subsurface excavation and/or surface collection.

Stipulation VIII.C.3 does not apply to non-archaeological properties, which must be evaluated for National Register eligibility regardless of ESA protection, unless specifically provided for in a consultation pursuant to Stipulation X.B.1, Finding of No Adverse Effect without Standard Conditions, or in an MOA developed pursuant to Stipulation XI, Resolution of Adverse Effects.

The delineation of an ESA pursuant to Stipulation VIII.C.3 of the Agreement may be used to reach a finding of No Adverse Effect in accordance with Stipulation X.B.2 (a)(ii) and (iii) of the Agreement, provided that all of the following conditions are met:

1. Adequate information is available to accurately delineate the property boundary in relation to the APE and to identify essential features of the property. This information may be obtained from literature review, surface survey, subsurface testing, historical research, or consultation with Indian tribes.
2. The scope and design of the undertaking are sufficiently developed and detailed to ensure that the property will be protected from all adverse effects.
3. All appropriate protection measures are defined (e.g., signing, staking, fencing, monitoring provisions) and the information included in the Final Construction Plans, Contract Special Provisions, and Pending File of the Resident Engineer (RE) assigned to the construction project.
4. An ESA action plan is developed to ensure that provisions for protection are carried out and will be documented in accordance with Stipulation XVI of the Agreement.

Delineation of an ESA may be used as an element of protection for non-archaeological properties when specifically provided for by a condition in a finding of No Adverse Effect without Standard Conditions pursuant to Stipulation X.B.1 or for resolution of adverse effects when specifically provided for in an MOA developed pursuant to Stipulation XI, Resolution of Adverse Effects.

Caltrans PQS will develop and provide appropriate ESA information to Project Development, Construction, and Maintenance personnel to protect properties during project activities through implementation of an ESA action plan. Project Development shall include ESA information in Construction Plans, Contract Special Provisions, and the Pending File of the project's RE. During

construction, the RE shall ensure that contractors comply with ESA guidelines in the Contract Special Provisions. The District Environmental Branch shall monitor construction and maintain contact with the RE on ESA compliance.

ATTACHMENT 6

STANDARD TREATMENT OF ARCHAEOLOGICAL SITES: DATA RECOVERY PLAN

In accordance with Stipulation XI.A, when an archaeological property is eligible for the National Register under Criterion D only, potential adverse effects to the property may be resolved through data recovery to recover important information that would have been otherwise lost as a result of an undertaking. A Caltrans Principal Investigator (Archaeology) shall determine applicability of data recovery, and if applicable, the appropriate level of documentation for a data recovery plan.

A data recovery plan shall, at a minimum, include the following:

- Discussion of the National Register significance of a property.
- Research questions that are directly pertinent to those data sets that qualify the property for inclusion in the National Register under Criterion D.
- A discussion that explains why it is in the public interest to pursue answers to these research questions. The discussion should indicate whether, why, and how the public may benefit from the scope and nature of the information developed through data recovery, and demonstrate that the costs of proceeding with the data recovery are prudent and reasonable.
- Results of previous research relevant to the property type.
- Proposed investigations (data needed to address research questions and the proposed methods and techniques to acquire that data, including any special studies).
- Field methods and techniques that will clearly and cost-effectively address the property's structure and content in the context of the defined research questions and the property's stratigraphic and geomorphic context.
- Laboratory processing and analyses, with justification of their cost-effectiveness and of their relevance to the property and its research values.
- Methods and techniques used in artifact, data, and other record management.
- Provisions for ongoing Native American consultation and coordination, if Native American values or concerns are present or are likely to be present.
- Qualifications of key personnel.
- Disposition, including curation, of recovered materials and records resulting from implementation of the data recovery plan.
- Cost proposal.
- All required permits
- Report preparation schedule, including the names of parties to whom reports will be distributed upon completion.
- Monitoring provisions and procedures for evaluating and treating discoveries of unexpected finds during the course of the project, which may include consultation with other parties.
- Explicit provisions for disseminating research findings to professional peers in a timely manner.
- Plan for public involvement and educational or interpretive programs, focusing particularly on the community or communities that may have interest in the results.

FIRST ADDENDUM TO THE PROGRAMMATIC AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
AND THE CALIFORNIA DEPARTMENT OF TRANSPORTATION
REGARDING COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT, AS IT PERTAINS TO THE ADMINISTRATION OF THE FEDERAL-AID HIGHWAY PROGRAM IN CALIFORNIA

WHEREAS, the Federal Highway Administration (FHWA), the California State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and the California Department of Transportation (Caltrans) executed a Programmatic Agreement (Agreement), executed on December 30, 2003, regarding the Federal Aid Highway Program in California; and

WHEREAS, the Agreement established that the California Division Administrator, FHWA is the "Agency Official" responsible for ensuring that the Federal-aid Highway Program in the state of California complies with Section 106 of the National Historic Preservation Act, as amended (NHPA), and codified at its implementing regulations, 36 CFR Part 800, and effective January 11, 2001; and

WHEREAS, pursuant to the June 7, 2007 "Memorandum of Understanding between the FHWA, California Division and Caltrans, Assumption of Responsibility for Categorical Exclusions" (MOU) prepared in accordance with Section 6004(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (P.L. 109-059), codified as Section 326 as amended Chapter 3 of title 23 United States Code, the Secretary of the United States Department of Transportation, acting by and through the FHWA, assigned to Caltrans the responsibility for compliance with Section 106 of the NHPA for projects covered by the MOU; and

WHEREAS, FHWA, SHPO, the ACHP and Caltrans have consulted to enter into this First Addendum to the Agreement to recognize that the Chief of the Division of Environmental Analysis at Caltrans is the "Agency Official" responsible for ensuring that the Federal-aid Highway Program in the state of California complies with Section 106 of the NHPA for projects covered by the MOU; and

NOW, THEREFORE, FHWA, SHPO , the ACHP and Caltrans agree that the Agreement shall be addended as follows:

STIPULATIONS

I. Where the Agreement specifies FHWA responsibilities for compliance with Section 106 of the NHPA, the Caltrans Division of Environmental Analysis, Cultural and Community Studies Office shall assume those responsibilities, except as provided in stipulations II and II below.

II. In accordance with Stipulation IV.A of the Agreement, FHWA shall retain responsibility for conducting direct government to government consultation with Indian tribes.

III. FHWA shall assume responsibility for compliance with Section 106 of the NHPA and the Agreement for any project it determines should be excluded from the MOU pursuant to Section X.B of the MOU.

IV. This First Addendum shall take effect following execution by FHWA, SHPO, the ACHP, and Caltrans and shall remain in effect until the MOU expires or is terminated, or the Agreement expires or is terminated, whichever occurs first.

SIGNATORY PARTIES

Federal Highway Administration

By: Gene K. Fong Date: 8/6/07
Gene K. Fong, California Division Administrator

California State Historic Preservation Officer

By: Stephen D. Mikesell for Date: 8/6/07
M. Wayne Donaldson, State Historic Preservation Officer

Advisory Council on Historic Preservation

By: John M. Fowler Date: 9/28/07
John M. Fowler, Executive Director

California Department of Transportation

By: Will Kempton Date: 8/21/07
Will Kempton, Director

SECOND ADDENDUM TO THE PROGRAMMATIC AGREEMENT
AMONG THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
AND THE CALIFORNIA DEPARTMENT OF TRANSPORTATION
REGARDING COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC
PRESERVATION ACT, AS IT PERTAINS TO THE ADMINISTRATION OF THE
FEDERAL-AID HIGHWAY PROGRAM IN CALIFORNIA

WHEREAS, the Federal Highway Administration (FHWA), the California State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and the California Department of Transportation (Caltrans) executed a Programmatic Agreement (Agreement), executed on December 30, 2003, regarding the Federal Aid Highway Program in California; and

WHEREAS, the Agreement established that the California Division Administrator, FHWA is the "Agency Official" responsible for ensuring that the Federal-aid Highway Program in the state of California complies with Section 106 of the National Historic Preservation Act, as amended (NHPA), and codified at its implementing regulations, 36 CFR Part 800, and effective January 11, 2001; and

WHEREAS, the July 1, 2007 "Memorandum of Understanding between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program" (MOU) prepared in accordance with Section 6005(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (P.L. 109-059), codified as Section 327 as amended Chapter 3 of Title 23 United States Code (23 U.S.C. 327) officially approves Caltrans' application to participate in the Pilot Program, and is the written agreement required by 23 U.S.C. 327(a)(2)(A) and (c) under which the Secretary of the United States Department of Transportation (USDOT Secretary) may assign, and Caltrans may assume, the USDOT Secretary's responsibilities for federal environmental laws with respect to one or more highway projects within California, including Section 106 of the NHPA; and

WHEREAS, FHWA, SHPO, the ACHP and Caltrans have consulted to enter into this Second Addendum to the Agreement to recognize that the Chief of the Division of Environmental Analysis at Caltrans is the "Agency Official" responsible for ensuring that the Federal-aid Highway Program in the state of California complies with Section 106 of the NHPA; and

NOW, THEREFORE, FHWA, SHPO , the ACHP and Caltrans agree that the Agreement shall be addended as follows:

STIPULATIONS

I. Where the Agreement specifies FHWA responsibilities for compliance with Section 106 of the NHPA, the Caltrans Division of Environmental Analysis, Cultural and Community Studies Office shall assume those responsibilities, except as provided in stipulations II and II below.

II. In accordance with Stipulation IV.A of the Agreement, FHWA shall retain responsibility for conducting direct government to government consultation with Indian tribes.

III. FHWA shall retain responsibility for projects specifically excluded from delegation to the state in Part 3, Section 3.1 of the MOU; and FHWA will assume responsibility for compliance with Section 106 of the NHPA and the Agreement for any project for which FHWA resumes responsibility pursuant to Part 9 of the MOU.

IV. This Second Addendum shall take effect following execution by FHWA, SHPO, the ACHP, and Caltrans and shall remain in effect until the MOU expires or is terminated, or the Agreement expires or is terminated, whichever occurs first.

SIGNATORY PARTIES

Gene K. Fong, California Division Administrator

California State Historic Preservation Officer

By: _____ Date: 8/6/07
M. Wayne Donaldson, State Historic Preservation Officer

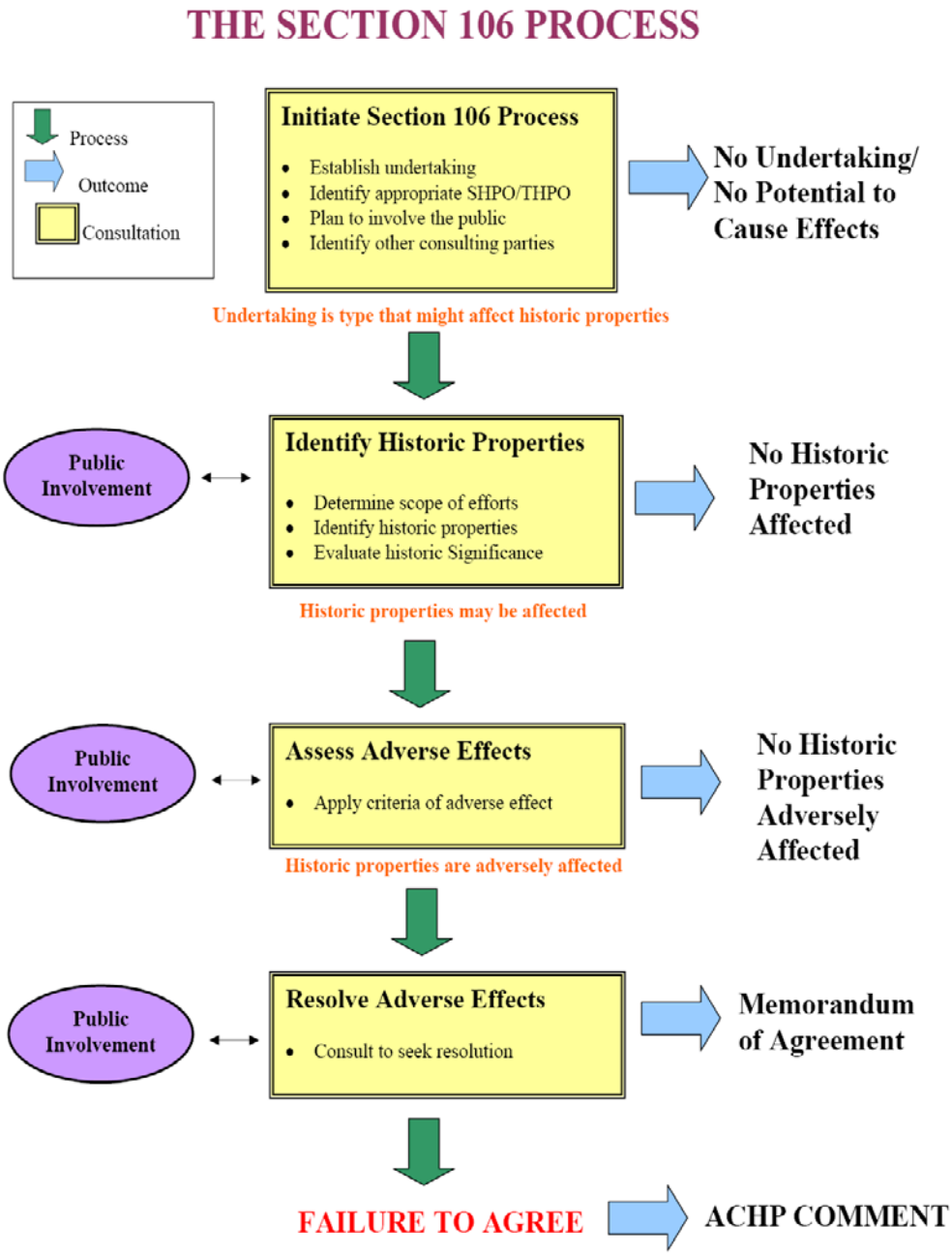
Advisory Council on Historic Preservation

By: _____ Date: 9/28/07
John M. Fowler, Executive Director

California Department of Transportation

By: _____ Date: 8/21/07
Will Kempton, Director

APPENDIX E
THE SECTION 106 PROCESS



IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	November 17, 2011
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Management Technical Advisory Committee Meeting #1

November 17, 2011 2:00p.m. to 3:30p.m.
Caltrans District 7 - 100 South Main St

Present

Linda Taira	Caltrans- Corridor Studies	213-897-0813	linda_taira@dot.ca.gov
Phillip Law	SCAG	213-236-1841	Law@scag.ca.gov
Fred Glick	IBI Group	206-498-4280	Fred.glick@ibigroup.com
Dahlia Persoff	Caltrans Landscape	213-897-0463	dahlia.persoff@dot.ca.gov
Dapo Majekodunmi	Caltrans Traffic	213-897-5742	Dapo_majekodunmi@dot.ca.gov
Joseph Kibe	Caltrans Traffic	213-897-5702	jkibe@dot.ca.gov
Frances Lee	Caltrans Planning – Corridor Studies	213-897-0673	Frances.lee@dot.ca.gov
Lily Kam	Caltrans Fwy Ops	213-897-0238	Lily_kam@dot.ca.gov
Judy Gish	Caltrans Public Affairs	213-897-3487	Judy.gish@dot.ca.gov
Alan Thompson	SCAG	213-236-1940	Thompson@scag.ca.gov
Teresa Fong	Metro	213-922-2854	fongte@metro.net
Lan Saadatnejadi	Metro	213-922-7337	saadatnejadil@metro.net
Tona Avalos	LACFCD	626-458-4312	tavalos@dwp.lacounty.gov
Liz Jennings	MRCA	323-221-9944	Liz.jennings@mrca.ca.gov
Gayle Greenberg	Rep Xavier Becerra	213-483-1425	Gayle.greenberg@mail.house.gov
Simon Pastucha	LA Planning Department UDS	213-978-1475	Simon.pastucha@lacity.org
Bahman Janka	City of Pasadena	626-744-4610	bjanka@cityofpasadena.net
Dennis Woods	City of South Pasadena	626-403-7236	dwoods@ci.south-pasadena.ca.us
Bill Delo	IBI Group	949-833-5588	bdelo@ibigroup.com
Shannon Heffernan	IBI Group	213-250-4770	sheffernan@ibigroup.com
Kimberly Demuth	Cardno ENTRIX	206-239-7391	kimberly.demuth@cardno.com
Mahmoud Ahmadi	AFSHA Consulting	714-457-1339	msa@afshaconsult.com

Distribution Attendees

Item Discussed	**Action By**
1 Introductions	
a. All attendees participated in self-introductions. b. IBI Group would like active participation from members of the Technical Advisory Committee. • TAC meetings should include a representative from LADOT and the Mayor's office. • IBI Group Project Manager Fred Glick presented information on the Federal Highway Administration's National Scenic Byway Program, the Historic Arroyo Seco Parkway, steps to updating the 2004 CMP, Project scope and schedule, TAZ zone data, and the Baseline Evaluation Documentation list. The presentation was circulated to meeting attendees.	
2 Public Workshops	
c. Public workshops will be held December 5th, 6th, and 8th at the following locations: • December 5th Monday: South Pasadena • December 6th Tuesday: Highland Park • December 8th Thursday: Chinatown, Los Angeles d. The second round of public workshops will be held in late winter. e. Prior to the first round of public workshops, IBI Group will send cities a list of regulatory documents that may have an impact on the Corridor.	IBI Group
3 Project Study Area Boundaries	
f. Study Area and Corridor Boundaries • The project study area includes land located generally within a half-mile of the Parkway (SR 110) and Arroyo Seco where the two are adjacent. Figueroa Street is included within the half-mile and may be affected by any changes made to the Parkway. The boundary to the south of the Parkway is defined by the Watershed Boundary until the Arroyo Seco veers north away from the Parkway alignment in Pasadena. • Project study area boundaries go beyond the Caltrans right-of-way and include portions of several adjacent neighbourhoods. The CMP will involve the Goldline Light Rail, bicycle trails, etc as means to reduce congestion on the Parkway. The relationship between urban and the Parkway is important.	

4 Corridor Management Plan Implementation	
g. Implementation and Funding • Multimodal solutions identified in the CMP require timing and funding sources. The project team will need guidance from city staff/government agencies to determine what projects can be funded. • The CMP must identify a priority list of projects and funding sources. • Caltrans noted that this CMP will lead to an implementation plan. The projects/improvements identified in the CMP will be part of a preapproved list for an implementation plan. • Implementation could include obtaining funding for environmental review of the CMP and/or the identified project list.	
h. Environmental Review • This project does not include funding for a CEQA or NEPA study.	Caltrans
• Caltrans will confirm with Federal Highways if there is an environmental component tied to a CMP. Caltrans will need to review CEQA to determine if a planning document needs environmental review or if an EIR is only needed at a project level.	Caltrans
• If there is an environmental component to the CMP, Environmental staff will be added to the TAC.	
i. CMP Umbrella Document • The CMP can serve as an umbrella document for all government agencies and cities. Recommendations made in the CMP will be preapproved by relevant agencies. All agencies can sign off on the CMP. • The TAC and project team must identify how this document can be used, implemented, environmentally "cleared", and tied to appropriate funding sources.	TAC/IBI Group Team
5 Technical Work	
j. Transportation Analysis/Modeling • IBI Group will use the TAZ zones identified by SCAG for the modeling effort. TAZ zones identified are very broad and should be reduced to include a smaller demographic.	IBI Group
k. Adjournment • The next TAC meeting is tentatively scheduled for January 12th at 2:00 PM.	

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	January 30, 2012
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Management Technical Advisory Committee Meeting #2

January 12, 2012 2:00p.m. to 3:00 p.m.
Caltrans District 7 - 100 South Main St

Present

Name	Firm/Agency	Phone	E-Mail
Linda Taira	Caltrans- Corridor Studies	213-897-0813	linda_taira@dot.ca.gov
Frances Lee	Caltrans- Corridor Studies	213-897-0673	frances.lee@dot.ca.gov
Dale Benson	Caltrans	213-897-2934	dale_benson@dot.ca.gov
Phillip Law	SCAG	213-236-1841	Law@scag.ca.gov
Alan Thompson	SCAG	213-236-1940	thompson@scag.ca.gov
Teresa Fong	Metro	213-922-2854	fongte@metro.net
Kew Husting	LADOT	213-972-5008	Kew.husting@lacity.org
Tona Avalos	LACFCD	626-458-4312	tavalos@dpw.lacounty.gov
Simon Pastucha	LA Planning Department UDS	213-978-1475	Simon.pastucha@lacity.org
Dennis Woods	City of South Pasadena	626-403-7236	dwoods@ci.south-pasadena.ca.us
Fred Glick	IBI Group	206-498-4280	Fred.glick@ibigroup.com
Bill Delo	IBI Group	949-833-5588	bdelo@ibigroup.com
Shannon Heffernan	IBI Group	213-250-4770	sheffernan@ibigroup.com
Mahmoud Ahmadi	AFSHA Consulting	714-457-1339	msa@afshaconsult.com
Nicole Possert	Arroyo Guild	323-255-5792	aguild@pacbell.net

Distribution Attendees

Item Discussed	**Action By**
1 Introductions	
a. All attendees participated in self-introductions. b. IBI Group will update Technical Advisory Committee contact list with participants from the TAC Meeting #1 and send to Linda Taira (Caltrans).	IBI Group
2 Transportation Assessment	
a. The travel demand model will be used to evaluate and assess multi-modal travel demand along the corridor by subarea. The model will be supported by data collected from the Origin/Destination surveys (online and license plate survey). b. The model (microsimulation) will be delivered to Caltrans and SCAG at the completion of this project. Caltrans could share the model/data with cities for specific projects if applicable. c. If the data collection results yield low bicycle counts, IBI Group will explore reasons why data/counts are low for this mode of travel. d. IBI Group discussed the corridor – level microsimulation model which will assess operations of the Arroyo Seco Parkway corridor at critical intersections and ramps (hot spots). Maps identifying these key locations were distributed to the TAC for comments/feedback.	IBI Group TAC
3 December Workshops	
a. Nicole Possert gave a brief summary of data collected from the three public workshops held in December. Comments from the three workshops were documented by meeting, table, subject, and priority (high, medium, low). b. Workshop comments were distributed to the TAC for review and feedback.	TAC
4 Origin/Destination Survey	
a. Strategies were discussed for survey distribution and collection. Caltrans, Metro, and SCAG will provide a link to the origin/destination survey on their websites. The survey will be send to the TAC for distribution and forwarded to local blogs and papers along the corridor (LA Streets, The Source, etc). b. The online survey may be limiting and should be distributed at community meetings, neighborhood councils, schools, and on the Gold Line. c. The survey will be refined to incorporate additional questions	IBI Group, TAC, Caltrans, Metro, SCAG IBI Group

regarding alternative travel modes in the corridor. The deadline for the origin/destination survey data collection in mid-February. d. The survey can be modified to one specific mode of travel (bicycles) for short/long term use and data collection.	IBI Group
5 Path Forward: Report Outline	
a. The Arroyo Seco Parkway CMP should specifically define the purpose of the plan and how agencies, cities, the audience can use it. b. The CMP outline should first define the possibilities of the Parkway in the future. Existing conditions and FHWA requirements should follow or be included as part of the Appendix. c. Linda suggested that due to light turnout for this meeting, perhaps we should skip the February meeting, and next meet in March. All present seemed to agree. d. Fred suggested holding Stakeholder (municipality) meetings in February as an alternative to the TAC meeting. The primary purpose of the February meetings will be to discuss the corridor vision with the jurisdictions and regional agencies. They include: Pasadena, South Pasadena, City of Los Angeles, Army Corps, and County of Los Angeles.	
6 Wrap-up/Discussion a. IBI Group will distribute any meeting materials prior to the TAC Meeting #3 on March 8th at 2:00 PM.	IBI Group

Workshop #1 Prioritization

Intrinsic Qualities

Highlight Arts and Crafts/Route 66 history.	High	South Pasadena	1
Recreational uses adjacent to the corridor such as the Arroyo Seco Golf Course and Arroyo Seco Racquet Club are an attribute. Noise from the Parkway can be heard that these two locations. Find ways to mitigate noise.	High	South Pasadena	2
Restore murals and connect the Parkway to the art/culture of the adjacent neighborhoods.	High	Highland Park	1
Improve signage on the Parkway and in adjacent neighborhoods. Signage on bicycle paths for destinations. Signage promoting destinations along the corridor (i.e Southwest Museum, Debs Park, Heritage Square, Lummis House)	High	Highland Park	1
Attractions should be accessible to everyone. - Connectivity to the Audubon Center, Debs Park, Heritage Square, Southwest Museum in necessary. This is the heart of the corridor.	High	Highland Park	2
Expand flood plain of the Arroyo River. Possibly use it for food water storage	High	South Pasadena	1
Destination/feature signage along the Corridor	High	South Pasadena	1
Restore historic elements	High	South Pasadena	1
More signs along the Parkway	High	Chinatown	1
Overall wayfinding signage plan that is consistent across Los Angeles, South Pasadena and Pasadena. Within the ½ mile to mile of corridor to give the corridor a identity.	Medium	South Pasadena	1
Locate a recreation park/museum north of the Arroyo Seco Golf Course.	Medium	Chinatown	1
Uniform and consistent Historic sign imagery to show the history of the Corridor	Medium	South Pasadena	2
Incorporate lighting to match historical time period and have a consistent design	Medium	Highland Park	1
Caltrans has ignored previous recommendations for the Arroyo Seco Parkway.	Medium	Highland Park	2
Restore the Arroyo River and use it as a destination.	Medium	South Pasadena	1
Create an awareness of the historic bridges and enhance bridges.	Medium	Highland Park	1
Provide better lighting at parks to increase safety.	Medium	Chinatown	3a
Elisian Park is a good destination and a community attribute	Medium	Chinatown	2
Provide more printed materials for area attractions and distribute/ incorporate them into classrooms	Medium	Chinatown	3b
The original concept of the Parkway was to provide a connection with Arroyo River at all times. The new guard rails prevent this.	Low	Highland Park	1
Provide more parks along the Parkway for exercising purposes	Low	Chinatown	1
Fix the Parkway	Low	Chinatown	1
Farmers market near the 4 level interchange and Los Angeles State Historic Park	Low	Chinatown	1
Provide more activities (cultural related)	Low	Chinatown	3b
More lights on the Parkway	Low	Chinatown	4

Other Intrinsic Quality Comments:

Create a theme for the Parkway that shows its connection to DT LA	South Pasadena	1
Tie in rail history to the Parkway	South Pasadena	1
Key destinations along the Parkway include: South Pasadena Library; Ostrich Farms; Nature Park, Arroyo Seco Golf Course, Mission Meridian TOD, Southwest Museum	South Pasadena	1,2
Arts venues and events	South Pasadena	2
Encourage parrots and hawks to fly over highway (i.e. bird sanctuary)	South Pasadena	2
Equestrian trails and stables are rare to the area and considered an attribute to South Pasadena.	South Pasadena	2
There is Art District in NeLa. Identify new attractions in Highland Park and allow for the attractions to be open longer throughout the day/week	Highland Park	1
Green the Parkway north of Interstate 5 so it does not feel industrial	Highland Park	1
CMP should include a definition of a Parkway from a historical standpoint	Highland Park	2
Identify the start/end of the Caltrans right-of-way	Highland Park	2
Review original report and photographs of the Arroyo Seco Parkway from 1929	Highland Park	2
San Fernando Road to Avenue 19 (adjacent to the Old Jail) area is not developed, but will be within the next 10 years. More TOD development in the area.	Highland Park	2
Historical elements along the Parkway have been lost and not recognized	South Pasadena	1
Horse stables/san Pasqual stables and trails	South Pasadena	1
Provide a movie history/tours of the Parkway	South Pasadena	1
Adding water resources	South Pasadena	1
Provide signage that identifies the location of Heritage Square	South Pasadena	1
Have a different standard for signage along the Corridor	South Pasadena	1
El Rio de Los Angeles is a state park with 40 acres and a community attribute.	Chinatown	3a
Identify the different districts/neighbourhoods along Figueroa Avenue	Chinatown	3a
There is an artist community in Highland Park. Keep the artist community. Judson Studios and Gallery is an attribute	Chinatown	3a
Control rodent/vermin population in neighbourhoods adjacent to the corridor	Chinatown	3a
Cypress Park is a community attribute.	Chinatown	3a
South Pasadena Library is a community attribute.	Chinatown	3a
Bring people to community.	Chinatown	3a
Provide public restrooms.	Chinatown	3a
Parks along 110 too dangerous and need more security.	Chinatown	3a
More visibility at night of signs is needed	Chinatown	3a
More lights along the Parkway because it is too dark.	Chinatown	3a
Historic museum (southwest)	Chinatown	3a
Upgrade bridges over Parkway	Chinatown	3a
Signage in Spanish would be helpful	Chinatown	4
Change the "Literature List" to Information List	Online feedback	
Compile and make available the 1000s of aerial photos of the late 1930-1960s to get a real comprehensive image of what we have lost	Online feedback	
Require Caltrans to have APPROVALs from all City and Neighborhood Councils of the "Corridor"	Online feedback	

Require compliance of the Arroyo Seco with the LA City "Low Impact Development" of the LA Dpt.Pub.Works.	Online feedback
Require phased removal of concrete lining from the Arroyo Seco to status as of 1950	Online feedback
One cultural/ community event that we didn't cover much last night, is the Farmers' Market that we have every Thursday night. It takes places right by the Gold Line Mission Station and that is right next to the Meridian Iron Works historical museum. While this is at the very edge of the study area, the event has become important to this town and is linked in a way to our Gold Line Station.	Online feedback

Visual Experience

Southwest Museum is iconic to the visual experience. Emphasize the Southwest Museum awareness via Goldline and Parkway (i.e. lights, landscape, signage)	High	Highland Park	1
Heritage Square is beautiful. Increase Heritage Square location signage and reduce the size of fences surrounding Heritage Square so it can be seen from the Parkway.	High	South Pasadena	2
Adequate removal of grafitti and trash to change perception of community. There needs to be a timely response of maintenance and trash removal on Avenue 43 and Avenue 46.	High	Highland Park	1
The arroyo should be restored. It should not have a freeway through it. The Arroyo should be a parkway. Other transportation alternatives are provided in the neighbourhoods to get cars off the Parkway	High	Highland Park	2
Rim of the Valley tram	High	South Pasadena	1
Caltrans has ignored previous recommendations for the Arroyo Seco Parkway	High	Highland Park	
Signage is lacking from Union Station to general cultural attractions in Chinatown	High	Chinatown	3b
Prefer retrofitting to change current concrete to the "hard" barriers to more natural dividers (Greener)	High	Chinatown	4
Address graffiti	High	Chinatown	4
Lack of visibility with solid barriers on Parkway. Reduced scenic experience and loss visual (safety issue)	Medium	South Pasadena	1
Plants in the medians to enhance Parkway	Medium	South Pasadena	2
More landscaping along the Parkway	Medium	Chinatown	1
More trees and more lighting in areas adjacent to the Parkway	Medium	Chinatown	1
Gardens (more)	Medium	Chinatown	3b
Need for landscaping between 101 freeway and 5 freeway	Medium	Chinatown	2
Maintain landscape along the Parkway	Low	Highland Park	1
Green natural views are reminiscent of childhood memories	Low	Chinatown	4
Presentation of the corridor is not welcoming. The perception of the Corridor must be changed	Low	Highland Park	1
Changes have been made to the corridor that block views and are dull. It looks depressing and needs more greenery.	Low	Chinatown	4
The original concept of the Parkway was to have eye contact with the Arroyo River at all times. The new guard rails prevent this.	Low	Highland Park	2
Views are now blocked by K-Rails and speeds have now increased as a default	Low	Highland Park	2
Trees landscaping is needed	Low	Chinatown	1
More lighting to increase safety	Low	Chinatown	3b

Other Visual Experience Comments:

Views of solar panels hurt visual imagery	South Pasadena	2
Concrete channel looks awful	South Pasadena	2
There are scenic views from the Southwest Museum.	South Pasadena	2
Concrete barriers impede views, bad chain link aesthetic	Highland Park	1
Have consistency in design along corridor	Highland Park	1
Fence/barrier detracts from corridor. The "fenced in" look is not scenic. Create a uniform/better appearance of barrier	Highland Park	1
Montecito Heights solar panels obstructive views	Highland Park	2
Use Views as a traffic calming measure	Highland Park	2
Blue path vs. natural state of the channel	South Pasadena	1
Maintain the visual experience along the corridor with a balance of safety	South Pasadena	1
Improve experience of crossing Parkway and Arroyo via traffic improvements and visual experience. It is too dark in corridor.	South Pasadena	1
Improve lighting- safety and appearance	South Pasadena	1
Tunnels- decoration/artist treatment	South Pasadena	1
Hillside protection measures to reduce solar farm	South Pasadena	1
Improvements at public/private interface (i.e. backyard fences)	South Pasadena	1
Lost sight of the Arroyo River	South Pasadena	1
No concrete in the LA River. Clean the LA River and maintain it	Chinatown	3a
K-rails are ugly, in particular along the portion of the Parkway that starts at the LA River to French Avenue	Chinatown	3a
Beautiful flowers and plants along Parkway	Chinatown	3a
Trees	Chinatown	1
Native natural plants	Chinatown	1
Accent lights on trees. More trees in San Pasqual	Chinatown	1
Add trees and landscaping along the whole Parkway	Chinatown	1
Make Parkway more beautiful to advertise scenic corridor	Chinatown	1
Fence between freeway and LA River upgrade	Chinatown	1
Recapture water from watershed area to water landscaping	Chinatown	1
Remove concrete and add green elements in the Arroyo River	Chinatown	2
Graffiti on 110 overpass an eyesore (and dangerous for graffiti artists to paint graffiti)	Chinatown	3b
Maintain parks along route. Provide recreational and aesthetic opportunities/views are special to the Arroyo River and Parkway	Chinatown	4
Areas of note: via Marisol- needs attention trash, looks messy especially during holidays.	Chinatown	4
Park views should inspire travelers to go to parks	Chinatown	4
Concrete median. Prefer landscaping and trees to concrete barrier	Chinatown	4
More green nature zones	Chinatown	4
Make landscape so schools can see beauty especially around Evans	Chinatown	4
Restore the ArroyoSeco to the same image as shown in the 1940's?? postcard image shown in the Presentation and on the web site...	Online feedback	

Eliminate the sound walls	Online feedback
ADD NO NEW Concrete anywhere	Online feedback
To beautiful Arroyo Parkway, I would change the signage to something more classic, light up the bridges with spotlights under the bridge.	Online feedback
Wouldn’t it be amazing to retile the tunnels? Something subtle but beauteous? Nature-themed patterns or panoramas or views of the mountains?	Online feedback
The most important component of making this a truly scenic and esthetically pleasing area is the removal of the concrete flood channel. Restoring this ancient waterway to green, verdant and wet with walking and biking trails will reinforce the primacy of nature over it's neighboring auto culture.	Online feedback

Traffic and Intersections

On/off ramps are most dangerous on the southbound lanes of the Parkway. There should be a dedicated lane to enter/exit the Parkway with no traffic. Mitigation measures must occur further north on the Parkway at Avenue 60 to improve safety.	High	South Pasadena	2
Figueroa is the alternative Parkway route in South Pasadena. Choose bulb out locations wisely. They could be useful in the commercial district along Figueroa.	High	South Pasadena	2
Improve safety on/off ramps, especially on Avenue 43 and York Boulevard (SB)	High	Highland Park	1
Examine traffic congestion on Avenue 26 between the Goldline Station and Figueroa	High	Highland Park	2
Better use of signage at Dodger Stadium for both pedestrians and automobiles	High	Chinatown	3a
Would like more cautionary lanes and safety measures when entering the 110 between and the 5. Example Via Marisol, Avenue 52, and Hill St	High	Chinatown	4
On/off ramps safety. Stop on ramps, short off ramps	High	Chinatown	5
Accidents and congestion at Dodger games	High	Chinatown	5
Weaving at 1-5/SR 110 safety	Medium	Chinatown	5
Improve appearance and maintenance of existing on/off ramps on Avenue 43	Medium	Highland Park	1
Lower speeds experience/travel times	Medium	South Pasadena	1
Lack of alternate streets and routes	Medium	Chinatown	5
There is a traffic light timing issue on Glen Arm Street with the Goldline which causes traffic back up on the Parkway from Glen Arm to Fair Oaks. This is a California Public Utilities issue.	Medium	South Pasadena	2
Troublesome intersections: Glenarm, Orange Grove and Fair Oaks (too busy on on-ramps) N.S traffic from the I-710. Orange Grove ramp is improved, but still busy. On-ramp at Fair Oaks needs to be redone and it is the busiest in South Pasadena.	Medium	South Pasadena	2
How can the CMP inform a multi-modal approach? Make multimodalism a priority. Avoid congestion/regional impact	Medium	South Pasadena	1
Safety pull-outs at on and off ramps. The ramps used to have flashing lights	Medium	Highland Park	1
Sound wall decreases visibility and is not safe for entrance onto the parkway. Slower speeds 55 mph for more emphasis	Medium	Highland Park	1
Study reducing speed to help increase safety	Medium	Chinatown	3b
Make the Parkway safer	Medium	Chinatown	1
Add a stop sign and exit by Cathedral High School	Medium	Chinatown	4
Interstate 710 gap closure via tunnel, surface or multi-modal	Low	South Pasadena	1
More lights near Dodger Stadium because it is too dark	Low	Chinatown	1
On ramps at Marmion Way and Bridewell Street are too short to enter the Parkway	Low	Chinatown	1
Accidents at Avenue 43	Low	Chinatown	1
Parkway curvature it too dangerous in the area near the Gold Line crossing bridge	Low	Chinatown	1

More safety measures for pedestrians and motorists	Low	Chinatown	4

Other Traffic and Intersection Comments:

No adequate drainage in the fast lane of the Parkway. New median does not allow for permeability	South Pasadena	2
Do not slow the speed down on the Parkway because it is a safety issue. Make drivers more attentive. Traffic is always at the same location.	South Pasadena	2
Traffic is bad southbound during rush hour.	South Pasadena	2
Speed on the Parkway has increased since new K-rails were put in place	Highland Park	2
See Arroyo Seco Cornfields Project (ASCP) traffic analysis	Highland Park	2
Improve on/off ramps	South Pasadena	1
Avenue 43 northbound off ramp has traffic back-up	South Pasadena	1
1-5 to US 101 bottleneck	South Pasadena	1
There is a lot of traffic backup at Glenarm. Improve the flow at this point	South Pasadena	1
Northbound lanes of the Parkway should be a priority/capacity	South Pasadena	1
Flashing yellow arrows on on/off ramps	South Pasadena	1
Barriers seem to increase speeds	South Pasadena	1
Reduce speeds on Parkway	South Pasadena	1
Mitigations measures to reduce traffic volumes	South Pasadena	1
Fair Oaks interchange- 2 projects are planned	South Pasadena	1
Active enforcement of cell phone laws by CHP and local police so they are not used on the Parkway. No cell phone use should be part of the changeable message signs.	Chinatown	3a
The off ramp at Hill Street adjacent to Dodger Stadium is very unsafe	Chinatown	3a
Problematic intersections adjacent to Heritage Square Gold Line Station and near Lincoln/Cypress Station	Chinatown	3a
Install speed limit feedback lights throughout the corridor	Chinatown	3a
Safety at on/off ramps and speeds lower the 55 mph. how do you slow down that traffic with pedestrian safety?	Chinatown	3a
More traffic signs	Chinatown	1
Along 110 it is too dark after tunnel accidents around Avenue 56	Chinatown	1
Lanes too narrow/old especially at the Parkway entrance/not enough space to enter and get up to speed	Chinatown	1
Lighted stripes between lanes for more visibility	Chinatown	1
Extremely dark at night at Academy Road exit off 110	Chinatown	3b
Dangerous exiting (speeding) off-ramp on Hill Street southbound	Chinatown	3b
On/off ramp improvements for safety specifically at Hill Street north and southbound	Chinatown	3b
Traffic noise pollution for residents living hear Hill St northbound ramp	Chinatown	3b
Widen 110	Chinatown	4
Broadway and 101 intersection is dangerous. Needs stop signs and signals	Chinatown	4

Cathedral High School traffic issues/safety at Bishops Road	Chinatown	4
Mores lanes on 110	Chinatown	4
Have more lanes at the end of the 110	Chinatown	4
Emergency lanes needed on the 110 and call boxes	Chinatown	4
Light to get onto Parkway at the near the 110 and 5 interchange	Chinatown	4
Light at Hill St exit	Chinatown	4
There is a big traffic safety concern in the vicinity of Cathedral high school.	Chinatown	4
Bishops road at cottage road street issue of coming off freeway	Chinatown	4
The biggest problem with the Arroyo Parkway is the people that drive on it. My husband rides his motorcycle to work in downtown every day. From his vantage point he can see into the cars around him and regularly sees people texting/talking on their cellphones, shaving, applying mascara, driving with their knees while they use the iPad taped (yes, taped) to their steering wheel, drinking coffee and reading the newspaper. All while operating a motor vehicle, oftentimes at unsafe speeds. These "good" drivers drift into other lanes, rear-end the drivers in front of them and slow traffic with their erratic driving. Driving while distracted kills.	online feedback	
There's always a backup in the morning	online feedback	
People speed on the 110 because other drivers don't read the signs that read "Slower Traffic Keep Right," People that do not yield to faster traffic and cut people off, not paying attention, etc. Situation awareness and some courtesy would avoid these incidents.	online feedback	
Is it any more dangerous than any other LA area freeway? If not, don't change anything. You could try to add more emergency pull-off areas, but considering the construction and available shoulder area for development, I don't think it is possible.	online feedback	
Reduce speed to the same as Figueroa, York, Pasadena, Mission	online feedback	
Restore the ArroyoSeco to something equivalent to the Huntington Drive which has the same problem...commuter route with 35mph signs and people going at 55mph when they can.	online feedback	
The problem is people view it as a freeway (65mph) but it was designed as a parkway (45mph). I don't really know what the practical solution is, but perhaps a visual redesign (tree lined median, more signage highlighting that it's a parkway and not a freeway, etc.), along with enforcement of the speed limit and public outreach (PSA's, etc.) would be appropriate. However, my hunch is CalTrans and LA county don't want the speed reduced to a safe limit because it will slow traffic, so in the end this probably won't amount to any real safety improvements.	online feedback	
When visiting my friend in Malaysia, we drove down the higher speed roads. There were many thing speed bumps that were hundreds of slightly raised white lines painted on the road. They indicate that a stop/light was ahead and forces all drivers to slow down. It feels light those bumps when your wheels or on the dividing line between lanes. I think these mini speed bumps would be good for the right slow lane especially near the on ramps and off ramps and tightest turns.	online feedback	
I drive the parkway everyday to get Downtown from South Pasadena.	online feedback	

For the most part I find people to be courteous, but there are definitely speeders and drivers who like to swerve and cut you off. It becomes readily apparent who drives it daily and who is a first timer. Reducing the speed limit would be a great improvement, as would an alternate decorative motif on the median dividers vs. the "up smile-down smile" that they just applied. Come on! CALTRANS could have selected something a bit more attractive.	
The biggest problem is the on/off ramps. In morning rush hour you pretty much have to from 0 to 60 on most on ramps. Compounding the problem are the assholes who insist on going full bore in the slow lane, making it downright life-threatening for those wanting to get on this so-called parkway.	online feedback
As for suggestions, I don't think there's anything you can do that would make a difference short of widening it, adding real emergency lanes, and rebuilding all the on/off ramps.	online feedback
Although Safety is/was a major issue for the SR-110 - quess what - the presenters did not have ANY "Pin Boards" as to where accidents have occurred and especially as to time, day, and conditions (night after 8pm??, Sat/Sun)...So what are they after??? Safety or INCREASED COMMUTER CAPACITY Easiest - Rumble Strips for lane separation and for travel lanes that really vibraTE OR MAKE LOUD NOISE AT 40+MPH - YEAH THEY WEAR OUT BUT i THINK AFTER A FEW YEARS PEOPLE WOULD SLOW DOWN. Speed cameras on the StateRoute may be a problem without some Reg/Law changes Usual problem is LADoT and Caltrans want to increase total (=commuter) volume - how to make capacity - alot of separate lanes for on/off ramps? straighten curves - check out the I-110 south of the I-10 - they can Reduce number of interchanges - leave the bridges We in El Sereno/RoseHills have the same problem with the Mission/Soto/Huntington road bridge (=Last real Redline Trolley bridge) and getting more flow on Soto Valley Blvd RR Bridge - Next Valley and Soto Bridge WHY - LADoT wants to help commuters - Huntington = 40,000car/day - with 5-7% at VanHorne/Huntington with 2-5 occupants - NOT owner/occupants/residents of LACity	online feedback
The recent redesign is terrible. Only a fool would call it historical in appearance, but more importantly it made the roadway more dangerous. The tall Jersey barricades that line the center median replacing the former open guard rails are a poor choice for such a winding parkway as they obscure driver's view of stalled traffic ahead. Who approved this dangerous design? Moreover, the meridian and sidewalls are now an open canvas for an overabundance of graffiti. Lower speed limits are not the answer.	online feedback

Patrolling the parkway is difficult because stopping violators is a hazard to the officer, the scofflaw and other drivers. The obvious solution of replacing the new barriers is fiscally a nonstarter. It looks like we are stuck with an ugly mess of a parkway. Also, there is apparently no money in the redesign budget for maintenance. The northbound exit ramp to Avenue 64 has had a smashed barrier for months and a chain link fence on the southbound shoulder just south of Avenue 64 has been unrepaired for six weeks making access to taggers all the easier.	
Intersection problem spot: Ave 52 & Fig--it leads to on/off ramps to the Pkwy, and cause it's residential and there's street parking, but also cause of 7-11 at Fig being so active PLUS the Food4Less loading dock just behind it on Ave 52 and the fact that there are big rigs backing up, etc. (Who let that happen?)	online feedback
Better drainage, especially at low points beneath underpasses, would help during periods of even light rain. For on-ramps that begin with a stop sign, how about closing alternate on-ramps, but leaving the off ramps?	online feedback
I think the speed limit on the Arroyo Seco Parkway should be lowered to increase safety.	online feedback
Although I was always told that the speed limit is 55 mph, majority of motorists do not seem to realize it. They usually drive 60 to 70 mph or greater. That's why there are so many accidents. Speed limits signs should be posted at every on ramp. There should also be more enforcement. I seldom see CHP or any other enforcement agency on the freeway	online feedback
One thing I noticed about the New Parkway were the fixed barriers on the sides. I frequently see people lose control and run into the barrier - 1) with the fixed barrier they are thrown back into traffic 2) sometimes turned over. In the past, when a car lost control and hit a soft fence, it would be stopped off the roadway not endangering any other drivers. My question is why were the hard fixed barriers placed on both sides in lieu of a soft barrier which may stop the vehicle?	online feedback
Longer exit lanes or double lanes when exiting. almost got killed sat night traffic was backed up on the Ave 52 exit and I had no where to go in 3 lane.	online feedback
installing some sort of 'accident/breakdown notification system' would be extraordinarily helpful. I am not a traffic engineer so I am not sophisticated on the options, but it seems that there could be kiosks on the side of the road that you could activate if your car became impaired. Then this would activate digital signs along the freeway that notified drivers to slow down and be aware. Or perhaps remote control cameras that could activate the same signs?	online feedback
My family is happy to hear that Caltrans and SCAG are attempting to address the hazardous mess that is the 110 Freeway north of I-5. Sorry to have missed the meetings, but we just read about them in the Eagle Rock Patch. Coincidentally, we were caught in traffic, about to get on the 110 Southbound at Orange Grove when the accident that killed a ten-month old baby happened. The Ramirez family's unthinkable loss is a tragedy that should spur real change. We hope	online feedback

that you are still taking input. Never in 25 years of driving have I seen more accidents, cars flipped over, actively spinning out or in ditches than on the 110 Freeway (and I grew up in NJ--where bad driving is an art form--and cut my driving teeth on the Beltway in Washington DC. I know from bad driving!).

The exits and entrances are insanely short, as you know, with "ours" in HP at Avenue 60 being 5 miles an hour 90 degree angle. Drivers don't seem to account for the ancient design of the freeways' curves at all either.

When we have folks visit from the West Side or from out of town, we warn them to either avoid the freeway, or to take exits with the longest ramps, like Via Marisol or Fair Oaks.

Three years ago, when my two year old said to me, "Look, Mommy, that car next to us is spinning!"- we banned driving on the freeway in the rain entirely.

Here are some suggestions we hope can help make the 110 (short of redesigning it to make it modern) safer:

--Reduce the speed limit. The road was built to tool around in jalopies, and was not designed to be a freeway, so it is actually a "road." Change the definition of the 110 back to the Arroyo Parkway.

--Make the speed limit 40-50 miles an hour, then have CHP enforce it. People may still drive 60 mph, because they are not that bright, but at least we won't see as many folks speeding at 75-80 mph.

--The lights leading up to the entrance on the northbound side to the 5 really seemed to have made a difference in terms of people getting over at the last minute to exit. Would it be possible to have lane lights like those for every exit?

--The signage warning about curves could be more prominent. Could the speed on those curves also be reduced to 25 or 30 mph?

--What about rumble strips in exit lanes?

--Instead of concrete barriers, how about some trees that make the road feel less like a freeway and more like a thoroughfare?

--LA is desperate for more public transportation and light rail in general so people have alternatives.

Transit (rail and bus)

Avenue 26 and Figueroa is a transit hub	High	Highland Park	2
Goldline should have more frequent off peak times. Shorter trains/same capacity	High	South Pasadena	1
More frequent bus service needed	High	Chinatown	3b
More buses Route #2 and Route #4 from Union Station	High	Chinatown	1
When traveling on bus or rail: mountain views important (scenic) and fresh air, keep views	High	Chinatown	4
Shuttles from Old Paseo Mall to Goldline stations	Medium	Chinatown	3b
Goldline provides good access to Union Station	Medium	Chinatown	5
Would like more information on access via different transportation modes	Medium	Chinatown	4
Improve public transit by decreasing the wait time between Goldline trains and buses	Low	Highland Park	1
Once you pass Riverside Bridge there are no connections until Fletcher	Low	Highland Park	2
Good transportation offered along the route. Create transit hubs	Low	Chinatown	1

Other transit comments:

Re-evaluate Mission Meridian Goldline Station access. Disabled access issue. Funnel pedestrian traffic towards Farmers Market	South Pasadena	2
Use of transit to restore the Arroyo River	Highland Park	1
Increase frequency of the Goldline	South Pasadena	1
Allow bikes on the Goldline for rush hour access	South Pasadena	1
Goldline best view in Metro network. Promo for the Parkway on the Goldline	South Pasadena	1
Could corridor accommodate buses?	South Pasadena	1
Union Station to Evans School. Safety issue, provide transportation	Chinatown	1
Wants more buses that run along Sunset and Figueroa	Chinatown	1
More frequent bus lines connecting downtown LA to Pasadena	Chinatown	1
Better connectivity to Gold Line stations (with parking lots for cars)	Chinatown	1
Multimodal hubs along route	Chinatown	1
Figueroa/Cesar Chavez- heavy bus congestion (not safe)	Chinatown	3b
The way to get through the corridor on bus from Chinatown to Pasadena is difficult	Chinatown	3b
Service to improve public transportation	Chinatown	3b
Shuttle from Goldline to Parkway attractions	Chinatown	4
Exits off the Arroyo Seco Parkway are too sharp	Chinatown	4
Views of the River, flowers, and trees while on transit	Chinatown	4
Reliable safe public transit needed. Gold line is great but doesn't go everywhere.	Online feedback	

Bicycle, Pedestrian, and Equestrian

Maintain existing bicycle routes/path	High	Highland Park	1
South Pasadena is trying to connect the gap in the bicycle trail. The trail will run along the backside of the Arroyo River (in the flood control channel) from South Pasadena to Downtown Los Angeles. Wants to work with Scenic Byways to make this a multi-use trail.	High	South Pasadena	2
Create a walking trail/multi-use connection throughout the corridor	High	South Pasadena	1
There is no pedestrian access along Avenue 26 between the Goldline Station and Figueroa. Poorly lit and unsafe. Needs to be examined for pedestrian safety and traffic congestion	High	Highland Park	2
Continuous bikeway along Arroyo River	High	South Pasadena	1
Bicycle connections needed between the Arroyo and Los Angeles River	High	South Pasadena	1
Better use of signage at Dodger Stadium for both pedestrians and automobiles	High	Chinatown	3a
Better sidewalks near Cypress Recreation Center, River Garden Park, and Los Angeles River Center	High	Chinatown	3a
Cycling- opportunity to be able to cycle	High	Chinatown	2
Pedestrian walk ways needed	High	Chinatown	2
There needs to be a pedestrian bridge connecting Sycamore Park to Dennis Park. Many pedestrian safety issues. Shortest way for students to walk home from Franklin.	Medium	Highland Park	2
Think about the treatment of bikeways in the corridor with a recreation focus	Medium	South Pasadena	1
Better pedestrian access at Ave 18 across bridge	Medium	Chinatown	3a
Provide better crosswalks near Evans School	Medium	Chinatown	3a
More lanes for bikes	Medium	Chinatown	1
Making walking safer. Need for safer walkways at the intersection of Avenue 26 and Figueroa and vacant along the Arroyo River	Medium	South Pasadena	1
Crosswalk is needed at the south side of Avenue 26 and Figueroa St	Low	South Pasadena	1
Provide maps of corridor- tour by mode	Low	South Pasadena	1
Improve bicycle/pedestrian connections at the confluence of the Arroyo River and Los Angeles River	Low	Chinatown	3a
Provide lights on the bike paths	Low	Chinatown	1
Bike paths lighted and through park connections	Low	Chinatown	1
Better access to parks for pedestrian and bicyclists	Low	Chinatown	2
More safety measures for pedestrians and motorists	Low	Chinatown	4

Other bicycle, pedestrian and equestrian comments:

Complete bike trail to connection to Downtown LA	South Pasadena	1
Connection from South Pasadena Natural Park to Parkway along York is unsafe due to transients. Many students use this Park and route.	South Pasadena	2
A multi-use trail for equestrians, bicyclist and pedestrians could all conflict.	South Pasadena	2
Arroyo Boulevard and Grand Avenue have bicycle traffic due to the Rose Bowl. Bicycle traffic along Grand Avenue between Mission St and Hermosa Street. There is a bike plan for a Class II bike lane on Arroyo Boulevard.	South Pasadena	2
Extend bike path within the Corridor to the Los Angeles River and north to	Highland Park	1

Pasadena. An off street bikeway is preferred		
There needs to be feeder routes that connect to the bicycle network along the Arroyo River	Highland Park	2
there are not many bike path connections from the south end of the Corridor	Highland Park	2
The Arroyo Seco Foundation is trying to extend bikeway from Montecito Highway to the confluence. Constrained by the flood channel and the Parkway.	Highland Park	2
Use bike plans creatively/ how is the best way to implement	South Pasadena	1
Trail connections at Arroyo River/LA River confluence	South Pasadena	1
Main Street bridge over River- possible bike path/connection	South Pasadena	1
Extended bike path along Arroyo River	Chinatown	3a
Add bike lane on Figueroa Class II only	Chinatown	3a
Pedestrian safety issues at the 101 and I-5 Interchange and adjacent surface streets. Allow for better control of signals so pedestrians are safe	Chinatown	3a
Provide better sidewalks across LA River	Chinatown	3a
Recognize the historical/cultural significance of the Arroyo Seco Bikeway as it was the Dobbins Cycle Way from 1897-1908.	Chinatown	3a
Signage along the corridor needed such as way finding	Chinatown	3a
Poor pedestrian connections near Figueroa/Route 66 Main Street. Improve traffic signals and light signals.	Chinatown	3a
Better and safer pedestrian crossings near Dodger Stadium. Signage	Chinatown	3a
Bicycle community in Highland Park near Heritage Square	Chinatown	3a
Provide pedestrians bridges across the parkway connecting Sycamore Grove Park to Debs Park, Montecito Heights Recreational Area	Chinatown	1
Bicycle ways	Chinatown	1
Bicycle paths through parks	Chinatown	1
Bridge to cross over Parkway	Chinatown	1
Bike path needed	Chinatown	1
Existing bicycle paths need lighting or any new bike paths have lighting	Chinatown	1
Locate a dog park along the Parkway	Chinatown	2
Arroyo Seco Corridor forms a link in the Rim of the Valley Trail System. This is a trail system which encircles Santa Clarita, San Fernando Valley, San Gabriel Mountains, and runs through the Arroyo Seco to Elysian Park, Griffith Park and Malibu. This system is multi-use, including equestrian, hiking and bicycle pathways. Actually, Arroyo Seco Stables is the Los Angeles trailhead for the Pacific Crest Trail, which connects Mexico to Canada.	Online feedback	

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	April 5, 2012
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Management Plan Mini Charrette

March 21, 2012 11:30 am to 1:30 pm
LADOT - 100 South Main St – Pacific Palisades Conference Room

Present

Michelle Mowery	LADOT/Bicycle Program	213-972-4962	Michelle.mowery@lacity.org
Carlos Rios	LADOT	213-972-4963	Carlos.rios@lacity.org
Simon Pastucha	Urban Design Studio – City Planning	213-978-1475	Simon.pastucha@lacity.org
Tomas Carranza	LADOT	213-972-8476	Tomas.carranza@lacity.org
Ken Husting	LADOT	213-972-5008	Ken.husting@lacity.org
Linda Taira	Caltrans	213-897-0813	Linda.taira@dot.ca.gov
Fred Glick	IBI Group	206-498-4280	Fredglick.1@gmail.com
Bill Delo	IBI Group	949-833-5588	bdelo@ibigroup.com
Shannon Heffernan	IBI Group	213-250-7440	sheffernan@ibigroup.com
Nicole Possert	Arroyo Guild	323-255-5792	aguild@pacbell.net

Distribution Attendees

Item Discussed	Action By

Action By

Item Discussed

1 Bicycle Connectivity in Los Angeles	
To have a continuous bicycle path along the Arroyo Seco to Downtown Los Angeles, right-of-way must be obtained. Michelle (LADOT) noted that the public does not want a Class I bicycle path in the channel. A bikeway, on top of the channel or along the channel wall (1 to 3 miles) will be important for connectivity. The Arroyo Seco bicycle path is a low priority of the City due to issues similar with Tujunga Wash. There is nothing in the Arroyo Seco Corridor that the City of Los Angeles considers "big picture" in the 2010 Bicycle Plan. A commuter bikeway must be a minimum of 12 feet (17 feet is preferred) and a landscaped bridge is needed. Figueroa Street is a major bicycle lane corridor. The bicycle network should connect to the Occidental College campus. Bicycle parking is poorly done and/or nonexistent in Los Angeles. Bicycle parking needs to be improved by Gold Line stations to eliminate parking problems. There should be more focus on bicycle connectivity from local streets to LRT stations (feeder network). Information on the bicycle plan is located at www.bicycleLA.org. As part of the 2010 Bicycle Plan, the following improvements to the bicycle network will be made: • York to Avenue 56 • Figueroa Bike Lane (North Figueroa from Colorado to York and York to San Fernando) • Huntington (from Alhambra to Sodo) • Mission (from Sodo to Broadway) • Avenue 28 • Avenue 46 (to South Pasadena limits) The City's Mobility Element (currently underway) will affect the 2010 Bicycle Plan and the Plan may need an update. The CPP should be designed to pursue funding. Even if projects are not on the City's five year plan, the City can move forward with bicycle projects if they are a political priority. Jill Sourial, from Council District 1 is leading the bicycle facility work.	
2 Planning and Transportation in Los Angeles	
Within the Corridor, planning needs to focus on transit oriented	

Item Discussed	Action By
development. Enhanced ridership forecasts will be needed for TOD studies. Gold Line ridership has increased this year due to rising gas prices. Major arterials are not going to change much, possibly with neighbourhood streets and traffic calming. There is no longer a Neighborhood Traffic Management (NTM) Department within LADOT. There is a need for neighbourhood traffic calming recommendations. Modify the Corridor study area relative to the existing boundaries of Historic Preservation Overlay Zones, such as Highland Park –Garvanza and Lincoln Heights. The City recommended to replace "the Gauntlet" and to have surveillance, if possible. In regards to City property vs Caltrans ownership of land, Dennis Crowley may have this information due to earlier Arroyo Seco corridor work.	
3 Linkages	
Potential project identified in the 2007 Linkages study were funding by the HSIP (Highway Safety Improvement Fund) and SRTS (Safe Routes to School). The City was granted a total of 11 million dollars for Corridor improvements identified through the Linkages study.	
4 Priorities and Recommendations	
The City suggested a simple plant palette that relates to the character of the Parkway and adjacent neighbourhoods. IBI Group can reference the LA River Plant Guidelines. The CPP should have a quantifiable mitigation credit for traffic reduction on the Parkway, a car share program/bicycle share program. Create new guidelines for traffic impact analysis. "Streets for people" City of LA program. City must realize this <u>great aspect</u> of the Parkway. <u>Elevate Up</u>! with great neighborhoods: • Transit connections • Balance with neighborhoods • Better parking • Better transit ridership • Better neighborhood elements • Improved bike facilities • For car travel, emphasize the scenic route of the Parkway Safety should still be the first priority, including: personal safety and design safety.	

Item Discussed	Action By
The bicycle networks in Los Angeles should evolve to a commuter path in the near future; in the long term, they should be similar to the Cycle Superhighway in Denmark. Land use and street integration should be part of the long term vision for the City and part of the City's Mobility element update. Whatever is adopted moves forward. The City is proposing a county-wide developer mitigation fee. The City will collect the money and implement the projects. All cities in the County of Los Angeles have submitted their project lists for pedestrian, transit, bicycle, and road improvements.	

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	February 28, 2012
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Management Plan Meeting with Pasadena

February 8, 2012 10 a.m. to 11 a.m.
City of Pasadena

Present

Linda Taira	Caltrans Planning	213 897 0813	linda_taira@dot.ca.gov
Fred Glick	IBI Team / IBI Group	206 498 4280	Fred.Glick@IBIGroup.com
Shannon Heffernan	IBI Team / IBI Group	216 250 7440	christina.defreitas@ibigroup.com
Nicole Possert	The Arroyo Guild	323 255 5792	aguild@pacbell.com
Rosa Laveaga	City of Pasadena	626 744 4321	rlaveagea@cityofpasadena.net
Bahman Janka	City of Pasadena	626 744 4610	bajanka@cityofpasadena.net

Distribution Attendees

Item Discussed	**Action By**
1 Introductions and Project Overview	
Self-introductions.	
2 Project Schedule	
Linda Taira provided an introduction and overview of the Arroyo Seco Parkway Corridor Management Plan (CMP) project. The CMP is a guiding document for improvements and enhancements in the Arroyo Seco Parkway corridor. These improvements can include both transportation-related projects, as well as non-transportation projects. Fred Glick presented a brief overview of the project and study area. The study scope and study area extends beyond the physical boundaries of the Parkway to include a one mile wide corridor (1/2 mile	

Item Discussed	Action By
on each side of the Parkway).	
3 Draft Arroyo Seco Parkway CMP Vision	
Fred Glick provided a brief overview of the project visioning and effort and goals. The consultant team has developed a draft vision statement for the project and this was distributed for review and comment at the meeting. City of Pasadena staff (Rosa) highlighted the experience and uniqueness of the Corridor, in particular, the connection to the Arroyo Seco trail system and parks. The City recently produced Pasadena trail guides to stimulate tourism and appreciation for the Arroyo Seco trail system; these trail maps augment the existing Arroyo Seco Parks Master Plan. City staff (Rosa) will forward this information to IBI Group (Fred Glick).	City staff (Rosa)
To increase the experience along the Parkway, City staff recommended removing the wire fencing that collects trash/litter along the Parkway. Caltrans noted that this was a good suggestion, but the fences are not within the Caltrans right-of-way. Competing issues on the Parkway of throughput and safety will alter demand. Safety, due to high speeds and minimal capacity allowed on the existing on/off ramps, is a key issue identified by various communities adjacent to the Parkway. In 2004, the Parkway had the highest accident rate of all California freeways. An appropriate threshold of safety, regulating throughput (downsizing lanes with traffic calming), and providing increased multi-modalism along the Corridor will need to be reached. City of Pasadena staff (Bahman) suggested the removal of a vehicular travel lane on the Parkway to provide a dedicated bicycle lane in the median.	
IBI Group (Fred Glick) will send City of Pasadena staff (Rosa/Bahman) the project study area map. The City suggested including photographs and precedent images in the CMP to guide complete streets and pedestrian improvements.	Fred Glick
4 Planned Projects and Goals for South Pasadena	
Fred Glick requested a “wish list” for the City of Pasadena and the Parkway in the near-term, mid-term, and long term. City staff noted their major areas of focus are signage (gateway and wayfinding), an information kiosk, and multi-modal connectivity/large paseos spanning the Parkway. *Signage/information kiosk:* Signage/wayfinding is necessary along the Corridor to point visitors to bicycle routes, historic landmarks, etc; the Parkway should be a designation instead of an experience. Existing wayfinding directs visitors to the Rose Bowl, but there are not wayfinding signs for all the parks in Pasadena. The City has some funding available to implement park signage.	

Item Discussed	Action By
The City noted the Arroyo Seco Parkway “gateway” sign has been implemented. There needs to be a physical location of information, such as a kiosk, at the entrance of the Parkway. The kiosk should have outreach materials, and directional and wayfinding signs for streets adjacent to the Parkway. The City was awarded a $2.1 million Metro wayfinding grant for signage implementation. Pasadena will need to provide the money for the grant initially and then get reimbursed by Metro. City staff (Bahman) can provide more information. *Multi-modal connectivity/paseos:* City staff (Bahman) suggested a grand paseo concept that can provide safe and inviting pedestrian experience while crossing Parkway. Examples of grand paseos in Southern California are in the City of Santa Clarita on McBean Parkway. Fair Oaks Avenue is undergoing a transformation; there is concept for the development of the Parson’s site which may be a City funded project. In addition, complete streets will be implemented on Fair Oaks Avenue.	

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	April 6, 2012
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Management Plan Mini Charrette

March 22, 2012 1:30 pm to 3:30 pm
South Pasadena - 815 Mission Street

Present

Dennis Woods	South Pasadena	626-403-7236	dwoods@ci.south-pasadena.ca.us
Samuel Zneimer	South Pasadena	626-403-7215	szneimer@ci.south-pasadena.ca.us
Fred Glick	IBI Group	213-250-7440	Fred.glick@ibigroup.com
Bill Delo	IBI Group	949-833-5588	bdelo@ibigroup.com
Shannon Heffernan	IBI Group	213-250-7440	sheffernan@ibigroup.com

Distribution Attendees

Item Discussed	**Action By**
1 Community Branding and the Amenity Package	
Alternate Modes of transportation along the Corridor include: Drive, bicycle, Gold Line and bus service (Metro, Dash, and ARTS). What would make someone choose one alternative over another? • "The Package" (Amenity Package: assurance of time; comfort; safety; platform; connectivity. Create Incentive not to drive on the Corridor. • Along with amenity package include the bicycle package (mobility hubs, bike sharing stations, etc) • Create a place for people to have a destination on the Parkway • Provide safety for all modes along the Corridor. Bus use currently has barriers to use (safety) • Safety necessitates activity nodes	

Item Discussed	Action By
Branding with a consistent Identity will show that each jurisdiction is part of the Arroyo. Any improvements made to the Corridor through a universal branding system MUST have specific attribute that identify the character of each community. Example: South Pasadena – a Craftsman, Chinatown – Chinese lanterns, Highland Park – arts. Identity of communities can be part of the following: • Lighting, signage, barriers, features • Wayfinding program Historical Integrity is very important to South Pasadena. Improvements must look nice, if not they get rejected outright. Improvements must fit the neighborhood character. Include signage prototypes as part of the plans: logs, bricks, craftsman style are all applicable to South Pasadena The Parkway/Corridor is not contextually rich. It needs to be inviting and have a special character.	
2. Multi-modal Connectivity along the Corridor	
The 710 – Total Overlap • Get CH2M Study – Connectivity Issue. The modes are not currently designed for good connectivity (See CH2 Map) • Bicycle and pedestrian connectivity are missing through the Arroyo. Provide adequate infrastructure (bicycle and pedestrian links) and connect them. Acknowledge "The 5" • Address the Major Issues and what is needed Bicycle Connectivity • Class 1 bike path needed (A.S. Bikepath) - Dedicated, Class 1, Sought .How to get people down there from within the city. • Improve the top of the Arroyo - South Pasadena <u>wants</u> to be connected. Convert dirt path to multi-use trail. Gold Line Connectivity • At all Gold Line. stops, have clear connections with transit and bike stops. Include real time message signs at bus and Gold Line stations. Provide other bus stop/Gold Line amenities that are innovate. • In South Pasadena, a lot of people get here by driving. Incentive to get out of cars! • Mission Meridian Station needs to have a bikeway connection to the Arroyo Seco Reconnect South Pasadena transportation system with NATURE. Connections should capitalize on nature while serving the community. This can be down through real time message signgsConnection to	

Item Discussed	Action By
capitalize on nature while serving the community	
3. Buzzwords to Create Change along the Corridor	
• Safety • Reduced Congestion • Consistent with S375 and AB32 • Complete Streets • SMART Mobility (C.T.) • Natural History • Improve Air Quality • Improve Health, etc. Anything that will open up the Arroyo, wins. Pushing traffic into city streets, fails. Perpetual shifts can be engineered.	

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	March 1, 2012
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Management Plan Meeting with Los Angeles County Department of Public Works and the US Army Corps of Engineers

February 16, 2012 1:30 PM

Present

Fred Glick	IBI Team / IBI Group	206 498 4280	Fred.Glick@IBIGroup.com
Shannon Heffernan	IBI Team / IBI Group	216 250 7440	christina.defreitas@ibigroup.com
Nicole Possert	The Arroyo Guild	323 255 5792	aguild@pacbell.com
Tona Avalos	LA County DPW	626 458 4312	tavalos@dpw.lacounty.gov
Lee Alexanderson	LA County DPW	626 458 4370	lalexanderson@dpw.lacounty.gov
Stuart Strum	US Army Corps	213 452 3797	stuart.r.strum@usace.army.mil
Richard Gomez	LA County DPW	626 458 4322	rgomez@dpw.lacounty.gov

Distribution Attendees

Item Discussed	**Action By**
1 Introductions and Project Overview	
Self-introductions.	
2 Project Schedule	
Fred Glick provided an introduction and overview of the Arroyo Seco Parkway Corridor Management Plan (CMP) project. The CMP is a guiding document for improvements and enhancements in the Arroyo Seco Parkway corridor. These improvements can include both transportation-related projects, as well as non-transportation projects. Fred Glick presented a brief overview of the project and study area. The study scope and study area extends beyond the physical boundaries of the Parkway to include a one mile wide corridor (1/2 mile on each side of the Parkway).	

Item Discussed	Action By
3 Draft Arroyo Seco Parkway CMP Vision	
Army Corps and LA County DPW (staff) approved the language in the Arroyo Seco CMP Vision & Goals, noting that it is similar to the Los Angeles River Revitalization Master Plan. Staff recommended the project team to “think big” with the Vision & Goals of the CMP and to reference the Los Angeles River Revitalization Master Plan for guidance; “thinking big” includes identifying where environmental justice can be applied along the Corridor (specifically closing Griffin Street to allow for a seamless connection between Sycamore Park and Debs Park) and discussing the possibility of realigning the Parkway. The Vision & Goals need to be grouped together in sub bullets, specific to the Parkway Vision & Goals and Corridor Vision & Goals.	
4 Planned Projects and Goals for the Arroyo Seco	
Fred Glick requested a “wish list” for the City of South Pasadena and the Parkway in the near-term, mid-term, and long term. Staff noted their major areas of focus are flood protection, storm water management, and multi-modalism/multi-modal assets for adjacent neighbourhoods. The largest issue, and highest priority of staff is flood protection of the Arroyo Seco channel; goals related to flood protection measures must be supported with strong language. Restoration of the Arroyo to a more natural state must not induce flooding. Engineering restoration measures should identify stormwater management, retention, best management practices (BMPs) and water treatment. Preservation and safety must be harmonious. Oil, grease, break dust, and trash from the Parkway are all pollutants of the Arroyo Seco. Trash reduction measures can include a plastic bag ban ordinance. Mitigation measures for construction projects/impacts adjacent to the Parkway do not need to be included in the CMP. Any potential intrusions will be addressed during the construction permitting process. Storm water management BMPs to improve water quality should be incorporated into the CMP as they relate to treatment (bioswales) of Parkway water run-off. Water conservation opportunities for storm water to percolate into the ground water should be included. Any treatment to the Arroyo Seco Watershed, such as sediment management measures at Devil’s Damn will affect the Arroyo Seco downstream. The CMP needs to be a multi-modal document; a signage plan, as part of the CMP, should identify linkages between Gold Line stations to bicycle and pedestrian paths. The information must also be web accessible. Staff noted there will be strong opposition for a bicycle path within the Arroyo Seco Channel. Staff suggested signal synchronization to mitigated traffic at the Raymond/Fair Oaks on-ramp to SR-134; traffic build-up at the end of the Parkway affects surface streets. Automobiles travel at very high speeds	

Item Discussed	Action By
as they exit the Parkway, specifically at Glenarm to California. IBI Group to review the North Los Angeles Hillside Protection Ordinance.	IBI Group

IBI Group
18401 Von Karman Avenue – Suite 110
Irvine CA 92612 USA

tel 949 833 5588
fax 949 833 5511

Minutes

To/Attention	Project File	**Date**	April 9, 2012
From	Shannon Heffernan	**Project No**	31097
		Steno	

Subject Arroyo Seco Corridor Mini- Charrette Metro

March 21, 2012 8:30 to 10:30 am
Metro Building – One Gateway Plaza - Conference Room 22nd Floor

Present

Teresa Fong	Metro	213 922 2854	fongte@metro.net
Carl Torres	Metro	213 922 1230	torresc@metro.net
Philbert Wong	Metro	213 922 2642	wongp@metro.net
Anthony Jusay	Metro	213 922 7675	jusaya@metro.net
Linda Taira	Caltrans Planning	213 897 0813	linda_taira@dot.ca.gov
Phillip Law	SCAG	213 236 1841	law@scag.ca.gov
Fred Glick	IBI Team / IBI Group	213 897 0673	Fred.glick@ibigroup.com
Bill Delo	IBI Team / IBI Group	949 833 5588	bdelo@ibigroup.com
Shannon Heffernan	IBI Team / IBI Group	213 250 7440	sheffernan@ibigroup.com
Nicole Possert	Arroyo Guild	323 255 5792	aguild@pacbell.net

Distribution Attendees

Item Discussed	**Action By**
1 Parkway Alternatives and On-going Studies	
The Corridor Management Plan has changed to a Corridor Partnership Plan. The traffic/transportation microsimulation is based on SCAG's regional transportation mode. Two alternatives are proposed: an auxiliary lane	

Item Discussed	Action By
from Interstate 5 to Glenarm, and ramp modifications/closures. Caltrans noted the auxiliary lane can be introduced as a Demonstration Project. Caltrans and Metro (funded) are involved in a planning study called "Making Connections". FTA, Metro, and SCAG are collaborating on methods to collect bicycle data (bicycle Wikipedia) to synchronize the bicycle system. The Union Station Master Plan is underway and will be a two/three year process; proposals for design have been submitted. Metro plans to include high capacity bicycle parking at Union Station.	
2 Bicycle Connectivity	
Metro is encouraging more bicycle parking and bicycle stations for Gold Line stations with high ridership. Along the Corridor, this would apply to Highland Park. There is an opportunity for bicycle share at the Gold Line Southwest Museum Station. The City of Los Angeles is focused on multi-mobility and adopted their Bicycle Plan in 2010. Michelle Mowery from LADOT/City of Los Angeles can identify bicycle connections in Los Angeles. Avenue 19 bicycl lanes are planned to connect to Spring Street. Metro removed peak hour bicycle restrictions on Gold Line trains to encourage bicycle use. The Eagle Rock community, in Northeast Los Angeles, is sponsoring bicycle connections from Gold Line stations to Occidental College. There are gaps in the 2006 Metro Bicycle/transit Strategic Plan, specifically from South Pasadena to Pasadena and Highland Park to Union Station. The existing LA County path needs to be enhanced; this can be considered fundable for 2013 with another update to the Strategic Plan. The City of Pasadena submitted an application for Call for Projects in 2009 for a signal bicycle detection program. South Pasadena submitted an application for Call for Projects to improve bicycle parking at their Gold Line station; this request was not granted. Call for Projects applications describing a specific project that has been publicly vetted are more likely to be funded.	
3 Gold Line	
The Gold Line Foothill Extension bridge, 210 Freeway bridge, is fully funded through Measure R. The Foothill Extensions will be completed by 2014/2015. An EIR for Phase 2B has been completed; this segment	

Item Discussed	Action By
has yet to receive funding. Each Gold Line Station was allocated a specific number of parking spaces determined by the EIR and ridership projections for opening day. For the Gold Line Fleet Management Plan, six minute headways with three car trains are planned for 2017. Currently the Gold Line runs at six minute headways and two cars. Once the Foothill Extension opens in 2015, the Gold Line will have 50% greater capacity and possibly five minute headways. The Foothill Extension would absorb trips on the Parkway.	
4 Highways/Freeways	
Traffic/truck management divergence occurs on Interstate 710, 10, and 210. Any ramp modifications made to the Parkway should include an ITS component. Metro is traditionally the funding partner for any highway improvements. With the passage of Measure R, Metro is playing a more active role in execution and management of highway improvements.	
5 Metro Bus	
To expand Metro bus service to Gold Line stations, feeder line would need to increase in frequency. Currently, there are no future plans for bus expansion on Figueroa Street on the Monte Vista Corridor. Route 81 on Figueroa Street is the only bus line; DASH routes (operated by LADOT) also run also Figueroa Street. The closures of any ramps along the Parkway do not affect Metro bus service. The frequency of lines along Figueroa Street will likely change. Expansion of Route 84 along Hill and Broadway (Chinatown) will go to public hearing.	
6 Signage/Wayfinding	
Metro staff can provide further insight on signage and wayfinding plans: Todd Mitsuta, Jorge Parto (station access/wayfinding), Chris Corbello (creative services). Metro is creating a QR application to identify next trips for transit.	

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (From Chinatown Workshop)

07/23/2012

Name:	E-mail:	Phone:	Address:	Location:	Comment:
Paul Evleth	pevleth@earthlink.net	323-428-1684	638 Crane Blvd.	Academy Rd. /Solano Exit	Was Dodger Stadium and the Police Department part of this process/if not can you please outreach to them? Adjacent to the S/B lanes at Academy through Hill St./China Town Exit there are several green light poles that illuminate the bikeway. There is an ongoing problem of graffiti on the green poles and fencing. When the contractors paint the graffiti over, they are not using the correct shade of green paint. Please ask them to look up the correct color code.
				Ave. 43/South Bound Ramps	Because of the historical nature and significance of the Arroyo Seco Pkway, litter, landscaping, and graffiti maintenance should be increased. Is there a landscaping improvement plan? Can the Amber curb level warning light that used to flash be restored? The housing appears to still be there.
Dr. Tom Williams	Ctwilliams2012@yahoo.com	-	-	Chinatown	Review and revise locations of items on many pages of sheets starting w/ workshop #1 prioritization. -Too many boards w/ too many issues for people to deal with in one hour-they walk away. -Return Arroyo Seco Pkwy. To its original design concepts and reduce posted speeds to 35 mph. - Put in overhead speed sensors and cite for any speed overage at $350 for first infraction and $100 more for each addition. -Remove any concrete not part of the original “as-built”. -Dedicate the #1 lanes for BRT

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (From Chinatown Workshop)

07/23/2012

					-#3 all go back to speed and enforcement-45 mph is too fast for curves, and speed should be 35 mph with the #3 lanes as turning-merge-BRT lane. -For La confluence-needs to return concrete channel to more "natural" soft bottoms or soft sides or both-make it like the postcard PPT-especially north of Ave 60 ramps and from 43rd – 52nd ramps. -Close ramps of more than ½ mile-anymile.
Lydia Moreno-Solano Canyon Comm. Organization President	Lydiaamoreno@aol.com	562-818-6006	505 Solano Ave.	-	Please keep historical aspect on Fig. tunnels, tile needs maintenance plan, tunnels need maintenance plan as well-will send more comments via email.
Jack Fenn	jackfenn@pacbell.net	323-227-1182	905 Montecito Dr.	NB Ave 43 off ramp and on ramps	Exceptionally dangerous. Recommend reconfiguration be moved up drastically, until then, add flashing signage at bridge/ramp.
Esther Margulies	Esther.margulies@aecom.com	213-593-7775	515 South Flower St.	-	Seems odd that the only perspectives on view are focused on the roadway surface. Why not at the truly scenic qualities? Please integrate natural systems and ecological function. The watershed has critical value beyond a cultural landscape. Bravo for championing the scenic by way designation!!!

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (From Chinatown Workshop)

07/23/2012

Board:	Sticky Comment:
Implementation Board	Make it happen now.
	Graffiti and liter removal.
	Because of its historical significance we would like to see graffiti and liter removed more quickly.
	Small price to pay for preventing fatalities.
	Leiana Marie Ramirez.
	Please take this seriously-too many causalities/fatalities.
	Too dangerous and careless to wait 5-15 years.
	Our daughter, Leiana Marie Ramirez, would still be alive if there were an aux lane north of York Blvd.
	This should come before any aesthetic changes..precious lives have been lost.
	An emergency lane would have changed Leiana's fate.
Recommendations: Parkway Improvements for Pasadena and South Pasadena Board	Real stream restoration into Parkway improvements. –Tbrick
Recommendations: Parkway Improvements for Highland Park/Los Angeles Board	Integrate this plan with the Arroyo Seco Watershed Assessment and other environmental planning efforts.
	Kayaks in the Arroyo.
	Emphasize the Arroyo confluence with the LA River.
Recommendations: Parkway Improvements for Chinatown/Los Angeles Board	Flashing 5 MPH exit sign – in the meantime a flashing sign.
	Avenue 43 NB ramps: move replacement schedule up. Too dangerous to wait 15 years.
	Increased presence of traffic police to help increase "fear".
	Speed bumps reduce car speed.
	Crossing guards who speak multiple languages including Cantonese to advise the elderly how to safely cross.
	The miles per house should not be high, due to the current safety.
	All on and off ramps need to be lengthened and widened. There is not space to slow down and enter or come in to the freeway. Safety.
	Switch around green and red signals, every 8-10 seconds to control existing traffic.
Recommendations: Tourism and Marketing and Community Identity Board	Highlight Arroyo culture as a tourism element.
Recommendations: Multi-Modal and Natural Environment Board	Link the Arroyo to LA River revitalization.
	Focus public attention on the stream and water in the Arroyo.
	Repairing and strengthening fences and maintaining safety.

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (From Chinatown Workshop)

07/23/2012

	This wouldn't work in LA City- check the LID ordinance. 1000sqft roof on R1 requires 100 gal storage- not 400 gal for ¾" rainfall.
	Need program to eliminate invasive exotic plants like tree of heaven (alcantus) castor bean, etc. oleander.
	The historic postcard showed a stream. Is there a plan to restore and naturalize the Arroyo Seco? There should be.
Recommendations: Transportation Board	NO electric signage.
	Caltrans is using incorrect shade of green to paint over metal light poles.
	A continuous bike trail all along the corridor.
	What about the southbound side of the Avenue 43 ramps? Is there or will there be a s/b on-ramp/exit ramp plan?
	Good idea- 45 mph, ditto!
	Graffiti cleanup regularly and often.
Planning Framework Board	Metrolink central maintenance facility pollution issues.
	Metabolic studios waterwheel cornfields + LA review Annenberg funding.
Study Area Board	Show Solano Canyon neighborhood and all other neighborhoods.
	Add schools to map and community centers.
	Traffic- dodger commuter.
	Solano Canyon underpass- clean and homeless by school.
	Radio Hill- homeless. Fire problem Elysian park – clean up area. Playground casa nova. Help neighborhood adjacent.

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (South Pasadena Workshop)

07/24/2012

Name:	E-mail:	Phone:	Address:	Location:	Comment:
R. Schneider	rdschneider@yahoo.com	323 913 4939	-	-	1. Reduce to two travel lanes1. Reduce to two travel lanes 2. Restore planted medium & parks 3. Cycle way complete 4. Add "hook ramp" on ramp for Fair Oaks to SB 110
C. Cunningham	grysx@hotmail.com	-	-	Parkway Land Reduction/Narrowing	Great idea, making these routes enter/exit lanes or emergency pullouts is a safer option.
				Speed 45 mph	Yes! Do it! 45 max would save lives on this winding corridor.

Board:	Sticky Comment:
Recommendations: Multi-Modal and Natural Environment Board	What does 21st century landscape architecture have to do with the parkway? Keep it natural.
	Yes this is a great idea.
	Establish bike paths separate from the street and cars along the Arroyo Seco connecting with the existing 1.2 mile bike path between Mont. Heights park and York ave. bridge.
	55 MPH, 55 MPH, 55 MPH, 55 MPH
Recommendations: Transportation Board	Slow it down to 45 mph!!!
	Improve all the on-off ramps to Arroyo Seco Pkwy.
	These can be unattractive and take away the feeling of this unique freeway. Also more and more people have this information in their GPS system.
	These are also ugly and their benefit is small.
	Minimal visual impact ok. Big signboards NO.
	Why jam existing traffic into less space?
	Why extend commute times?
	What would the new Ave 43 bridge look like?
	Resurface the Arroyo Seco Pkwy. YES!
	Transition form 110 N dangerous!
	Additional lighting along the Arroyo.
	Improve transition for NB 110 to NB 5.
	Reinstall outside historic lights @ tunnel.
	Improve tunnel lighting!
	Improve ped. Xing along the tunnel.
	Improve Fair Oaks on-off ramp! (Fair Oaks Bridge)

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (South Pasadena Workshop)

07/24/2012

	Add an antenna in the tunnel, no radio reception.
	Enforce 55 mph.
Study Area Board	Not Mt. Washington Dr. Its Marmion Way.
	Ave. 60 LA side + Hernon bank and sidewalk separating. - Peter
	Finish the cement bike lane from 43rd ave. to LA and to the 210 in the Arroyo Seco wash.
Vision Board	Re-establish the Southwest Museum and respect the Highland Park community.
Implementation Board	Do not reduce the 3 lanes.
	Will Highway Patrol enforce these ideas?
	Solve the major bottle neck southbound from Interstate-5 to Hill Street/ 4 level interchange for morning traffic.
Implementation Board: Northbound between Pasadena Avenue and Avenue 43	Take the freeway out of the thinking mentality- it's a Parkway, two lanes for lower speeds.
Implementation Board: Northbound between Avenue 60 and Marmion Way	Great idea. DANGEROUS curve.
	Love this idea!
Recommendation Parkway Improvements: Pasadena/South Pasadena Board	Fair Oaks on-ramp and off-ramp. A plan exists, work on implementing it.
Recommendation Parkway Improvements: Chinatown Board	How much will the new Avenue 43 exit go into parking area parallel to the Arroyo?
	Like the idea of eliminating the 5 point intersection at Avenue 43 and Home.
	Would landscape improvements be included in the Avenue 43 ramp improvements?
	Northbound Avenue 43 exit is okay. Northbound entrance needs fixing.
	Northbound Avenue 43 needs to be open more at the northbound.
Recommendations: Built Environment Board	How much will the new Avenue 43 exit go into parking area parallel to the Arroyo?
	Historic standards have been woefully violated with present project as done.
	Show some respect for vegetation of all kinds including trees.
	There almost seems to be no maintenance plans right now. Trash, debris, graffiti, and even downed light poles never get taken care of- what makes us think that will change if these plans are implemented?
Recommendations: Tourism and Marketing and Community Identity Board	Make Parkway meters more uniform- rates and hours.
	Re-establish the Southwest Museum.
	Interpretive/designation signage of cultural monuments E2.1

Arroyo Seco Corridor Partnership Plan
DRAFT Comments (South Pasadena Workshop)

07/24/2012

	Pg64.
	CASA etc. Councils talk the problems to death. Get Caltrans to work, get Highway Patrol active.
	Need a signage on Figueroa Street for the Southwest Museum.
	Market Highland Park's good qualities.
	Update/improve signage for museums/cultural landmarks along Parkway as deemed in prioritization workshops.
Intrinsic Qualities Board	Need to restore historic lighting outside tunnel.
	We need respect and recognition for historic resources.
Elements of a Corridor Plan Board	Raised reflective marker?
	More street lighting?
	Work on increasing financial resources for all levels of government.
	Enforce existing plans!!!
Planning Framework	Monitor LA planning, building, and safety reports.
Guide to Corridor Partnership Plan Board	Stop Caltrans. Waste of valuable dollars on dubious "historic" renovation.
Recommendations Parkway Improvements: Highland Park	Focus on this corridor. It is important. It would be great to connect downtown Los Angeles to Highland Park, Avenue 50-61 and Debs Park.
	Avenue 50-61 needs improvement including more solar panel lighting, benches, and open gardens. Highland Village people have waiting for years to have this Parkway improved.
	Avenue 52 is a victim of being too narrow.
	Fascinating idea to reduce lanes and not build auxiliary ramps, but amazing traffic build up! Hmm?
	How does this impact the neighborhood?
	Which ramp configuration is the most urgent to solve?

Arroyo Seco Corridor Partnership Plan
Emailed Comments

No.	Section	Commenter	Comments	Code	Consultant Response/Actions
1	75 Realignment of NB Ave 43 off-ramp	Jack Fenn jackfenn@pacbell.net 323-227-1182	I fully support this, but historic dangers of the current configuration require that this change be made ASAP. 5-15 years out is too long. Must receive priority. Seek America Fast Forward Funds.		
2	74	Jack Fenn	Because of the disproportionate danger of the NB Ave 43 ramp, initiate auxiliary/shoulder lanes from Interstate 5 to Ave 52 within coming year.		
3	NB Ave 43 Bridge	Jack Fenn	Until right lane modifications can be done, install a large "EXIT 5 MPH" sign with flashing lights and a hard right arrow at the NB Ave 43 bridge.		
4	Implementation-Auxiliary Lanes	Jack Fenn	Why are the auxiliary lane/shoulders scheduled for 5-15 years out? They seem like the least costly safety modifications that are almost immediately doable.		
5	Implementation- Speed Limits	Jack Fenn	I suggest that speed limit signs be placed where on-ramp vehicles come up to speed, not as much as 3 miles or 3 interchanges apart.		

6	76	Jack Fenn	76 as compliance relates to the CHP, push for (demand!) truck enforcement. While semis sometimes get on or get wedged on a ramp -- notably Ave 43 NB and SB -- hundreds of trucks over the 3 tons GVW (gross vehicle weight) limit use the parkway daily. Construction trucks, vans, bobtails, heavy duty pickups, auto transports, LA City trucks, etc. Signage is ignored; enforcement is required.		
7	80-81 Waterway restoration and storm-water runoff	Jack Fenn	The large, open area between Montecito Heights and Lincoln Heights within the east side of the corridor is threatened by development. The Corridor Partnership should add its voice to conserving it as accessible open space. It is an important link in the Arroyo Seco watershed.		
8	82	Jack Fenn	The above area, often called Flat Top, should fall under a Viewshed Protection Plan .		
9	83	Jack Fenn	Use as much permeable hardscaping as possible.		
10	83	Jack Fenn	Why isn't the restoration of native plant communities ongoing instead of 15+ years off?		
11	-	Jack Fenn	Establish NB designation of "Arroyo Gateway," perhaps before the Pasadena Ave. OC.		
12	Viewshed Protection Plan	Jack Fenn	Work must be done to modify the California Solar Protection Act (1978) to keep solar farms off the Arroyo-adjacent hillsides. The Broadview array at Griffin and Montecito, which is designed as a money maker, is well within the half mile flanking the parkway on the east.		
13	87	Jack Fenn	Re "multi-user trail network" : resist horses!		
14	NB Ave 43 on-ramp	Jack Fenn	Just a reminder that the NB Ave 43 ramp has a nickname: "The Montecito Heights IQ Test," and the parkway is "El Camino del Arroyo de Sangre Fria," which translates as "The Highway of the Stream of Cold Blood." Good reasons for both.		

15	General	Suzanne Gero Suzgero@att.net	I have enjoyed seeing the improvements, such as the flagstone and open metal fence on the sides and the attractive simplicity of the center divider. I also enjoy seeing the native plants and trees.		
16	General	Suzanne Gero	Remove the trash from the right hand side heading southbound. Plastic bags dangle from almost every twig on some stretches.		
17	General	Suzanne Gero	Clear the storm drains and add screens to prevent future build-up.		
18	General	Suzanne Gero	Take pictures of graffiti and email them to Officer Molly Beall at 32430@lapd.lacity.org. She is the police officer who deals with graffiti and will determine if it is related to gangs, taggers or art. She can make arrests. Once she receives the pictures, the graffiti can be removed. I have noticed that the graffiti near the Elysian Viaduct re-appears and builds quickly after it has been cleaned. I would like to suggest the method described in The Tipping Point by Malcolm Gladwell on p. 142 in which the subway trains in New York were painted on a daily basis to remove graffiti as the" Broken Windows " theory was effectively applied.		
19	General	Suzanne Gero	I am pleased to see that the beautiful sign near Chinatown has been restored on the northbound side. The restored landscaping also looks great. There are some areas through downtown which still need trash removal.		

20	General	Suzan Gero	The tunnels are amazing with their detailed exterior architectural design. However, graffiti needs to be removed from the upper archways and the interior white tiles need to be cleaned on a regular basis. Whenever I visit Pittsburgh, PA, it is always a sparkling experience to enter a similar, but spotless, tunnel and then see the city straight ahead. When I return home from LAX on the shuttle, it is sad that the other passengers headed for Highland Park, South Pasadena and Pasadena have to travel through 4 tunnels with dirt all over the tiles.		
21	General	Amanda Simonson apukashel@yahoo.com	I live in Montecito Heights and have come to cherish Flat Tops as a great piece of land full of history about North East Los Angeles. Where else on Earth can you go hiking, see red tail hawks and black walnut trees, all the while with downtown in view? It truly is a special piece of land that needs to be protected from threatened development. Flat Tops really is the charm and character that makes North East LA a special area. Flat Tops is an open space that the neighboring communities feel lucky to be able to enjoy. It truly is a unique space that has historical, environmental, cultural and moral reasons for it to be protected. As projects for the Arroyo start happening, please protect and help keep Flat Tops as open space. If we can connect Flat Tops as open space along with the LA river revitalization project, this area could be enjoyed and discovered my many more people.		

22	General	Bill DePoto bdepoto@yahoo.com	Inclusion of diversified natural-style stormwater best management practices in the planning process is a step in the right direction. I would encourage Caltrans to turn to those organizations that have already proved through their work how thoughtful design of these stormwater amenities make these devices operate efficiently and make them easy to maintain. Such an organization is North East Trees (www.northeasttrees.org), a non-profit organization founded and functioning in the Arroyo Seco watershed since 1989.		
23	General	Bill DePoto	I would also encourage the plan to address the daylighting and integration of major tributaries into the main stem of the Arroyo Seco, at least within the improvement plan right-of-way. Connectivity of the open spaces along and adjacent to the corridor is also important.		
24	pg. 80 Implementation	Bill DePoto	I take exception to the statement within the stormwater quality improvement element of the Watershed Restoration Element of the Implementation chapter (p. 80). It says, "Continue with flood protection as the principal purpose of the flood control channel..." The purpose of the channel needs to be revisioned with equal multiple principal purposes, those of: peak flow conveyance, normal flow maintenance, habitat sustenance, and recreation possibility.		

25	General	Bill DePoto	Finally, please review the apparent confusion within the plan between the names and acronyms for the City's Department of Water and Power (DWP) and that of the County's Department of Public Works (DPW), the parent agency of the Flood Control District, which would have fundamental jurisdiction of the channel.		
26	General	Tim Mellin timconsultme@hotmail.com	Don't forget to consider contacting the L.A. County Dept. of Parks/Recreation to see if there are any County parks that can tie into the Arroyo Seco Corridor Partnership project. That might result in funding, networking, etc.		
27	General	PasadenaVille pasadenaville@gmail.com	I think it has great potential and just from some of the proposals you laid out for the parkway improvements I think there is a great future. But it really means nothing if there is no comprehensive maintenance plan. For many years, trash and debris have line the parkway on a constant basis and chain link fences take forever to be repaired. Do you know there are two felled light poles that have yet to be picked up and replaced for who knows how long? Graffiti abatement has improved but I think you can do better.		
28	General	PasadenaVille	I'm quite pleased with the scope of recommendations you've made on improving the Arroyo. The traffic recommendations are just what's needed. But if we're going to beautify the parkway let's try to keep it beautiful		

29	General	Peter Cashman peter.cashman@sbcglobal.net	1) The most interesting idea, that I believe will be particularly attractive to residents of Hermon, Highland Park, Monterey Hills, Mt Washington etc ... is the notion of Lane 3 as a transition lane. It becomes more and more dangerous for residents of these communities to enter and exit the Parkway as every week passes. Too many folks crossing the river or entering from Pasadena or in South Pasadena seem to think they are on a Nascar track. They have absolutely no consideration for drivers from the majority of communities bordering the Parkway.		
30	General	Peter Cashman	2) This is a plan for the future. However we cannot escape the present. In particular the disgraceful job recently completed on replacement of the center median, erection of barrier walls etc. Not only are the completed "safety improvements" not as advertised by Caltrans the quality of work done by the contractor is one of the shoddiest I have seen in recent memory. The new historic lights are fine but look ridiculous interspersed amongst the old modern lights. Who knew that the new 'walls' would ensure no one actually can see the Arroyo stream anymore! The emboss on the new median is cheap and nasty and nothing like the quality of the work being done in the Sepulveda Pass and other projects. And this is supposed to be a National Historic Byway! None of the trees cut down as a result of these 'safety improvements' have been replaced or let alone additional plantings as promised repeatedly by Caltrans in public meetings.		

31	General	Peter Cashman	3) When is someone going to address the dangerous stae of the Avenue 60 over-crossing. Both the roadway and the sidewalks are falling away especially on the Hermon side. Sidewalks have separated from the curb/gutter making it incredibly difficult and dangerous for pedestrians. Large numbers of folks cross the Arroyo on foot, with strollers, shopping carts etc and have to navigate this mess. Not to mention elderly, disabled, schoolchildren and toddlers. The northbound roadway from Hermon to Highland Park is sloping so badly that most ride down the middle straddling the center lines to avoid the drop off and the potholes.		
32	General	Peter Cashman	4) What has Caltrans done about the drainage issues on the Parkway especially the incredibly dangerous fountian that erupts in heavy rains from a manhole in the Pasadena bound roadway underneath the Via Marisol bridge?		
33	Southbound Avenue 43 Ramps	Mount Washington Homeowners Alliance Daniel Marlos dmarlos@roadrunner.com	1) Tourism. Because the CPP mentioned the importance of tourism, perhaps we could establish direction signs (in a river rock design) showing where Mt. Washington and Montecito Heights are. Other historic sites in the vicinity include Lummis Home, Heritage Square, the Audubon Center and the Southwest Museum. They could be included in this single signage marker. There is a large grouping of signs currently attached to a post, but perhaps these could all be consolidated into one large sign. (see attached photos). The existing signage is disorganized and unsightly. A similar marker could be used for the same locations on the northbound exit ramp.		

34	Southbound Avenue 43 Ramps	MWHA	1) Tourism. Because the CPP mentioned the importance of tourism, perhaps we could establish direction signs (in a river rock design) showing where Mt. Washington and Montecito Heights are. Other historic sites in the vicinity include Lummis Home, Heritage Square, the Audubon Center and the Southwest Museum. They could be included in this single signage marker. There is a large grouping of signs currently attached to a post, but perhaps these could all be consolidated into one large sign. (see attached photos). The existing signage is disorganized and unsightly. A similar marker could be used for the same locations on the northbound exit ramp.		
35	Southbound Avenue 43 Ramps	MWHA	Southbound Entrance: Consider widening the onramp curve section by taking away part of the landscaped shoulder on the right side. This would allow more options for longer vehicles to enter. Is there some type of sensing device forvehicles that exceed the weight limitation? Something that would warn the motorist that they are not allowed to enter might eliminate the problem.		

36	Southbound Avenue 43 Ramps	MWHA	Foliage / Vegetation adjacent to ramps: Currently, there is overgrown asparagus fern and an unknown type of vine that should be pruned back. In addition, there are signs of invasive, exotic Trees of Heaven sprouting up within the landscaping area that need to be removed. We would like to participate in a landscape plan for this ramp that would include native plants as well as other drought tolerant vegetation that is low maintenance. Is there a plan for the landscaping of the entire historic Arroyo Seco Parkway that could include our ideas?		
37	Southbound Avenue 43 Ramps	MWHA	Existing Irrigation. We were lucky to be present when the irrigation system was in operation. Much of the water does not reach the trees because of overgrown undergrowth mentioned in #4. At least one of the sprinkler heads is aimed into the onramp and the water does not reach the landscaped area.		
38	Southbound Avenue 43 Ramps	MWHA	Existing Triangular median between southbound onramp and exit ramp. It was recently cleaned by Caltrans. Is there a plan for regular maintenance to reduce the amount of litter that accumulates in considerable quantities? When entering the onramp, there is a non-working, preexisting warning lamp fixture set into the curb that was most likely a flashing amber light. It is historical and a safety feature that is currently in disrepair. Can the warning light be restored?		

39	Southbound Avenue 43 Ramps	MWHA	Maintenance Plan. Is there a regularly scheduled maintenance plan for the entire historic Arroyo Seco Parkway?		
40	Southbound Avenue 43 Ramps	MWHA	Prospective Community Events. How many can we have per year where Caltrans would close the ramp? We would like to be part of the maintenance more than just once per year.		
41	Southbound Avenue 43 Ramps	MWHA	Park. Who has jurisdiction over the park adjacent to the ramps? Could CalTrans partner with the community and the controlling agency to improve the park? A. When will the park be dedicated? B. How much irrigation if any is existing? C. Can irrigation be added and/or improved? D. Regular Maintenance is needed.		
42	Southbound Avenue 43 Ramps	MWHA	Electronic Signage. We oppose the use of electronic signage along the entire historic Arroyo Seco Parkway. Such signage would not be in keeping with the historic character of the parkway. Such signage would be a distraction and is out of character considering the reduction in speed limits and number of lanes that is being proposed.		
43	General	Joyce Dillard dillardjoyce@yahoo.com	The problem with this “partnership” is the twoagencies only connected with transportation and the lack of expertise in PublicHealth, Recreation and Parks, Emergency Services, Fish & Wildlife Servicesand Economic Tourism.		
44	General	Joyce Dillard	SCAG does not have the well-roundedexpertise to embrace aspects outside of urban planning.		

45	General	Joyce Dillard	This Scenic Byway is one of four inthe State and a key component to the regional structure to incorporate andpromote the activities and businesses that are in or near the corridorincluding the worldwide draw of the Rose Parade and Rose Bowl.		
46	General	Joyce Dillard	Consequently this CMP CorridorManagement Plan is more than just a transportation instrument.		
47	Transportation Recommendations	Joyce Dillard	You state: Parkway improvements are focused on theParkway itself, while the multi-modal improvements encompass both the Parkwayand the full study corridor. Comments: Multi-modal improvements are ignoringthe current transportation and recreation methods such as equestrian travel andhistoric trails.		

48	Transportation Recommendations	Joyce Dillard	You State: RecommendationA.1.2: Explore the installation of “context sensitive” changeable message signs(CMS) on the Parkway. Changeable message signs disseminate travel times,incidents, and Parkway conditions and provides motorists with sufficienttime/options to take alternate routes – if needed. Comments: Missing are the facts and figures ofaccidents, deaths and general public safety along the Corridor. Signage such as this spells trouble as toomany vehicles crash through barriers and end up in the Arroyo Seco. The Gold Line times are immaterial tovehicular traffic. Colorado Blvd. is far from the byway. Tourists will have already decided to usepublic transit OR have rented a vehicle. Alternative routes are thestreets-which are near hills with too many named “Avenue…” Buses cannot enter or exit the byway. Dodger Stadium does traffic is wellestablished and needs no further signage. Access is limited from the 110. Street access from Broadway is normal.		
49		Joyce Dillard	You state: Recommendation A.1.6: Explore theimplementation of a demonstration project to evaluate the conversion of theParkway’s number three lane from a general purpose through lane to an auxiliarylane and/or shoulder between Orange Grove Avenue and Avenue 43. Comments: Toomuch traffic flows on this byway that would not make shoulders a wise decision. Again, you have no statistics on trafficaccidents, deaths and injuries.		

50	Transportation Recommendations	Joyce Dillard	You State: Recommendation A.1.9: Improve trafficsignage along the Parkway to encourage safe driving and adherence to speedlimits and traffic regulations. The proposed additional signage would serve toemphasize the established speed Conduct appropriate engineering studies to document the installation of warning signs and advisory speed signs for all curves along the Parkway with a design speed below 55 MPH. Install the warning signs and advisory speed signs called for based on the results of the engineering study recommended in A.1.9. Comments: The curves are extremely dangerous andsignage is small and unnoticeable. Thereneeds to be consideration of signage (from the Downtown Los Angeles side) to educate the driver thatspeed should be reduced.		
51	Multi-Modal Recommendations	Joyce Dillard	The area, due to pockets of poverty, makeuse of all modes of transportation including walking and buses. The bus system, outside of Figueroa St., ispoor and infrequent. The Gold Line isunder-utilized because aspects of tourism, such as the Southwest Museum, werenot developed for regional tourism and economic growth. The Southwest Museumhoused one of the most valuable collection of Indian artifacts which was movedto Griffith Park. The Museums of theArroyo are a component of the National Scenic Byway. The City of Los Angeles was founded withinthe boundaries of the Arroyo Seco Parkway Scenic Byway.		

52		Joyce Dillard	Youstate: Recommendation B.1.1: The Byway Corridorneeds to improve upon the existing transit modes that provide alternativetransportation choices for people seeking other means of travel to arearesources and destinations. Comments: Destinationsneed to be promoted by tourists' maps and guides. Bicyclists need public safety rules as theyrun red lights and are extremely dangerous. This Public Safety whole is a problem for successful tourism expansion. Thelocal shuttle services are extremely poor. Many areas critical to the viewshed cannot be reached by public transit. Again,equestrian travel is completely ignored, yet an important historical aspect ofthe corridor. Youhave completely omitted Metrolink, its maintenance yard and the effects on theair quality and noise levels.		

53	Multi-Modal Recommendations	Joyce Dillard	Youstate: Integratethese transit recommendations with the many approved plans in existence, including Northeast Los AngelesCommunity Plan CirculationElement, Fremont Traffic Calming Concept Plan,Metro's long-range plans and bicycle plans, CentralCity North Community Plan–Circulation Element,and City of South Pasadena Circulation Element,City of Pasadena General Plan Mobility Element, and more. Comments: Arroyo Seco Restoration FeasibilityStudy, Greater Los Angeles County Integrated Regional Water Management PlanGLAC IRWMP, Los Angeles Region Basin Plan for Coastal Watersheds, South CoastAir Quality Management Plan, LA River Revitalization Master Plan LARRMP and anyother water, watershed, or public health plan should be researched at thispoint in the process and incorporated. Any Migratory Bird studies or Wildlifestudies should be incorporated as the birds and animals share the corridor withthe humans.		

54	Byway Corridor Bicycle Facility Improvements	Joyce Dillard	Youstate: Recommendation B.1.2: Establish acomplete, regional bikeway system as a key link in a multi-modal network supportingthe Byway Corridor. Comments: More than just bicycles, equestriantransport should be improved to include Emergency Evacuation. Horses and their ability to transport humans,animals and goods during an earthquake or other emergency is the primaryalternative, not bicycles. The Pacific Crest Trail traverses Mexico to Canada and is ignored in thisdiscussion. Again, bicyclists have poor habits inthis area. Red lights should mean "stop"but for the bicyclist it means "go." Awide-spread safety program is needed IMMEDIATELY.		
55	Byway Corridor Pedestrian Facility Improvements	Joyce Dillard	You state: Recommendation B.1.3: To continue to be aregion rich in pedestrian opportunities, the Arroyo Seco Corridor needs tobecome more physically integrated with regard to a complete multi-modalcirculation network. Comments: Pedestrian travel is extremelydifficult. The first mile/end mileaspect of public transit has not been studied for this area, so the assumptionis that improvement will help. Improvement, based on realistic patternsof use, could work, but it does not appear that detailed information will evenbe collected for analysis. Language has never been addressed asan aspect of tourism including use of symbols		

56	Byway Corridor Watershed Restoration	Joyce Dillard	You state: Recommendation C.1.1: Improve the qualityof the Arroyo Seco Watershed and integral environment throughout the CorridorPartnership Planning Area. Undertake actionsfor improving the environment and actions for re-building a landscape framework in the same spirit as the original Parkwayengineering efforts were undertaken. Implement these actions within the Parkway itself and the adjacent BywayCorridor Partnership areas. Comments: This is more than just a LandscapeFramework. This is Water Management planningat its fullest but missing participation of Caltrans, SCAG and other key groupsin the Water Quality and Water Supply aspect of the Upper Los AngelesRiver Watershed. Omitted are the plants, animals, birds andweather aspects as well as geologic and mineral aspects.		

57	Byway Corridor Bicycle Facility Improvements	Joyce Dillard	You state: Recommendation C.1.2: Re-capture thenatural and cultural variety within the watershed, resulting in optimal conditionsfor improving water quality. Minimize soil erosion in areas wherever alteration of natural systems has occurred. Minimize surface and groundwater alteration and contamination. Make Parkway right-of-way design decisions recognizing that the Arroyo Seco Parkway still exists within the floodplain of the Arroyo Seco. Comments: You do not have to reinvent thewheel. There are agencies and regionalgroups heavily involved in this aspect including the Los Angeles Regional Water Board and theState Water Resources Control Board that regulates water quality. Participation is missing outside of water andpublic works agencies. TMDLs Total DailyMaximum Loads are regulated by NPDES and MS4 permits. Caltrans is a permittee. LACFCD LA County Flood ControlDistrict is another agency involved with the corridor but omitted in thisPartnership.		

58	Byway Corridor Bicycle Facility Improvements	Joyce Dillard	You state: Recommendation C.1.3: Improve the qualityof stormwater runoff. Work closelywith partner agencies such asLos Angeles County Department of Power and Water to manage water quality issues. Comments: You first need to recognize the properagencies involved in stormwater runoff and the local ordinances enacted as wellas the State agency enforcement. There is no such agency: Los Angeles CountyDepartment of Power and Water USEPA is another agency involved withTMDLs. It is the Receiving Waters, dueto Commerce, that is affected. On thestate level, the CaliforniaWater Plan is evolving to include sources of water supply from local rainwaterharvesting. Missing is the very important PublicHealth aspects, not yet regulated, that could cause widespread disease amongstbirds and animals and threaten both humans and major industries. Missing is the Geological Studies ofthe Repetto Hills and the aspects of lack of infiltration in the		
59	Byway Corridor Bicycle Facility Improvements	Joyce Dillard	You state: Recommendation C.2.1: Restore andrehabilitate the landscape throughout the Parkway and its setting, by developinga comprehensive 21st century landscape architectural design approach to thisearly 20th century engineering landmark. Comments: Please consider Wildlife Corridors aswe have deer, coyotes, bobcats and other critters. Native plants should be native to the area,not the State.		

60	Byway Corridor Landscape Improvements	Joyce Dillard	You state: Recommendation C.3.1: A setting andenvironment once as beautiful as the Arroyo Seco Parkway needs to be enhancedand maintained through a variety of efforts by Caltrans and partner agencies. Comments: General Plansshould be included in this study as the determine Land Use, not Caltrans orSCAG. The Scenic Byway should beincorporated in the General Plan, Its Elements and the Community Plans. Again, thisis one of four byways in the State. Theothers are: Pacific Coast Highway (Route 1) through Big Sur in Monterey County; Route 190 in Death Valley National Park; and Tioga Road/Big Oak Flat Road in Yosemite National Park. Theimportance to the region and its economy of a successful Corridor has beenunderplayed. We cannot recall it beingmentioned in ANY environmental document. Heightincluding Floor-to-Area Ratio and Air Rights, which could impair viewsheds orinterfere with Migratory Bird flights, should be		
61	Byway Corridor Landscape Improvements	Joyce Dillard	You state: Recommendation C.3.2: Developcorridor-wide landscape design policies, guidelines and specific projects that supportwatershed ecosystem restoration goals, habitat conservation and open spaceprotection. Comments: Again,join those aspects of planning, statewide and regional that already exist inthe area. You do not need to create anew machine but incorporate aspects to enhance the watershed.		

62	Built Environment Recommendations	Joyce Dillard	You indicate: Parkway Preservation Byway Corridor Preservation Comments: Becomeinvolved with Climate Change Adaption as an aspect of preservation with theGovernor's Office of Planning and Research.		
63	Tourism and Marketing Recommendations	Joyce Dillard	You state: Parkway Marketing Recommendation E.1.1: Coordinate withother agencies to promote and create infrastructure to enable multimodal user shiftsfrom the Parkway to transit, bicycle or pedestrian especially physicalimprovements to the Parkway such as … Comments: Thisis more than transportation. It is, atleast, about Wildlife, Birds, Plants, Geology, Water Supply, Water Quality,Habitat Conservation, Weather Prediction, Traffic, Air Pollution, Noise, andCommerce. Theoutdoor "experience" is the marketing source point, not how you travel down thebyway.		
64	General	Jerry P. Schneider 4113 Sea View Avenue Los Angeles, CA 90065 (323) 225-2748 email: jerryspe9@sbcglobal.net	The plan appears well thought out and incorporates the many years of community planning that has gone ahead of this document. One document that is not listed as a reference plan is the Arroyo Seco Linkages Study, conducted in cooperation Los Angeles City Council District One and the Metropolitan Transit Authority Gold Line Project.		

65	General	Jerry P. Schneider	It is good to recognize the roles of CASA and CASO for continuing coordination of planning and implementation among the various agencies and community organizations. I concur that the coordination role of CASA should continue as key to planning and implementing this plan..		
66	Section 3 Parkway Safety Improvements: Recommendation A.1.7 (page 45)	Jerry P. Schneider	Relative to the Avenue 43 North Bound Off-ramp: The construction of a new bridge across the Arroyo Seco (channel) is badly needed for safety of vehicles using the Parkway and this off-ramp, as evidenced by the high frequency of accidents related to the present alignment. A secondary benefit of the proposed off-ramp alignment to intersect Avenue 43 west of Homer Street is that this would eliminate a “pinch point” for a multi-use bicycle/pedestrian tail along the Arroyo Seco channel. Consideration of a safe crossing of Avenue 43 at Homer Street by pedestrians and bicyclists is a must.		

67	Section 2 Byway Corridor Bicycle Facility Improvements: Recommendation B.1.2 (page 54)	Jerry P. Schneider	I heartily agree with the bulleted goals: “ Erect new multi-use bridges (bicycle/pedestrian) across the Arroyo Seco….” And “Make multi modalism a priority throughout the Byway Corridor as defined herein.” Do these two bulleted goals allow for the development of a multi-use trails in place of a commuter bike path along the Arroyo Seco channel. For years we have been frustrated with the criteria and standards for a Class I Bike Path, that have lead to high cost estimates and potential non feasibility of having a multi-use trail along the Arroyo. I hope this allows for other than fully paved pathways, using natural materials such as decomposed granite or rock chips. Also, a slower design speeds such as 15 mph vs. 25 mph would result in fewer constraints on alignment saving many existing trees and saving on costs.		

68	Section 3 Byway Corridor Pedestrian Facility Improvements: Recommendation B.1.3 (pages 54 & 55)	Jerry P. Schneider	I heartily agree with all of the bulleted goals, however I believe there is a need to add a bulleted goal specifically addressing the existing pedestrian bridge north of Avenue 43 that leads from the Sycamore Grove Park. This bridge is key in providing connectivity from the Gold Line Southwest Museum Station and Sycamore Grove Park to key natural and cultural resources on the east side of the Arroyo Seco, such as Debs Park, Audubon Center at Debs Park, and Montecito Heights Recreation and Senior Centers. There are serious problems with the alignment of the approach to the west end of this bridge. Most users, especially those from the Gold Line will be approaching from the south, yet the existing alignment favors users approaching from the north. Also, there is no longer a need to use a tunnel under the former LA Electric Railway alignment. This former railway right of way has been transferred to the City of Los Angeles and the Department of Recreation and Parks is considering a multi-use path on it that would parallel the Parkway. The existing bridge approach includes a stairway that is not user friendly, especially for bicyclists.		
69	Section E, Tourism and Marketing Recommendations: Section 1/ Parkway Marketing: Recommendation E1.1 (page 63)	Jerry P. Schneider	In the second bulleted goal “Provide a multi-user trail network along the Parkway.. which could also accommodate interpretive and way finding signage.”, the word “could” is not as strong as “should”. I do recommend replacing “could with “should” or change the sentence to read “….together with interpretive and way finding signage.”		

70	Speed Reduction	Cat Davidson cdavidson13@students.polytechnic.org	Reducing the speed limit to 45 seems like a ploy to get revenue from speeding tickets. Cars aren't going to travel at 45 mph on the freeway (yes, it's a parkway now, but as long as there are no traffic lights, drivers will still see it as a freeway). Like with all freeways, drivers will go as fast as traffic safely allows. Currently the speed limit on the Pasadena freeway is 55, but during the less-busy times of day I find it's very common for the fast lane to travel at speeds approaching 75 mph. This is LA County. People want to get where they want to go, and they want to get there as fast as possible		
71	Speed Reduction	Cat Davidson	Having driven it many times, I understand that some may have concerns about driving fast around the freeway's sinuous curves (though I have never seen vehicles that seem out of control). Yet before this is treated as dangerous evidence supporting the new speed limit, I'd like to see it proven that the Pasadena freeway sees more accidents than other freeways in the area. Only then, if the 110 has been seeing more injuries and deaths than average, would I support slowing down.		
72	Auxilary Lane	Cat Davidson	As for changing the right lane to an auxiliary lane, that sounds like a good way to slow traffic down even further. With the 110-N as the busiest freeway in the country (with the 110-S at a close 2nd), and with rush hour traffic already a problem, this would exacerbate the nuisance of commuting downtown for Angelenos who all make the trek for work. This, along with the lowered speed limit, would only serve to back traffic up or force citizens to take alternate routes, like the 10 or the 5, creating more traffic problems elsewhere.		

73	Bicycle Facilities	Cat Davidson	The idea that I found the craziest was the possibility of adding a bike lane on portions of the freeway. That is a FANTASTIC way to get bikers killed. As I've mentioned, the Parkway is still viewed as a freeway. People drive fast on freeways. Many, unfortunately, drive recklessly on the freeways. Adding bikers to that mix is laughably unsafe. Like I've said, as long as there are no traffic lights, it's a freeway. Can you imagine putting bike lanes on any other freeway? That's insane!		
74	Maintenance and Preservations	Cat Davidson	As far as freeway maintenance and preserving surrounding environments go, I'm all for it. But the propositions to "improve" the Pasadena freeway are terrible. If California wants to do something that the community will benefit from, put the money in our schools.		
75	General	Cat Davidson	To sum it all up: if it ain't broke, don't fix it.		
76	Speed Reduction General Safety	Kathleen Belleau kathybelleau@yahoo.com	Glad to hear you are slowing down traffic/ reducing speed limit. That road scares me...I avoid it at all cost because its dangerous. By the way, is there a way to enforce the speed limit on all the L.A freeways? I constantly see cars speeding, weaving and cutting off other cars. Also people are still on their phones either talking or texting. It's to the point that I hardly drive on the freeways. If I had the option of moving out of L.A I would because I thinks it's too dangerous		

MOUNT WASHINGTON HOMEOWNERS ALLIANCE

Board of Directors

Officers

President
Daniel Marlos
dmarlos@roadrunner.com
(323) 342-0902

VP Action
Chris Howard
christohoward@gmail.com
(323) 222-6646

VP Programs
Monique Gaudry
moniqueg42@yahoo.com
(323) 222-6558

VP Land Use
Clare Marter Kenyon
clare_mk@yahoo.com
(323) 227-6491

VP Membership
Patricia Yamaguchi
ybricky@aol.com

VP Hospitality
Susanne Brody
brody@usc.edu
(323) 788-8341

Secretary
Steve Rank
rankfamily@sbcglobal.net

Treasurer
Ruth Mehringer
ruthmlb56@roadrunner.com
(323) 225-1339

Parliamentarian
Michael Kelley
hermer.kelly@gmail.com

Directors

Michelle Harnsberger
michelle@harnsberger.com

Diane Mead
dimead2000@gmail.com

Paul Evleth
(323) 428-1684
pevleth@earthlink.net

Bob Brody
furnman1@earthlink.net

Carol Teutsch
cbteutsch@comcast.net

Past President
Stan Sosa
stan.sosa@gmail.com

August 2, 2012

ArroyoSecoCMP@gmail.com

RE: Arroyo Seco Parkway Corridor Partnership Plan

Dear Arroyo Seco Partners and CalTrans Officials,

The Mount Washington Homeowners Alliance, a local group with over 500 members, has charged its Beautification Committee with providing comments regarding improvements to the Avenue 43 ramps of the historic Arroyo Seco Parkway. Upon attending the community outreach event at Castelar Elementary School in Chinatown on July 23, 2012, we learned that there was no specific plan outlined for the southbound Avenue 43 onramps and exit ramps. Since this entrance/exit is the most convenient for our neighborhood, we would like to provide some suggestions for its improvement, beautification and maintenance.

Southbound Avenue 43 Ramps:

1) Tourism. Because the CPP mentioned the importance of tourism, perhaps we could establish direction signs (in a river rock design) showing where Mt. Washington and Montecito Heights are. Other historic sites in the vicinity include Lummis Home, Heritage Square, the Audubon Center and the Southwest Museum. They could be included in this single signage marker. There is a large grouping of signs currently attached to a post, but perhaps these could all be consolidated into one large sign. (see attached photos). The existing signage is disorganized and unsightly. A similar marker could be used for the same locations on the northbound exit ramp.

2) Truck Warning Signs. Currently there are two existing signs stating "No Trucks over 3 tons," however this does not appear to be adequate. There are passenger vehicles (e.g. stretch limousines) and other commercial vehicles that are simply too lengthy to enter the Avenue 43 Southbound freeway onramp. The signs should include length and possibly axle limitations. Furthermore, a flashing warning light mounted below a newly designed sign would help in warning vehicles.

3) Southbound Entrance: Consider widening the onramp curve section by taking away part of the landscaped shoulder on the right side. This would

allow more options for longer vehicles to enter. Is there some type of sensing device for vehicles that exceed the weight limitation? Something that would warn the motorist that they are not allowed to enter might eliminate the problem.

4) Foliage / Vegetation adjacent to ramps: Currently, there is overgrown asparagus fern and an unknown type of vine that should be pruned back. In addition, there are signs of invasive, exotic Trees of Heaven sprouting up within the landscaping area that need to be removed. We would like to participate in a landscape plan for this ramp that would include native plants as well as other drought tolerant vegetation that is low maintenance. Is there a plan for the landscaping of the entire historic Arroyo Seco Parkway that could include our ideas?

5) Existing Irrigation. We were lucky to be present when the irrigation system was in operation. Much of the water does not reach the trees because of overgrown undergrowth mentioned in #4. At least one of the sprinkler heads is aimed into the onramp and the water does not reach the landscaped area.

6) Existing Triangular median between southbound onramp and exit ramp. It was recently cleaned by Caltrans. Is there a plan for regular maintenance to reduce the amount of litter that accumulates in considerable quantities? When entering the onramp, there is a non-working, preexisting warning lamp fixture set into the curb that was most likely a flashing amber light. It is historical and a safety feature that is currently in disrepair. Can the warning light be restored?

7) Maintenance Plan. Is there a regularly scheduled maintenance plan for the entire historic Arroyo Seco Parkway?

8) Prospective Community Events. How many can we have per year where Caltrans would close the ramp? We would like to be part of the maintenance more than just once per year.

9) Park. Who has jurisdiction over the park adjacent to the ramps? Could CalTrans partner with the community and the controlling agency to improve the park?

A. When will the park be dedicated?
B. How much irrigation if any is existing?
C. Can irrigation be added and/or improved?
D. Regular Maintenance is needed.

10) Electronic Signage. We oppose the use of electronic signage along the entire historic Arroyo Seco Parkway. Such signage would not be in keeping with the historic character of the parkway. Such signage would be a distraction and is out of character considering the reduction in speed limits and number of lanes that is being proposed.

Thank you for considering our suggestions.

Daniel Marlos, President Mount Washington Homeowners Alliance (MWHA)

Welcome to Highland Park
Lummis Home
MTA Goldline
Southwest Museum
Mount Washington
Heritage Square
The Audubon Center
Montecito Heights

METRO
Senior Citizen Recreation Center
Casa de Adobe
Southwest Museum
HERITAGE SQUARE
Audubon Center

LOG & Referral Number DOTS # 201213107 / A67 PINK

DOTS REFERRAL

EXECUTIVE OFFICE/GOVERNMENTAL AFFAIRS
REQUEST FOR CORRESPONDENCE FORM

EMAIL/SCAN DATE 8-13-12 DIVISION Operations ATTN Diana Gomez

Governmental Affairs Red Folder Coordinator: *Please complete the district numbers of the corresponding legislative districts.*

Supervisorial District#_____ Assembly District#_____ Senate District#_____ Congressional District#_____

PLEASE INVESTIGATE AND PREPARE A RESPONSE TO THE ATTACHED LETTER, AND RETURN SIGNED COPY TO GOVERNMENTAL AFFAIRS, Nikita.Peterson@dot.ca.gov. 13th Floor, (213) 897-0830.

DRAFT DUE 8-17-12 RESPONSE DUE 8-20-12 FOLLOW-UP DATE_____

ADDRESSOR Michael Roster - Community Resident

SUBJECT Re: Proposals for the Pasadena Freeway / Arroyo Seco Parkway (California Route 110)

Governmental Affairs Coordinator_____ Ext_____
Governmental Affairs Manager_____ Date_____
Executive Projects_____ Date_____
Executive Assistant_____ Date_____

APPROVALS	DATE
DEPUTY DISTRICT DIRECTOR	
DEPUTY DISTRICT DIRECTOR, EXTERNAL AFFAIRS	
CHIEF DEPUTY DISTRICT DIRECTOR	
DISTRICT DIRECTOR	

COMMENTS_____

Date Final Mailed by Govt Affs_____
Date Final Scanned to Exec Staff_____

Rev. 09/09/2011

Maint and Ops Exec Assistant/HQ/Caltrans/CAGov

08/09/2012 04:08 PM

To D7 DOTS Coordinator/D07/Caltrans/CAGov@DOT

cc

bcc

Subject Task Assignment: DOTS #201213107, Proposals for the Pasadena Freeway/Arroyo Seco Parkway

You have been assigned a task for the following correspondence tracking document:

DOTS #201213107
Subject: Proposals for the Pasadena Freeway/Arroyo Seco Parkway
Task: 08/09: See below for task instr.

Results must be posted by 08/22/2012.

Single click this document link to access the task assignment.

Document Control #:	201213107	Link to Correspondence Document:	
Document Subject:	Proposals for the Pasadena Freeway/Arroyo Seco Parkway		

Task:
08/09: See below for task instr.

Priority:
● None ○ High (1) ○ Medium (2) ○ Low (3)

Date Due: 08/22/2012 Time Due: 03:00:00 PM

Assign to: Michael Miles

Admin: D7 DOTS Coordinator

Srvc Center / Program / District: D-7

Assigned by: Maint and Ops Exec Assistant

Additional Instructions / Attachments:

08/09/12: District 7 to reply direct. Note cc on incoming includes "Mayors and other elected officials of Pasadena and South Pasadena." If the district, because of the complexity of the issues raised, will require more time than the default time allotted in the DOTS database, please request an extension, specifying why and the end date. Also send preliminary reply letter such as shown on the D.O. Standard Formats site, <http://onramp/directorsoffice/files/ImmediateResponseLtr.doc>. Thank you. (JP)

Director's Office Correspondence

Tracking Information

Code:	Director's Referral	Control #:	201213107
Date Entered:	08/09/2012	Due Date:	08/22/2012
Assignor:	Steve Takigawa		
Admin:	Maint and Ops Exec Assistant		
Action Required:	Reply Direct	Current Status:	New Correspondence
Assignments Completed:			
Pending:		Completed:	

Comments: 08/09/12: Tasked to District 4 for direct reply. (J.M.Pass)

Document Information

Addressed To:	Malcolm Dougherty
From:	Michael Roster
Corresp. Date:	08/06/2012
Subject:	Proposals for the Pasadena Freeway/Arroyo Seco Parkway

Document Attachment(s):

Rosterin.pdf

Author:	*Deborah Ehrichs*	*Time Created:*	*08/09/2012 02:47 PM*
Last Editor:	*Maint and Ops Exec Assistant*	*Time Edited:*	*08/09/2012 03:58 PM*

Current User: *D7 DOTS Coordinator*

Michael Roster
1321 Fairlawn Way
Pasadena, CA 91105
(626) 449-9797 | mroster@earthlink.net

August 6, 2012

Malcolm Dougherty (Caltrans_Director@dot.ca.gov)
Director, Caltrans
P.O. Box 942873
Sacramento, CA 94273-0001

Re: Proposals for the Pasadena Freeway/Arroyo Seco Parkway (California Route 110)

Dear Mr. Dougherty:

I am writing on behalf of myself and a large number of other longtime Pasadena-area residents who are longtime commuters between Pasadena and downtown Los Angeles and also longtime voters and taxpayers. We have seen recent news reports that Caltrans, apparently pressured by a small number of people, not the thousands of drivers who use this route daily, is considering lowering the speed limit on the Pasadena Freeway/Arroyo Seco Parkway from 55 mph to 45 mph.

As discussed more fully below, it looks like there is a fairly easy solution to the issues that have been identified: Just enforce the long-existing 55 mph speed limit. It's that simple. By lowering the current speed limit to 45 mph, Caltrans is likely to significantly increase the already existing backups on this vital road (the only route available to many if not most of us between Pasadena/South Pasadena and downtown Los Angeles), would thereby create worse pollution and other negative environmental impacts, would likely force a number of drivers onto surface streets through residential neighborhoods and school zones; and would create other unintended negative consequences.

Among other things, we have gone to the Caltrans website and cannot readily find any place where this proposal is posted, and we certainly were not aware of the hearings apparently held last week. One gets the impression that only a small number of people who have pressed their own limited interests through the years and possibly have spent long hours lobbying Caltrans were aware of these hearings.

Second, we assume (hope?) that none of this is intended as retaliation by Caltrans against Pasadena and South Pasadena over the long-running dispute concerning the 710 freeway, or that this is a way to further backup traffic on the Pasadena Freeway/Arroyo Seco Parkway in order to create support for the 710 proposals.

Third, we hope you and the other people heading Caltrans, as well as our elected officials, will all note the weird inconsistencies in what is being said. The following quotes in boldface are

RECEIVED
AUG 09 2012

from these two news sources alone; there are lots of other equally weird and internally inconsistent statements being made:

www.ktla.com/news/landing/ktla-pasadena-freeway-renamed,0,4454612.story?track=rss

http://www.dailynews.com/breakingnews/ci_21234019/caltrans-wants-change-speed-limit-pasadena-freeway-45

- **"After conducting a study, Caltrans officials chose to make the name change as part of an overall plan to make the narrow and windy scenic roadway safer for drivers."** We don't recall any public discussion that this was a primary purpose of the name change, because if it was, there's probably a serious defect in the administrative record. Rather, it looks to us as if a small number of people spent years getting the official name changed and are now using the name change as a self-generating basis for insisting on a reduction in the speed limit. Folks, no matter what its name, it's the same road as it has been for 70-plus years, and as far as we know, the same 55 mph speed limit has been in place for nearly 60 of those years. Changing the name doesn't change the road. And by the way, cars have become significantly safer in recent decades, per innumerable transportation and other studies and which must also be taken into account in Caltrans' deliberations here.

- **"Since the road has been designated a national historic landmark, Caltrans cannot re-engineer the road to meet the same standards of more modern high-speed roadways."** In other words, the same people who spent years getting the historic designation, along with Caltrans, apparently were aware all along that safety improvements could have been made, but now that they have gotten the road designated a historic landmark, the same improvements that could/should have been made can't be. Is that really the logic Caltrans wants to stand on?

- **"Many residents and motorists who spoke at hearings last week in Chinatown and in South Pasadena said last year's median guardrail improvement may have added to the problem."** So Caltrans, after lots of negotiations with people who somehow created their own non-official watchdog status over a public freeway, finally settled on the concrete barrier instead of the longstanding (looking at earlier photos of the road, might we even say historic?) center guardrail. And now that we have this rather expensive and non-historic concrete improvement, they argue this has made the road less safe? And it's really not less safe, it's just that more people than before ***might*** now be exceeding the longstanding 55 mph speed limit? Are we missing something, or isn't the remedy just enforcing the existing speed limit?

- **"And while the slower speed limit may decrease traffic flow, Caltrans believes that the growing number of alternate transportation options, including high speed rail and an increase in bicycle lanes, will help commuters make smarter choices as they travel throughout the region."** By high speed rail, do the Caltrans unnamed spokespeople mean the Gold Line, since that's the only rail service that is even remotely close to the Pasadena Freeway/Arroyo Seco Parkway route? We hope you all know, the

average speed on the Gold Line between South Pasadena and downtown Los Angeles is approximately 10 to 20 mph (hardly "high speed"). And as for bicycles, just what route between Pasadena, South Pasadena and downtown do you all have in mind? Including for those of us who are aged 50 and older and/or for everyone during the rainy season, during the hot season, or in the darkness before sunrise and after sunset?

Somehow this freeway/parkway has served all of us just fine for the past 70-plus years, most of the time with a 55 mph speed limit. The road surely didn't get less safe this past year (other than the bizarre and internally contradictory statements quoted above). And remember, during especially busy times, the speed is more like zero to 10 mph anyway.

So instead of accepting the self-generating proposals described above, we urge Caltrans to consider the following. We likewise request that this letter be made a part of the official public file, assuming you or anyone else can find such a file:

1. Enforce the 55 mph speed limit.

Unless we're missing something, as already noted and will be noted several times again, the speed limit on this road has been 55 mph for most of its history. The problem is that, when it isn't gridlocked, there are some drivers who may indeed go 65 mph and above. But the remedy isn't to reduce the speed limit further. Rather, the cost-effective solution (and probably the only one that a neutral assessment will support) is to give fair warning and then simply enforce the long-existing current speed limit.

2. Install warning signs at key places for drivers exceeding the speed limit, including on curves.

We've all seen those flashing "your speed is" warning signs, including at the off ramp into Chinatown, most of which are portable, are low in cost and can be moved periodically. Try it out. Give notice that the 55 mph speed limit will be enforced and, if anyone thinks it's cost effective, also place these flashing warning signs in key locations as a further reminder. I think you will quickly (and cheaply) get the road functioning safely at the posted and long-existing 55 mph limit.

3. If really necessary (which it probably isn't), create an electronic system that reduces the speed limit when conditions warrant, such as during heavy rains.

Germany and other nations have such a system. It's not difficult to install and operate. We suspect most of the accidents are when the road is slick (although remember, during rush hours the actual speed is closer to zero anyway). So assuming it really is necessary, which we actually doubt, establish that the speed limit will be reduced under certain conditions.

4. Fix the true safety risks.

At least one of the news articles says that Caltrans had considered engineering changes that would reduce the risks, but now that the road has been declared historic, Caltrans can't. I hope

you all can see the foolishness of this logic – we wanted to fix it but we sought landmark status instead, and now that the road has landmark status, we can no longer fix it. Yikes.

I've served on the board of a highly respected community preservation organization, chaired a city committee that likewise considered important historic issues and am regularly involved with and support other groups with similar interests. So please, don't use historic protection as an excuse for not making appropriate safety improvements. If there are engineering remedies that should be considered, go and get the necessary exceptions or, if it really comes down to it, get the road un-declared as an historic landmark.

And if you are talking about some of the difficult exit ramps (like three or four of them), no doubt there are ways to (a) create collector areas at the ends of the ramps and onto the surface streets to eliminate backups onto the freeway/parkway, (b) place flashing warning signs a mile or so ahead of each of those exits with appropriate sensors, warning if there is such a backup ahead (and as exist on many other parts of the California freeway system); (c) if necessary (and given items a. and be. above, probably not) condemn certain adjacent properties in order to install additional dedicated lanes for these exits; and/or (d) close one or more of these exits, especially since most if not all are in areas with surface street alternatives.

5. Fix the truly unsafe conditions from the 110-North to the I-5 that Caltrans itself created.

Since we're talking about allegedly unsafe conditions on the Pasadena Freeway/Arroyo Seco Parkway, let's talk about the true-to-life unsafe conditions created solely by Caltrans two to three years ago at the left-hand transition lanes from the 110-North to the I-5 North.

I sent at least two emails about the modified transition lanes when the changes were first being implemented and got mind-bogglingly stupid replies from Caltrans, to the effect that this was still a work in progress and people would eventually figure out what all the (non-conforming) lights and arrows were about. It appears no one at Caltrans headquarters has traveled this route and seen the extraordinary dangers Caltrans itself has created, in that:

- Sometimes two lanes can now make the transition and sometimes only one. However, even when the system is allegedly set for only one transition lane, there is no way any normal driver would have any clue what the rules are at any given time, and thus drivers from the two left lanes continually make the transition and continually create near collisions throughout the day.
- The only way theoretically to know if the transition is set for one lane or two lanes at any given time is via a mysterious system of arrows and lane lights, as if locals let alone out-of-town and foreign visitors would ever have a clue what these lane lights and mysterious arrows are about. To the best of my knowledge, this system is not included in the nationwide standards for roadway signs and guidance markers.
- And we especially love the fact that one set of lane lights, when they are lit, leads drivers directly into a wall, something we have repeatedly brought to Caltrans' attention but nevertheless has been left in place. No doubt it looks good on paper at headquarters. But we defy you to try it in reality, especially if you were a non-resident and had never negotiated that particular interchange in the past, and especially at night.

The solution, by the way, is simple. Install overhead electronic signs, using symbols all U.S. and foreign residents understand, showing (a) that the farthest left (number one) lane is ONLY for a left turn onto the I-5 transition road, and (b) a changeable sign above the second (number two) lane that sometimes shows you can go EITHER left or straight from this lane and at other times clearly indicates you can go ONLY straight (that is, remain on the 110-North). And once you've done that, please remove the lane lights that are expensive, confusing, distracting and dangerous.

* * * * * * *

So why have I even bothered to take the time to write this letter? Because way too many of our citizens are losing confidence in government, and at all levels. And it is the ill-considered, internally self-serving and largely unpublicized government actions such as are being proposed here for the Pasadena Freeway/Arroyo Seco Parkway, a very busy and vitally important commuter route in Southern California, that cause this kind of distrust. We've also fallen into a pattern, both in California and nationwide, of adopting laws that we know are largely going to be ignored, but it's just easier for government officials to yield to a few narrow but diligent interest groups, never mind the impression this makes on the next generations.

As indicated at the outset of this letter, we would urge Caltrans to find out what the majority of the real and longstanding drivers on Route 110 think. Examine the few legitimate risks and identify workable action plans for them. And note that the most sustainable course of action is to just enforce the long-existing 55 mph speed limit.

Sincerely,

Michael Roster

cc: (1) Mayors and other elected officials of Pasadena and South Pasadena
(2) Caltrans District 7 Regional Office, 100 S. Main Street, Los Angeles, CA 90012
(3) Friends and family who routinely drive the Pasadena Freeway/Arroyo Seco Parkway (and have done so for 20- to 40-plus years)

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, SUITE 100
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0362
FAX (213) 897-0360
TTY 711
www.dot.ca.gov

Flex your power!
Be energy efficient!

August 30, 2012

Mr. Michael Roster
1321 Fairlawn Way
Pasadena, CA 91105

Dear Mr. Roster:

This is in response to your correspondence to Director Malcolm Dougherty, dated August 6, 2012, regarding the Arroyo Seco Parkway, State Route 110 (SR 110). This letter was forwarded to the District 7 California Department of Transportation (Caltrans) office, which manages and operates State transportation facilities within Los Angeles and Ventura counties.

Caltrans would like to thank you for the time to discuss the Arroyo Seco Parkway (formerly known as the Pasadena Freeway) study, during a recent phone call with our Planning staff. As discussed, the study merely presents planning concepts, all of which require a more extensive analysis when (or if) money becomes available for continued development and implementation of the Corridor Partnership Plan (CPP). Your letter will be added to other comments received in the study's appendix and placed onto our website.

In addition to the CPP, your letter described current traffic control devices in place at northbound SR 110 exit to northbound Interstate 5. Please note that the traffic control improvements at this location were recently evaluated in a "before and after" study by the University of California, Berkeley. Although, it may not be easily observed by commuters, study results indicate a substantial improvement of safety and operation over the previous one-lane exit configuration.

Thank you for your interest in the Arroyo Seco Parkway and our highway system. We encourage you to keep checking the web link listed above for updates and to continue providing us feedback on the CPP. This is a report that is intended to be a "living document" addressing planning strategies and community goals for this unique state route segment that is both a National Scenic Byway and a California State Historic Parkway.

Please contact Alberto Angelini, Acting Deputy District Director of Planning, Public Transportation and Local Assistance, at (213) 897-0362 with inquiries, or to arrange for a

FULL SIGNATURE MUST BE LEGIBLE OR INCLUDE PRINTED NAME

SIGNATURE/DATE: Alberto Angelini 8/30/2012
SIGNATURE/DATE: Lindsay Daniel J. Freeman 8/30/2012
SIGNATURE/DATE
SIGNATURE/DATE

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, SUITE 100
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0362
FAX (213) 897-0360
TTY 711
www.dot.ca.gov

Flex your power!
Be energy efficient!

August 30, 2012

Mr. Michael Roster
1321 Fairlawn Way
Pasadena, CA 91105

Dear Mr. Roster:

This is in response to your correspondence to Director Malcolm Dougherty, dated August 6, 2012, regarding the Arroyo Seco Parkway, State Route 110 (SR 110). This letter was forwarded to the District 7 California Department of Transportation (Caltrans) office, which manages and operates State transportation facilities within Los Angeles and Ventura counties.

Caltrans would like to thank you for the time to discuss the Arroyo Seco Parkway (formerly known as the Pasadena Freeway) study, during a recent phone call with our Planning staff. As discussed, the study merely presents planning concepts, all of which require a more extensive analysis when (or if) money becomes available for continued development and implementation of the Corridor Partnership Plan (CPP). Your letter will be added to other comments received in the study's appendix and placed onto our website.

In addition to the CPP, your letter described current traffic control devices in place at northbound SR 110 exit to northbound Interstate 5. Please note that the traffic control improvements at this location were recently evaluated in a "before and after" study by the University of California, Berkeley. Although, it may not be easily observed by commuters, study results indicate a substantial improvement of safety and operation over the previous one-lane exit configuration.

Thank you for your interest in the Arroyo Seco Parkway and our highway system. We encourage you to keep checking the web link listed above for updates and to continue providing us feedback on the CPP. This is a report that is intended to be a "living document" addressing planning strategies and community goals for this unique state route segment that is both a National Scenic Byway and a California State Historic Parkway.

Please contact Alberto Angelini, Acting Deputy District Director of Planning, Public Transportation and Local Assistance, at (213) 897-0362 with inquiries, or to arrange for a meeting regarding this study. There is also detailed information on the Historic Arroyo Seco Parkway/National Scenic Byway Corridor Partnership Plan (CPP), available at the following web link: http://www.dot.ca.gov/dist07/travel/projects/details.php?id=6.

Sincerely,

for MICHAEL MILES
District Director

c: Bill Bogaard, Mayor, City of Pasadena
Michael A. Cacciotti, Mayor, City of South Pasadena

ARROYO SECO PARKWAY
CORRIDOR PARTNERSHIP PLAN

Comments / Comentarios

24 July 2012

Name/ Nombre: Charles Woolf

E-mail: none

Phone/ Telefono: (323) 221-1296

Address/ Dirección: 349 Mt. Washington Dr., Los Angeles, CA 90065

Location/Issue Locación/Tema: Vol. 3 Recommendations 2012 page 44 Item 2. Parkway Physical Improvements

Comments/ Comentarios: The suggestions to take away the #3 lane from normal thru traffic so as to use it as an On or Off Ramp or emergency parking is a terrible ~~idea that can only increase traffic snarls and cause accidents. The~~ suggestions for both Southbound direction and the Northbound direction sound like they were proposed by someone who doesn't know how to drive or has never used the freeway. What should help would be to increase the length of On Ramps on available ground next to the 3rd lane. In Places where your idea is already in place it creates danger in places by forcing traffic wanting to stay on the freeway to exit.

Location/Issue Locación/Tema:

Comments/ Comentarios:

Name/ Nombre:

E-mail:

Phone/ Telefono:

Address/ Dirección:

Location/Issue Locación/Tema:

Comments/ Comentarios:

Name/ Nombre:

E-mail:

Phone/ Telefono:

Address/ Dirección:

Location/Issue Locación/Tema:

Comments/ Comentarios:

California Department of Transportation and Southern California Association of Governments

ARROYO SECO CORRIDOR MANAGEMENT PLAN LITERATURE REVIEW

DRAFT

FEBRUARY 29, 2012

DOCUMENT CONTROL

Client:	California Department of Transportation and Southern California Association of Governments (SCAG)
Project Name:	Historic Arroyo Seco Parkway National Scenic Byway Corridor Management Plan
Report Title:	Arroyo Seco Corridor Management Plan Literature Review
IBI Reference:	31097
Version:	Draft

Literature Review for Arroyo Seco Parkway Corridor Management Plan (CMP)

Literature Review Summary

This Literature Review evaluates the most recently adopted planning documents from municipalities adjacent to the Parkway to determine their relevance in affecting positive change along the Corridor through multi-modalism connectivity, traffic alleviation and mitigation, land use distribution (compact and transit-oriented development), open space preservation and the restoration of the Arroyo Seco. The thirty-two documents, both recently adopted and already implemented plans, from the cities of Los Angeles, South Pasadena, Pasadena, and the County of Los Angeles were reviewed. Many more planning documents related to the Parkway have been completed regionally and describe project and corridor features along the Corridor with varying levels of effectiveness. While only public policy documents can implement improvements along the Parkway, three grassroots planning studies are recognized because of their efforts to catalyze change within the Corridor. A list of the thirty-five planning documents and studies, for each municipality, is provided below:

City of Los Angeles Adopted Planning Documents

1. Northeast Los Angeles Community Plan (1999) – Land Use Element
2. Northeast Los Angeles Community Plan (1999) – Circulation Element
3. Avenue 57 Specific Plan (2002)
4. Mount Washington/Glassel Park Specific Plan
5. Highland Park-Garvanza HPOZ (2010)
6. Lincoln Heights HPOZ and Lincoln Heights Community Design Overlay
7. Silver Lake-Echo Park-Elysian Valley Community Plan (2004) – Land Use Element
8. Silver Lake-Echo Park-Elysian Valley Community Plan (2004) – Circulation Element
9. Angelino Heights HPOZ
10. Central City Community Plan – Land Use Element
11. Central City North Community Plan (2000) – Land Use Element
12. Central City North Community Plan (2000) – Circulation Element
13. Los Angeles River Revitalization Plan (2007)
14. City of Los Angeles Bicycle Plan (2010)
15. Cornfields/Arroyo Seco Specific Plan (CASP) (2010)
16. Los Angeles State Historic Park General Plan (2005)
17. Northeast Hillsides Zone Change Ordinance (2009)

South Pasadena Adopted Planning Documents

18. South Pasadena Bicycle Master Plan Update (2011)
19. Fair Oaks /SR 110 Interchange Improvement Project
20. Freemont Traffic Calming Concept Plan (2009)
21. Fair Oaks Avenue Street Improvement Project
22. City of South Pasadena Land Use Element (1998)
23. City of South Pasadena Circulation Element (1998)
24. Mission Street Specific Plan (1996)

City of Pasadena Adopted Planning Documents

25. City of Pasadena General Plan Land Use Element (2004)
26. Central District Specific Plan (2009)
27. South Fair Oaks Bio-Tech Center Specific Plan (1998)
28. City of Pasadena General Plan Mobility Element (2004)

29. Pasadena Bicycle Transportation Plan (2011)
30. Arroyo Seco Master Plan (2003)
31. Arroyo Seco Parks and Recreation Historic District

County of Los Angeles Adopted Planning Documents

32. County of Los Angeles Bicycle Master Plan (2011)

Planning Studies

33. Arroyo Seco Watershed Restoration Study (2011)
34. Arroyo Seco Watershed Assessment (2011)
35. Northeast Los Angeles Linkages Study (2005)

Literature Review

City of Los Angeles *Adopted Planning Documents*

1. Northeast Los Angeles Community Plan (1999) – Land Use Element
2. Northeast Los Angeles Community Plan (1999) – Circulation Element
3. Avenue 57 Specific Plan (2002)
4. Mount Washington/Glassel Park Specific Plan
5. Highland Park-Garvanza HPOZ (2010)
6. Lincoln Heights HPOZ and Lincoln Heights Community Design Overlay
7. Silver Lake-Echo Park-Elysian Valley Community Plan (2004) – Land Use Element
8. Silver Lake-Echo Park-Elysian Valley Community Plan (2004) – Circulation Element
9. Angelino Heights HPOZ
10. Central City Community Plan – Land Use Element
11. Central City North Community Plan (2000) – Land Use Element
12. Central City North Community Plan (2000) – Circulation Element
13. Los Angeles River Revitalization Plan (2007)
14. City of Los Angeles Bicycle Plan (2010)
15. Cornfields/Arroyo Seco Specific Plan (CASP) (2010)
16. Los Angeles State Historic Park General Plan (2005)
17. Northeast Hillsides Zone Change Ordinance (2009)

1. Northeast Los Angeles Community Plan (1999) – Land Use:

Relevance to the CMP Study Area: The Northeast Los Angeles Community Plan designates the land uses (residential, commercial, industrial, open space, public facilities, etc) for the communities adjacent to the Parkway; land use designations can alter residential density along the Parkway, increase congestion on the Parkway due to employment/retail destinations and alternatively, alleviate congestion by allowing for compact development adjacent to regional transportation stations (Gold Line). Many of the proposed land uses designations in the 1999 Plan are currently in place today: a historic preservation overlay for Lincoln Heights (recently adopted) and the Avenue 57 TOD which is focused around the Gold Line Highland Park station (completed in 2003).

Summary of Adopted Planning Document: The Northeast Los Angeles Community Plan serves as land use document for the Atwater Village, Cypress Park, Eagle Rock, El Sereno, Glassell Park, Highland Park, Lincoln Heights and Montecito Heights, Monterey Hills, and Mount Washington communities. The Mount Washington/Glassell Park Specific Plan, Avenue 57 TOD (recently added), and the Highland Park-Garvanza Historic Preservation Overlay Zone (HPOZ) are other regulatory documents found in the Community Plan area and applicable to communities adjacent to the Parkway.

Residential: NELA contains a large portion of the historic single-family residential units

found in the City of Los Angeles. Low-medium density residential land uses are adjacent to the Parkway from Pasadena Avenue to Hough Street. Density rollbacks were used to reduce residential density in NELA communities and accomplished by adjusting land use recommendations downward to better reflect prevailing densities.

Commercial: Commercial districts are located to the northwest of the Parkway along Figueroa Boulevard. The Community Plan provides recommendations to revitalize this historic commercial hub by separating pedestrian-oriented shopping districts from auto-centric retail.

Industrial: Industrial land uses are prevalent around the Interstate 5 and SR-110 (Parkway) interchange. The Community Plan supports industrial land uses types and strives to convert typical industrial uses (heavy manufacturing, service industrial, etc) into maximum employment opportunities (research and development, clean technologies, etc).

Historical Preservation: The Community Plan identifies the adopted HPOZ for Highland Park-Garvanza and a potential HPOZ for Lincoln Heights (recently adopted) to protect and promote enhancement of that area.

Urban Design: The Mount Washington/Glassell Park Specific Plan, Avenue 57 TOD, and the Highland Park-Garvanza HPOZ define and regulate development/development typologies in NELA.

2. Northeast Los Angeles Community Plan (1999) Circulation Element:

Relevance to the CMP Study Area: The Northeast Los Angeles Community Plan Circulation Element identifies the existing transportation infrastructure and planned multi-modal improvements for the communities adjacent to the Parkway. A robust multi-modal transportation network (rail, bus, and bicycle) in communities adjacent to the Parkway provides residents, commuters, and visitors with alternative modes of travel to reach their destinations. Many of the proposed multi-modal improvements in the 1999 Plan are currently in place - most notably, the construction of four Gold Line stations (completed 2003).

Summary of Adopted Planning Document: Northeast Los Angeles is a gateway for traffic that enters and leaves Los Angeles via freeways (including the Parkway), arterial streets, and rail lines. A strain on the transportation structure directly affects and limits any residential density or major commercial, industrial (employment), or institutional developments. No increase in density shall be allowed by a zone change unless it is determined that the infrastructure, including transportation, serving the property can accommodate the generated traffic.

Freeways, Highways and Streets: In addition to the five major freeways in the planning area, routes designated as major highways are Main Street, Soto Street, Huntington Drive, Valley Boulevard, San Fernando Road, Colorado Blvd, Figueroa Street and Glendale Boulevard.

Public Transportation: The Northeast Los Angeles Community Plan was adopted prior to the Gold Line which was completed in 2003. The Gold Line alignment follows Marmion Way with four stations in Northeast Los Angeles: Lincoln/Cypress, Heritage Square, Southwest Museum, and Highland Park.

Non-motorized Transportation: The Plan identifies pedestrian-oriented areas along portions of York Boulevard, Glendale Boulevard, Los Feliz Boulevard, the Gold Line

Corridor, North Broadway, Huntington Drive, and Eagle Rock Boulevard. The Los Angeles City Bicycle Plan (adopted 2010) identifies several bicycle routes, both backbone and support lines, through the Northeast Los Angeles communities. The Citywide Major Equestrian and Hiking Trails Plan identifies an equestrian trail paralleling the Los Angeles River. The trail proposes future connections with the Arroyo Seco Channel. The Plan supports the completion and connection of these trails so as to better serve community's recreational needs and improve the accessibility to other open space resources.

3. Avenue 57 TOD Specific Plan (2002):

Relevance to the CMP Study Area: The Avenue 57 TOD (Highland Park Station) is located northeast of the Parkway in Highland Park. The Specific Plan provides an opportunity to revive, physically and economically, the commercial center of Highland Park (Figueroa St) and the surrounding neighborhood. The Plan designates compact, mixed-use development in the form of residential, commercial, and live/work with enhanced pedestrian permeability within a half-mile of the station. This type of transit-oriented district provides nearby residents and commuters with the convenient option to use mass transit instead of the automobile.

In addition to transformation the Highland Park station area, the Plan brings into zone compliance the artist community, which has been a significant part of the neighborhood's history and reinforces the Highland Park HPOZ to maintain the architectural history and rich historic context.

Summary of Adopted Planning Document: The Avenue 57 TOD Plan is separated into seven subareas: Major Activity Centers, Secondary Activity Centers, Mixed-use Areas, Avenue 58 Farmers Market, Art Walk (Avenue 57 abutting the Parkway), Marmion Way Transit Corridor, and Residential Areas. Development incentives applicable to each subarea may have a direct impact on Figueroa Street or the Parkway. A list of development incentives include: joint living and work quarters, pedestrian amenities floor area bonus, targeted use floor area bonus, adaptive reuse, mixed use, reduced parking, floor area bonus lot assembly, and bonus for community uses. The Plan designates major activity centers, secondary activity centers, and mixed-use on Figueroa Street and provides development incentives for joint and work quarters. New residential density on commercially zoned property within Avenue 57 Transit Oriented District Plan shall be limited to RD1.5 density to maintain consistency with the adopted Northeast Los Angeles Community Plan.

4. Mount Washington/Glassell Park Specific Plan:

Relevance to the CMP Study Area: The Mount Washington and Glassell Park communities are recognized by their green hills and mature vegetation which can be seen northwest of the Parkway. The Mount Washington/Glassell Park Specific Plan is in place to preserve these notable views by limiting residential densities and land use intensities to those that can be accommodated by the existing infrastructure and topography.

Summary of Adopted Planning Document: The Mount Washington/Glassell Park Specific Plan is within the Northeast Los Angeles Community Plan boundary. The Plan strives to preserve the single-family residential character and to limit land use intensities and population densities to uses/densities that can be accommodated by the transportation system, public service facilities, utilities and topography. The Plan also focuses on the distinctive hills and canyons, mature vegetation, natural open space, and pedestrian walking trails opportunities, all worthy of preservation.

5. Highland Park-Garvanza HPOZ (2010)

Relevance to the CMP Study Area: The Highland Park-Garvanza HPOZ is the largest HPOZ, spanning the Parkway, and provides design guidelines for structures, natural features, landscape, and the public realm. Any "green" enhancements/recommendations for the Parkway, and within the Highland Park-Garvanza HPOZ, must be in compliance with these design guidelines.

Summary of Adopted Planning Document: The Highland Park-Garvanza Historic Preservation Overlay Zone (HPOZ) is located just west of the South Pasadena city boundary, encompassing land and communities on both sides of the Parkway. The original Highland Park HPOZ (1994) was amended in 2010 to include historic structures in the Garzanza, Montecito Heights, and Mount Angelus communities. The Highland Park-Garvanza HPOZ (2010) supersedes the Highland Park HPOZ (1994) document.

As the largest HPOZs, the Highland Park-Garvanza includes approximately 4,000 structures (including over 50 Los Angeles City Historic-Cultural Monuments) and was the first HPOZ to include commercial buildings (5700 block N. Figueroa Avenue). The Highland Park-Garvanza Preservation Plan serves as an implementation tool of the Northeast Los Angeles Community Plan. The HPOZ Ordinance requires that the HPOZ Board make all decisions related to maintenance, repair, restoration and minor alterations to a property. Infill of single-family homes and commercial uses is highly reviewed and regulated. Along with private residential and commercial development, public spaces and buildings also contribute to the unique historic character of a preservation zone.

6. Lincoln Heights HPOZ and Lincoln Heights Community Design Overlay:

Relevance to the CMP Study Area: The Lincoln Heights community is located southwest of the Parkway and east of Interstate 5. While there is no direct relationship between the Lincoln Heights HPOZ and the Parkway, the Lincoln Heights Community Design Overlay allows for more compact development on Broadway and Pasadena Avenue which may have an adverse affect on the Parkway in terms of added congestion.

Summary of Adopted Planning Document: Lincoln Heights is one of Los Angeles' first residential suburbs located northeast of downtown. Architecture styles of homes in Lincoln Heights vary and include Victorian, Arts and Crafts, and Period Revival. The intent of the Lincoln heights Preservation Plan is to ensure that historic preservation is both affordable and attainable for all property owners. The Lincoln Heights HPOZ primarily focuses on the historic preservation of single-family homes. The Lincoln Heights Community Design Overlay includes the commercial uses along Broadway and Pasadena Avenue. The Lincoln Heights Community Design Overlay is intended to improve the appearance and enhance the identity of the Lincoln Heights community through the application of design guidelines and standards. Lincoln Heights features a diversity of commercial uses creating opportunities for mixed-use development.

7. Silver Lake- Echo Park- Elysian Valley Community Plan (2004) – Land Use:

Relevance to the CMP Study Area: The Silver Lake-Echo Park-Elysian Valley Community Plan designates the land uses (residential, commercial, industrial, open space, public facilities, etc) for communities adjacent to the Four-Level Interchange and west of Parkway. The Plan ensures the protection of notable open spaces directly fronting the Parkway such as Elysian Park, Elysian Reservoir, Radio Hill Gardens, and Dodger Stadium.

Summary of Adopted Planning Document: The Silver Lake-Echo Park-Elysian Valley Community Plan area is located north of Downtown Los Angeles and separated from downtown by the community of Chinatown. The planning area is primarily single and multi-family residential

housing with notable open spaces: Elysian Park, Dodger Stadium, and the Los Angeles River along its eastern boundary. The Parkway runs east of Dodger Stadium and west of the Los Angeles River.

Residential: The Echo Park community, located directly west of the Four Level Interchange, is one of the oldest neighborhoods in Los Angeles. Elysian Valley comprises the northeast portion of the Plan area and is located north of Interstate 5 and west of the Los Angeles River. The community is characterized by abutting residential and industrial uses, with the dominant use being industrial; however, the portion of Elysian Park adjacent to the Parkway mostly consists of single-family homes.

Commercial: Sunset Boulevard is the notable commercial corridor, adjacent to the Four Level Interchange, lending Echo Park and Silver Lake their distinctive and identifiable character. Sunset Boulevard also provides a prime opportunity for transit oriented development and pedestrian friendly, mixed-use and infill development.

8. Silver Lake- Echo Park- Elysian Valley Community Plan (2004) Circulation Element:

Relevance to the CMP Study Area: The Silver Lake-Echo Park-Elysian Valley Community Plan Circulation Element identifies the existing transportation infrastructure and planned multi-modal improvements for communities adjacent to the Four Level Interchange and Parkway. The Plan area has a robust transit network and a higher percentage of transit use for work trips, as opposed to driving, than the citywide average. Opportunities for unconventional multi-modalism (pedestrian, bicycle, and equestrian) will augment the existing transit infrastructure and provide residents with more alternatives to arriving at their destinations.

Summary of Adopted Planning Document: This Community Plan area has a higher percentage of transit use for work trips than the citywide average – the trend is attributed to the area's lower household income and high level of transit service. Aside from traditional transportation uses, multi-modalism (pedestrian, bicyclists, and equestrians) is encouraged in the Circulation Plan. The Los Angeles City Bicycle Plan (adopted 2010) identifies several backbone and support bicycle routes through the communities of Silver Lake, Echo Park, and Elysian Valley. The Citywide Major Equestrian and Hiking Trails Plan identified proposed equestrian trails located in Elysian Park, traveling southeast to northwest along the Interstate 5 and Riverside Drive. In addition, the Los Angeles River Revitalization Plan highlights pedestrian and bicycle linkages through the community.

9. Angelino Heights HPOZ

Relevance to the CMP Study Area: Angelino Heights is bordered by Echo Park to the west, Interstate 101 to the south, and Sunset Boulevard to the north; it is also located west of the Parkway. While there is no direct relationship between the Angelino Heights HPOZ and the Parkway, it is important to note the historical and architectural significance of early suburban living in Los Angeles.

Summary of Adopted Planning Document: The Angelino Heights HPOZ was created in 1981 as the first Historic District in Los Angeles. Angelino Heights, the first suburb of the City, became the location of the City's first HPOZ District (1983) due to its high concentration of Victorian homes and valuable architectural legacy.

10. Central City Community Plan - Land Use:

Relevance to the CMP Study Area: While the Central City Community Plan area does not have a direct relationship to the Parkway, it is located east of the Four Level Interchange. The Central City Community Plan designates the land uses (residential, commercial, industrial, open space,

public facilities, etc) for the districts east of the Four Level Interchange. As more housing is developed within the Central City Community Plan area, the residential population in Downtown Los Angeles will increase; this will not affect the Parkway, as residents will use alternative modes of transportation (rail, bus, bike, and walk) for their short commutes to work.

Summary of Adopted Planning Document: The Central City Community Plan area is located south of Sunset Boulevard/Cesar Chavez Avenue, north of Interstate 10, east of the Interstate 110 (which becomes the Parkway at the Four Level Interchange) and west of Alameda Street; it also includes the east side of the Four Level Interchange. Land uses are primarily governmental, financial, and industrial; however, the resident population is growing as people find a renewed interest in urban living and existing vacant and historic commercial and industrial buildings are being converted to residential uses. The Plan is composed of nine districts: Civic Center, Bunker Hill, Financial Core, Convention Center/Arena, South Park, Center City/Historic Core, Little Tokyo, Central City East and South Markets. The district adjacent to the Parkway (Four Level Interchange) is Civic Center and contains public facilities at the local, county, state, and federal level.

11. Central City North Community Plan (2000) - Land Use:

Relevance to the CMP Study Area: The Central City North Community Plan designates the land uses (residential, commercial, industrial, open space, public facilities, etc) for the communities adjacent to the Parkway, most specifically Chinatown. Many of the proposed land uses designations in 2000 Plan do not recognize recent and transformative planning efforts affecting land adjacent to the Parkway and Arroyo Seco: the Cornfields Arroyo Seco Specific Plan (2010) which converts industrial land uses east of the Parkway to low intensity, light industrial to a mix of residential, commercial, and high valued light industrial (R&D, creative industry). The Los Angeles River Revitalization Master Plan (2007) transforms the Los Angeles River and will catalyze development along the proposed "riverfront".

Summary of Adopted Planning Document: The Central City North Community Plan area is adjacent to downtown Los Angeles with the Los Angeles River to the east, the City of Vernon to the south, Alameda Street and Sunset Boulevard to the west, and Stadium Way and Broadway to the north. Communities within the planning area include: Chinatown, parts of Little Tokyo, and parts of the original Mexican Pueblo. The community of Chinatown, primarily residential, is north of the Interstate 101.

> Residential: Nearly all housing within the planning area is low-rise multifamily (39 DU/AC) residential. The concentration of low-rise multifamily is located west of the Parkway and southeast of the Four Level Interchange. The Chinatown Commercial district consists of a mix of low-rise buildings with pedestrian oriented storefronts along segments of Hill Street and Broadway. Industrial land uses are located north of the Interstate 101, surrounding the Chinatown Commercial district.
>
> Industrial/Government: The northern industrial area adjacent to the Los Angeles River is now part of the Corn Fields/Arroyo Seco Specific Plan (CASP). City and County (public facilities) facilities including the Men's Central Jail, Piper Technical Center, DWP yards, Union Station, and the Alameda District Plan are part of this area. The William Mead Housing complex is located off Main Street and is the only housing component in this area.
>
> Artists-in-Residence District: The Artists-in Residence District is located just outside Little Tokyo and is primarily made up of old warehouses converted to artists' lofts and studios.

12. Central City North Community Plan (2000) Circulation Element:

Relevance to the CMP Study Area: The Central City North Community Plan Circulation Element identifies the existing transportation infrastructure and planned multi-modal improvements for communities adjacent to the Parkway and Arroyo Seco, most specifically Chinatown. The Plan was adopted in 2000, prior the completion of the Chinatown Gold Line station (2003) and it also does not include the proposed bicycle/pedestrian infrastructure as part of the Los Angeles Revitalization Master Plan (2007). The Central City North Community Plan Circulation Element is primary focused the automobile and existing street network to improve the level-of-service of roads. Multi-modal connectivity existing and proposed will provide residents and commuters with transportation alternatives to reach their destinations, alleviating traffic/congestion on the Parkway.

Summary of Adopted Planning Document: Three major freeways are located within the Central City North Community Plan: Interstate 5, Interstate 10, and SR 110 (Parkway). Major highways are Sunset Boulevard/ Cesar Chavez Avenue, First Street, and segments of Vignes and Santa Fe Avenue. The street segments are on Alameda Street between Olympic and 15th, and Olympic Boulevard between Alameda and Santa Fe. Sign and striping improvements will be made to increase the LOS at the following locations: First Street – Alameda Street to Mission Road, Fourth Street- Fourth Place to Mission Road, Alameda Street- Alpine to Cesar Chavez Avenue, Alameda Street- Olympic to 15th, Alpine-Broadway to Alameda, Broadway- Bishop Road to Cesar Chavez Avenue, Center Street- Commercial Street to Temple Street, Main Street, College to Alameda, Ord Street - Yale to Broadway, Olympic Boulevard- Alameda Street to Santa Fe Avenue, Santa Fe Avenue – Temple Street to First Street, Santa Fe Avenue – 15th Street to 25th Street, Vignes Street- Alameda Street to Cesar Chavez.

13. Los Angeles River Revitalization Master Plan (2007):

Relevance to the CMP Study Area: The Los Angeles River Revitalization Master reconnects surrounding communities (Chinatown, proposed Cornfields Arroyo Seco, Lincoln Heights, and Northeast Los Angeles) to the Los Angeles River via bicycle and pedestrians paths and a continuous park network. The Plan includes stream restoration, water quality treatment and management for the confluence of the Arroyo Seco and Los Angeles River. The Plan also identifies specific improvements made to the Taylor Yard (a City maintenance yard adjacent to the Arroyo Seco), Chinatown-Cornfields (planned development adjacent to the Arroyo Seco), and the Los Angeles River and Arroyo Seco confluence.

Summary of Adopted Planning Document: Los Angeles River Revitalization Master Plan (LARRMP) addresses the renewal of the Los Angeles both environmentally and economically. The Plan identifies a continuous river greenway (green connections linking to existing public open spaces), restoring the Los Angeles River to its natural riparian ecosystem, and creating identity and civic pride in the communities adjacent to the River.

> The River Greenway: The River Greenway will be used to reconnect adjacent communities to the Los Angeles River via a green spine in the City of Los Angeles. Safe and pedestrian friendly connections to the River Greenway will be provided by a system of arterial and local green streets, both bicycle and pedestrian friendly, and paseos with wide sidewalks and tree canopies.
>
> Taylor Yard: A bicycle and pedestrian bridge, over the Los Angeles River, will be located at the end of Dorris Place (currently the City maintenance yard). The Los Angeles River Bike Path will terminate near the Riverside Drive Bridge. At the confluence with the Arroyo Seco, there is an opportunity to link the Los Angeles River with the

extensive trail and open space systems of the Arroyo Seco. Future plans include a new pedestrian bridge and possible Avenue 19 Bridge undercrossing connecting the Arroyo Seco with the Los Angeles River Gateway.

Chinatown-Cornfields Area: The Plan calls for dramatic economic development of the Cornfields area and assumes that Main Street will once again become an important mixed-use walking street with a substantial mix of office and residential uses in dense buildings and towers at key locations, especially along the new riverfront. Green street connections, pedestrian portals, a proposed river greenway and recreational trail, and promenades are improvements identified in Chinatown River Park.

The Arroyo Seco Confluence: The confluence of the Arroyo Seco and the Los Angeles River will celebrate the natural intersection of two waterways with significant historical and cultural importance. The Arroyo Seco confluence will have habitat and stream restoration, water quality treatment and flood management, and strengthened ecological connections to the San Gabriel Mountains. Together, the Arroyo Seco and the Los Angeles River will connect the three largest parks in the City of Los Angeles, Griffith, Elysian, and Debs.

14. City of Los Angeles Bicycle Plan (2010):

Relevance to the CMP Study Area: The City of Los Angeles Bicycle Plan augments the existing bicycle network in the City of Los Angeles by adding three types of bikeways: backbone, neighborhood, and green. These new bicycle lane classifications will provide connectivity in communities adjacent to the Parkway and Arroyo Seco to Downtown Los Angeles and the Los Angeles River.

Summary of Adopted Planning Document: The 2010 Plan incorporates recommendations of the River Revitalization Master Plan to provide a continuous bicycle path along the south and west sides of the Los Angeles River and identifies connections to the River to enhance access to existing and future segments for non-motorized transportation and recreation. The Plan introduces three new bikeway networks: the backbone bikeway network (Backbone), the neighborhood bikeway network (Neighborhood), and the green bikeway network (Green).

Backbone: Backbone bicycle lanes will enable access to major employment centers, transit stations and stops, educational, retail, entertainment, and other open space and recreational resources. (Class II). Backbone bike lanes are located along the corridor on Cesar Chavez, Broadway, Sunset, First Street, Second Street, Stadium, Main, Figueroa, Avenue 19, Pasadena, Avenue 28, Hill, San Fernando, Monterey, Mission, Cypress, York, and Glendale and along SR 134.

Neighborhood: Neighborhood bicycle lanes are located on local and collector streets which are characterized by low traffic volumes and slower speeds. (Class III). Neighborhood bicycle lanes are located on Monte Vista, San Pasqual, Meridian, Avenue 54, Avenue 50, Hill, Griffin, Lincoln Park, Manitou, Main, Avenue 19, Humboldt, and Spring Street.

Green: Green bicycle lanes enhance access to the City's green open spaces particularly river channels like the Los Angeles River (Class 1). Greenway connections are planned along the Los Angeles River and along the Arroyo Seco Parkway. The Greenway runs from Avenue 19 along the Parkway to South Pasadena and the entirety of the Los Angeles River.

Mobility hubs provide car share and vehicle charging stations, and a variety of services oriented to bicyclists including attendant operated showers, restrooms, bicycle repair, and bicycle lockers. A clean mobility hub is located on northeast of the Four Level Interchange at Cesar Chavez and Main Street; and at First and Broadway. A multi-mobility hub is similar to a clean mobility hub except it would not provide attendants to oversee the bicycle lockers and storage areas or typically have restrooms and showers. Two multi-modal hubs are located within the corridor on First and Central which is southeast of the Four Level Interchange; and Figueroa and Hill Street.

15. Cornfields Arroyo Seco Specific Plan (2010 Draft)

Relevance to the CMP Study Area: The Cornfields Arroyo Seco Specific Plan area is located east of Chinatown and adjacent to the Los Angeles River. Land within the Plan boundary is strictly light industrial and the transformation of the area to mixed-use (residential, commercial, open space, and employment) will directly affect neighboring communities (Chinatown, Lincoln Heights, Elysian Park), the Los Angeles River, Arroyo Seco, and Parkway. The proposed circulation network of the Plan will augment the infrastructure of the neighboring communities along the Parkway transforming existing streets into "green/complete" streets allowing for multimodal transportation and connectivity.

Summary of Adopted Planning Document: The Cornfield Arroyo Seco Specific Plan incorporates approximately 660 acres of existing light industrial land uses and publicly owned maintenance, utility and railway yards. The Los Angeles River runs through the center of the planning area while the Arroyo Seco and Parkway run east west through the northernmost section. The Gold Line completes the infrastructure network and cuts diagonally across the planning area. The Plan is divided into five subareas; Area Three, Area Four, and Area Five directly relate to the Arroyo Seco and Parkway.

> Area Three: Area Three is classified as the "Rivertown" and sits between Broadway and the Los Angeles River, Interstate 5, and the Arroyo Seco. The central and northern portions of the Area Three will become a hub for light industrial and R&D space. A future park on the existing Fire Department property is envisioned for the area.
>
> Area Four: Area Four contains the Lincoln Heights/Cypress Park Gold Line Station and is adjacent to the Heritage Square Station. New parks surrounded by a mix of residential, light industrial, and Research &Development land uses will create an anchor for the Urban Center, Urban Village, and Urban Innovation districts. The pedestrian overpass gauntlet, that currently links Area Four to Cypress Street across the Parkway, will be transformed into welcoming pathway as a result of redesign of the overpass and the creation of defensible open spaces at its northern and southern entrances on either side of the Parkway.
>
> Area Five: Area Five is framed by the Arroyo Seco and the Los Angeles River to the southeast. Figueroa Street will evolve from an auto-oriented arterial into a more pedestrian friendly environment. An Urban Center District, located in Area Five, will provide office, R&D, and light industrial jobs while enhancing the quality of the public realm through open spaces. Shaded streets with wide sidewalks will seamlessly join to Confluence Park and the Los Angeles River. The east and the western portions of Figueroa Street will be a range of small to medium sized shops and offices.
>
> Collector-modified streets: Collector-modified streets will augment the existing street network by emphasizing multimodal travel and serving as a "Main Street" for Urban Villages and Urban Centers. Collector-modified streets have one vehicle lane in each

direction wide sidewalks, exclusive bike lanes, on street parking, landscaping, and storm water BMPs. Pasadena Avenue, north of Avenue 33, will be a collector-modified street.

Secondary modified I streets: Secondary modified I streets emphasize intra-city, multimodal travel, and connect to urban activity centers. A secondary modified I street has two lanes in each direction with wide sidewalks, exclusive bike lanes, on street parking, landscaping, and storm water BMPs. Figueroa Street will be a secondary-modified I street.

Secondary modified IV sheet: Secondary modified IV streets are more constrained and do not include on-street parking or bicycle lanes. Avenue 26, north of the Gold Line Station, will be a secondary-modified IV street.

16. Los Angeles State Historic Park General Plan (2005):

Relevance to the CMP Study Area: The Los Angeles State Historic Park (LASHP) augments the existing park network adjacent to the Parkway by providing a continuous green linkage to the Los Angeles River and Arroyo Seco and provides a green space for communities along the Los Angeles River (Chinatown, proposed Cornfields Arroyo Seco community).

Summary of Adopted Planning Document: The Los Angeles State Historic Park (LASHP) is located within a half mile of El Pueblo de Los Angeles Historical Monument, on what has been recorded as communal agricultural land during the pueblo's early years. Surrounding the Park are the historic and ethnically diverse communities of Lincoln Heights, Elysian Park, Solano Canyon, Chinatown, Chavez Ravine, and William Mead Homes. The Park has a listing as Los Angeles Cultural Landmark #83 for its historic use as the River Station/Southern Pacific Railroad site. It will establish important links to the cultural, historical, recreational, and environmental resources of the community, including the Los Angeles River and Greenway, surrounding neighborhoods and parks, and to El Pueblo and downtown Los Angeles.

17. Northeast Hillsides Zone Change Ordinance (2009)

Relevance to the CMP Study Area: The Northeast Hillsides Zone Change Ordinance regulates development in communities (El Sereno, Montecito Heights, Monterey Hills, Hermon, and Lincoln Heights) southeast of the Parkway in order to preserve the integrity of the hillsides and open spaces (fronting the Parkway) by restricting overdevelopment.

Summary of Adopted Planning Document: The Northeast Hillsides Zone Change Ordinance (2009) addressed fire and safety issues of hillside communities (El Sereno, Montecito Heights, Monterey Hills, Hermon, and Lincoln Heights) in Northeast Los Angeles while protecting the character, open space, and quality of these communities against overdevelopment. The Ordinance established new regulations, based on size and slope of the lot, for hillside properties by setting limits on building height, retaining wall height, and square footage for all new construction projects; approximately 11,000 properties were impacted by the adopted ordinance.

South Pasadena Adopted Planning Documents

18. South Pasadena Bicycle Master Plan Update (2011)
19. Fair Oaks /SR 110 Interchange Improvement Project
20. Freemont Traffic Calming Concept Plan (2009)
21. Fair Oaks Avenue Street Improvement Project
22. City of South Pasadena Land Use Element (1998)
23. City of South Pasadena Circulation Element (1998)
24. Mission Street Specific Plan (1996)

18. South Pasadena Bicycle Master Plan Update (2011)

Relevance to the CMP Study Area: The South Pasadena Bicycle Master Plan was recently adopted in 2011 and incorporates proposed bicycle improvements in the City of Los Angeles Bicycle Plan (2011) and the Los Angeles River Revitalization Master Plan (2007). The Plan allows for a seamless bicycle network along the Parkway connecting directly to the Los Angeles River and Downtown Los Angeles; it also connects to existing bicycle lanes in Pasadena linking South Pasadena to the Parkway and north to the Arroyo Seco.

Summary of Adopted Planning Document: The South Pasadena Bicycle Master Plan proposes a comprehensive network of bikeways totaling 22.8 miles. There is an existing Class I bike path along the Arroyo River running through Arroyo Seco Park; the Edison Easement is a proposed Class I bike lane. Proposed Class II and Class III bicycle lanes for South Pasadena are provided below:

> Proposed Class II bike lanes: Arroyo Dr, Pasadena Ave, Monterey Road, Arroyo Verde, York Blvd, and Orange Grove (north of Mission St). There is an existing Class II bike lane on Raymondale Drive.
>
> Proposed Class III bike lanes: San Pascual Avenue, Stoney Drive, Arroyo Verde, Orange Grove, Meridian, Fremont, Fair Oaks, Grevelia, and State Street.
>
> Multimodal Integration: there are three recommended bikeway projects that provide direct access to the Mission Gold Line Station Gold Line Station: Pasadena/Mission, El Centro/Oxley, and Meridian. Mission Street will have a proposed green bicycle lane. Lohman Lane has been designated as the Arroyo Seco multi-use trail.

The Plan provides continuity with the bicycle planning efforts in neighboring cities of Pasadena and Los Angeles. The following proposed bikeways, in adjacent cities, are designated as Class II or Class III and planned to connect with South Pasadena's bikeway network:

> Pasadena: Arroyo Drive, Orange Grove Blvd, Pasadena Avenue
> Los Angeles: San Pascual, York Blvd, Monterey Road, Avenue 60, Collins Ave, and Huntington Drive.

19. Fair Oaks Avenue/Parkway Interchange Improvement Project

Relevance to the CMP Study Area: The Fair Oaks Avenue/Parkway Interchange Improvement project will improve traffic flow and mitigate congestion on the Parkway at Fair Oaks Avenue in South Pasadena. This will increase efficiency of entering onto the Parkway and eliminate queuing traffic on local streets.

Summary of Adopted Planning Document: The improvements planned for the interchange of the Parkway and Fair Oaks Avenue includes the construction of a new on-ramp at State Street, east of Fair Oaks Avenue; the new on-ramp at State Street will allow for removal of the double left-turn

lanes at the existing on-ramp onto the Parkway significantly improving traffic flow on Fair Oaks Avenue. Additionally, the existing off-ramp onto Fair Oaks Avenue will be expanded from two to four lanes. Adding two off-ramp lanes at Fair Oaks Avenue will eliminate the queuing of traffic on the Parkway exiting on Fair Oaks Avenue. This will be accomplished by closing Grevelia Street to through traffic just west of Fair Oaks Avenue.

20. Fremont Avenue Traffic Calming Concept Plan (2009)

Relevance to the CMP Study Area: While there is no direct relationship between the Fremont Avenue Traffic Calming Concept Plan and the Parkway, Fremont Avenue is the main north/south thoroughfare in the City of South Pasadena. Traffic calming and safety measures will provide a more pedestrian friendly environment for South Pasadena residents; it will also reduce the speed along Fremont Avenue which may eliminate Fremont Avenue as a preferred north/south thoroughfare for commuters.

Summary of Adopted Planning Document: Adopted in 2009, the Fremont Avenue Traffic Calming Concept Plan is designed to increase safety, better accommodate pedestrians and cyclists along the corridor, achieve driving that is sensitive to the street's context and be cost conscious and implementable in stages. Traffic calming measures are used to reduce speed along Fremont Avenue.

21. Fair Oaks Avenue Street Improvement Project

Relevance to the CMP Study Area: Fair Oaks Avenue runs parallel to the Parkway, north of Huntington Drive, in South Pasadena. While there is no direct relationship to between Fair Oaks Avenue Street Improvement Project (focused on pedestrian safety) and the Parkway, the Project will enhance the pedestrian experience along Fair Oaks Avenue and link the neighborhoods located south and north of the Parkway.

Summary of Adopted Planning Document: The Fair Oaks Avenue Street Improvement Project is designed to improve movement along Fair Oaks Avenue, with an emphasis on pedestrian safety. The improvements include the installation of pedestrian bulb-outs and stamped concrete crosswalks at key intersections. There are also landscaped medians along Fair Oaks between Columbia Street and Monterey Road.

22. City of South Pasadena Land Use Element (1998)

Relevance to the CMP Study Area: Land Use Element designates the land uses (residential, commercial, industrial, open space, public facilities, etc) for the City of South Pasadena. Plan was adopted in 1998, prior to the completion of the Mission Gold Line station (2003); the Plan does include the Mission Street Specific Plan which allowed for compact development adjacent to the Gold Line station. Many of the proposed land use designations in the 1998 Plan are currently in place today, most importantly the build-out/implementation of the Mission Street Specific Plan which was instrumental in providing residents, commuters, and visitors with an alternative to the automobile for trips to Downtown Los Angeles and Pasadena.

Summary of Adopted Planning Document: The majority of land uses in the City of South Pasadena are designated as residential of varying densities. Since South Pasadena is at build out, any new development, and growth, will largely involve the redevelopment of underutilized parcels and the renovation of existing structures, increasing residential density within the City.

> Residential: North of the Parkway, between Arroyo Drive and Fair Oaks Avenue, land uses are very-low to low density residential (5 DU/AC). East of Fair Oaks Avenue and adjacent to the Parkway, there are high density residential land uses at up to 24 DU/AC. South of the Parkway there are medium (6-14 DU/AC) and high density (14-24 DU/AC)

residential land uses.

Commercial: Fair Oaks Avenue, located south of the Parkway is designated as a 'focus area" for revitalization, adaptive reuse and new development of commercial shops fronting both Mission Street and Fair Oaks Avenue. The Mission Street Specific Plan, Mission Street to Fair Oaks Avenue, was developed to address the impacts of the Gold Line station (completed 2003) on Mission Street and to implement the community vision of Mission Street as South Pasadena's pedestrian oriented, historic shopping street.

Arroyo Annexation: The Arroyo Annexation area is presently located in the City of Los Angeles, between the Parkway and the South Pasadena city limits. Inaccessible from Los Angeles, it represents a natural extension of the Arroyo Seco parkland and offers the potential for placing fallow land north of the Arroyo Seco channel into the recreational use by South Pasadena.

23. South Pasadena Circulation Element: (1998)

Relevance to the CMP Study Area: The Circulation Element identifies the existing transportation infrastructure and planned multi-modal improvements for South Pasadena. The Plan was adopted in 1998, prior to the completion of the Mission Gold Line station connecting the City of South Pasadena regionally; it also does not include the recently adopted South Pasadena Bicycle Plan (2011) which is instrumental in providing bicycle connectivity along the Parkway, and to Los Angeles and Pasadena.

Summary of Adopted Planning Document: The Parkway is one of two main regional transportation facilities connecting South Pasadena to Los Angeles and Downtown Los Angeles (the other is the Metro Gold Line). Two major arterials are located in the City of South Pasadena including Fair Oaks Avenue and Huntington Drive. Several minor arterials are located in the City including: Mission Street, Pasadena Avenue, Monterey Road, Grevelia Street, Orange Grove, and Fremont Avenue. The Mission Gold Line station (completed 2003) is located at the intersection of Mission Avenue and Meridian.

24. Mission Street Specific Plan (1996):

Relevance to the CMP Study Area: The Mission Street Specific Plan designates a historic shopping district along Mission Street with enhanced pedestrian permeability within a half-mile of the Mission station. The Plan, now implemented, provides nearby residents and commuters with the convenient option to use mass transit instead of the automobile for trips to Downtown Los Angeles and Pasadena. While the Mission Street Specific Plan does not have a direct relation to the Parkway, its compact development allows for travelers to forgo the Parkway and use alternative transportation (light rail) to reach their destinations.

Summary of Adopted Planning Document: The Mission Street Specific Plan was created in preparation for the Gold Line Mission Station located at Mission and Meridian. The Plan encourages the development of Mission Street as a pedestrian-oriented shopping street that builds on the historic character of the established Mission West Historic District. Mission Street is located southeast of the Parkway. The Mission Street Specific Plan appears to be built out and does not have a direct relation to the Parkway.

City of Pasadena Adopted Planning Documents

25. City of Pasadena General Plan Land Use Element (2004)
26. Central District Specific Plan (2009)
27. South Fair Oaks Bio-Tech Center Specific Plan (1998)
28. City of Pasadena General Plan Mobility Element (2004)
29. Pasadena Bicycle Transportation Plan (2011)
30. Arroyo Seco Master Plan (2003)
31. Arroyo Seco Parks and Recreation Historic District

25. City of Pasadena General Plan Land Use Element (2004)

Relevance to the CMP Study Area: The Land Use Element designates the land uses (residential, commercial, industrial, open space, public facilities, etc) for the City of Pasadena. The Plan has been instrumental in allowing Pasadena to be "a city where people can circulate without cars" by allowing for mixed-use development oriented around transit (Gold Line stations completed in 2003). The reduction of automobile trips to/within the City, made possible through multi-modalism and transit-oriented development, alleviates congestion of the Parkway by providing residents, commuters, and visitors with transportation alternatives.

Summary of Adopted Planning Document: The Land Use element focuses to protect residential neighborhoods and to create mixed-use urban environments oriented to transit and pedestrian activity. Targeted areas of higher density development will be of high quality and reflect the historic scale and character of Pasadena. Specific plans are used in seven major targeted development areas: the Central District, West Gateway, South Fair Oaks Biomedical Center, East Colorado Boulevard, East Pasadena, North Lake, and Fair Oaks/Orange Grove. All seven areas emphasize linkages to transit by clustering mixed-use projects near light rail stations and along Lake Avenue and Colorado Blvd. Specific Plans most applicable to the Parkway are the Central District Specific Plan and South Fair Oaks Bio-Tech Center Specific Plan.

26. The Central District Specific Plan (2009):

Relevance to the CMP Study Area: The Central District Specific Plan was revised in 2009 and envisions the Parkway as a more visually compelling auto-entrance into Pasadena. In efforts to further implement the "Arroyo Corridor/Fair Oaks" gateway, the City of Pasadena created design guidelines that address street environment, wayfinding and lighting.

Summary of Adopted Planning Document: The Central District Specific Plan area is located north of Glenarm along the Parkway. This Plan includes a diverse mix of land uses designated to create an employment district in the center of Pasadena. The Parkway is also part of a Central District Specific Plan sub district designation "Arroyo Corridor/Fair Oaks", otherwise known as the gateway to downtown. The Arroyo Corridor/Fair Oaks is an important gateway to downtown that also supports a broad mix of uses at the periphery of the urban core. The objective of this sub district is to establish the Parkway as a visually appealing entrance corridor and to provide an attractive opportunity for employment-generating uses (arts, technology, and knowledge based enterprises) within a revitalized low scale, mixed-use setting.

27. South Fair Oaks Bio-tech Center Specific Plan (1998):

Relevance to the CMP Study Area: While the South Fair Oaks Bio-tech Center Specific Plan does not directly affect the Parkway, the Plan facilitates South Fair Oaks Avenue as an employment hub for biomedical and research facilities. Efficiency along the Parkway will not be affected as employees working within the bio-tech hub in Pasadena will have a reverse commute.

Summary of Adopted Planning Document: The South Fair Oaks Plan Bio-tech Center Specific Plan is located south of Glenarm and focused around Fair Oaks and Raymond. This Plan was

adopted in 1998 to facilitate the transition of this area to become a center for biomedical and research facilities. The Plan includes adaptively reusing the historic Glenarm Power Plant as a biomedical and/or technology based function.

28. City of Pasadena General Plan Mobility Element (2004)

Relevance to the CMP Study Area: The Mobility Element identifies the existing transportation infrastructure and planned multi-modal improvements for Pasadena. The Plan was adopted in 2004 and does not include the recently adopted Pasadena Bicycle Transportation Plan (2011). The Plan focuses on the six Gold Line stations and multi-modal connectivity which will provide residents and commuters with transportation alternatives to reach their destinations, alleviating traffic/congestion on the Parkway.

Summary of Adopted Planning Document: The City of Pasadena updated their Mobility Element in 2004 to include the six Gold Line stations within the City boundaries and the considerable opportunities for Pasadena to coordinate other local transit, bicycle and pedestrian enhancement programs. The Plan further adds to the City's vision of where people can circulate without cars. As part of this Plan, the Parkway is a designated multi-modal corridor and a designated truck route.

29. Pasadena Bicycle Transportation Plan (2011):

Relevance to the CMP Study Area: The Pasadena Bicycle Transportation Plan was recently adopted in 2011 and incorporates proposed bicycle improvements in the City of Los Angeles Bicycle Plan (2011) and the South Pasadena Master Bicycle Plan. The 2011 Plan proposed a continuous bicycle path along the entire length of the Arroyo Seco.

Summary of Adopted Planning Document: The City of Pasadena updated their Bicycle Transportation Plan in 2011 to include the recently updated planning efforts from neighboring jurisdictions such as South Pasadena and the City of Los Angeles. The City of Los Angeles has an existing bicycle route on San Pascual Avenue that connects to South Grand Avenue, an existing bicycle route in Pasadena. The City of South Pasadena proposed Class II bikeways that would connect to the City of Pasadena's bicycle lanes along Fair Oaks Avenue, Meridian Avenue, and Orange Grove Avenue. The bikeways on Meridian Avenue and Orange Avenue will connect to Pasadena's bikeway on Orange Grove Boulevard.

The City of Pasadena has plans to construct a bike path along the Arroyo Seco starting in Hahamonga Watershed Park to the I-210 Freeway with future visions for a bike path along the Arroyo Seco, all the way to the southern City limit; this bike path would eventually link to the Los Angeles River bike path. As part of the Plan, the City has designated Marengo as a Class II bikeway and Glenarm as a Class III bikeway.

30. Arroyo Seco Master Plan (2003)

Relevance to the CMP Study Area: The Arroyo Seco Master Plan directly affects the Arroyo Seco, but excludes the Parkway. The Plan connects three sections of the Arroyo Seco to several regional trail systems (hiking, equestrian, and pedestrian); these regional trails and local pedestrian pathways make up the network of trails in the Lower Arroyo and form part of the Rim of the Valley regional trail system.

Summary of Adopted Planning Document: The Central Arroyo Seco Master Planning boundaries are between the 134 Ventura Freeway and the I-210. The Lower Arroyo Seco Master Plan area extends from the Colorado Street Bridge on the right to the South Pasadena city limits, on the left following the Arroyo Seco flood control channel. Several regional trail systems link the three sections of the Arroyo Seco to the north and south. From the Lower Arroyo, the Arroyo Seco Trail

through South Pasadena connects to Debs Regional Park and could potentially connect to the Los Angeles River.

31. Arroyo Seco Parks and Recreation Historic District

Relevance to the CMP Study Area: The Arroyo Seco Parks and Recreation Historic District protects the "cultural landscape" of the Upper, Middle, and Lower Arroyo Seco Parks. As improvements are proposed for the Arroyo Seco, certain historic features identified in the Arroyo Seco Parks and Recreation Historic District must remain protected.

Summary of Adopted Planning Document: The Arroyo Seco Parks and Recreation Historic District's contributing features include the Rose Bowl, Brookside Golf Club, Fannie Morrison Horticultural Center (now Kidspace), and a variety of landscape and architectural features found throughout the area. The Arroyo nomination is one of the first successful efforts to define a "cultural landscape" for listing on the National Register.

County of Los Angeles Adopted Planning Documents

32. County of Los Angeles Bicycle Master Plan (2011)

32. County of Los Angeles Bicycle Master Plan (2011)

Relevance to the CMP Study Area: The County of Los Angeles Bicycle Plan adopted in 2011, provides bicycle connections to the City of Los Angeles, South Pasadena, and Pasadena from unincorporated areas of the County. While the Plan does not directly affect the incorporated cities, it does provide necessary linkages to the County's regional bicycle system.

Summary of Adopted Planning Document: The County of Los Angeles Bicycle Plan provides a plan for the unincorporated areas of Los Angeles County. The Arroyo Seco and Parkway are encompassed in the City of Los Angeles, South Pasadena, and Pasadena; therefore there are no unincorporated areas adjacent to the Parkway. The Plan does acknowledge the existing bicycle plans of the three cities.

Planning Studies

33. Arroyo Seco Watershed Restoration Study (2011)
34. Arroyo Seco Watershed Assessment (2011)
35. NE Linkages Study (2005)

33. Arroyo Seco Watershed Restoration Study (2011)

Relevance to the CMP Study Area: The Arroyo Seco Watershed Restoration Study (2011) identifies candidate sites along the Arroyo Seco Watershed to receive ecosystem restoration projects; sites most applicable to the Parkway are Lower Arroyo Seco Park, South Pasadena Island, Arroyo Seco - Los Angeles, Sycamore Grove Park, and Rainbow Canyon. An Alternatives Analysis, to be completed in 2013, will further evaluate alternatives for each candidate restoration site.

Summary of Planning Study: The Arroyo Seco Watershed Ecosystem Restoration Study (2011) is the result of a collaborative effort between the Los Angeles County Department of Power and Water (LACDWP) and supporting agencies (City of Los Angeles, City of South Pasadena, City of Pasadena, City of La Canada Flintridge, and Raymond Basin Management Board) along the Arroyo Seco Watershed. The Study is instrumental in identifying ecosystem restoration projects that are implementable within the watershed framework. Ecosystem restoration projects are categorized by floodplain reconnection, invasive plan eradication/revegetation, and wetland restoration/enhancement; examples of each restoration project are provided below:

Floodplain reconnection: Floodplain reconnection will divert water from the Arroyo Seco into previously established side channels allowing sediment to pass beyond Devil's Dam; it will also modify bank slopes for the establishment of riparian buffers within the Watershed.

Invasive plant eradication/revegetation: Invasive plant eradication/revegetation will include in- channel vegetation of plantings, flow modification to favor native plants and species, and establish riparian fringe vegetation and buffers.

Wetland restoration/enhancement: Wetland restoration/enhancement will modify flow of the Arroyo Seco to support off channel habitats and construct storm water treatment wetlands to support habitats within the flood plain; it will also install retention basins to mitigate/reduce erosion.

34. Arroyo Seco Watershed Assessment (2011)

Relevance to the CMP Study Area: The Arroyo Seco Watershed Assessment (2011) identifies key restoration projects within the "Arroyo Seco Greenway" based on an assessment of adopted city planning efforts, stakeholder input, and the evaluation of Arroyo Seco Watershed needs and priorities. The Arroyo Seco Greenway is a series of integrated transportation, water resource, and habitat enhancement projects along the twenty-mile Arroyo Seco Corridor that will improve public safety, multi-modal transportation, economic viability, recreation, water quality, and ecosystem health in cities adjacent to the Parkway (most applicable, Los Angeles, South Pasadena, and Pasadena).

Summary of Planning Study: The Arroyo Seco Watershed Assessment (2011) is the result of a collaborative effort between the State of California Department of Water (CDM) Resources, local stakeholder groups, and spearheaded by the Arroyo Seco Foundation (ASF). The Assessment encapsulates grass roots planning efforts to connect the Watershed to adjacent amenities (Lummis House, Audubon Center, Huntington Botanical Gardens, Rose Bowl, and Hahamongna Watershed Park) and prioritizes Watershed restoration efforts, ranking them by the four Arroyo Seco Watershed Assessment goals:

Goal 1: Restore the natural hydrological function on the Watershed.
Goal 2: Better manage, optimize, and conserve water resources while improving water quality.
Goal 3: Restore, protect, and augment habitat quality, quantity and connectivity.
Goal 4: Improve recreational opportunities and enhance open spaced.

The Assessment, most importantly, establishes the Arroyo Seco Greenway Agreement which enables the development of collaborative project implementation agreements by designating a lead agency and funding source, with an emphasis on grant funding for the cost of planning, construction and maintenance.

35. Northeast Los Angeles Linkages Study (2005)

Relevance to the CMP Study Area: The Northeast Linkages Study (2005) addressed the need to better integrate the Parkway, Arroyo Seco, and Gold Line stations with adjacent communities (Chinatown, Victor Heights, Solano Canyon, Lincoln Heights, Cypress Park, Mount Washington, Montecito Heights, Highland Park, Monterey Hills, Hermon, and Garvanza) in Northeast Los Angeles through multi-modal transportation connections.

Summary of Planning Study: The Study is a response to multi-modal transportation opportunities for Northeast Los Angeles communities and the need for connectivity amongst the Parkway,

Gold Line, and other historically/culturally/recreationally significant destinations along the Corridor. Linkage Concept Plans, for "system-wide" improvements along the Parkway, and Demonstration Area Concept Plans, for specific neighborhood and prototypical improvements, were identified as ways to create positive change for the residents of Northeast Los Angeles. Linkage Concept Plans included "system-wide" improvement plans for pedestrian and bicycle circulation, transit system (routes and facilitates), parkway connections (better integration of the Parkway into Northeast Los Angeles), and parks and open space. The Demonstration Area Concept Plans represented site specific and prototypical improvements and included transit-oriented developments, signage improvements, landscaped pedestrian bridges spanning the Parkway, bus shelters, and information kiosks.

Implementing all of the potential improvements depicted on Linkage Concept Plans and Demonstration Area Concept Plans will result in vast improvements to the connectivity exhibited between the Parkway, Gold Line, adjacent communities, schools, and parks and open space. The Study identifies a phased approach solution for implementation, based upon funding availability and priorities of elected officials in the jurisdictions encompassing the study area.

Arroyo Seco Parkway Corridor Management Plan

A Rehabilitation and Preservation Plan for Southern California's Most Historic Road

WORKING DRAFT for Public Agency and Stakeholder Review
February 12, 2004

Arroyo Seco Parkway
Corridor Management Plan

A Rehabilitation and Preservation Plan for Southern California's Most Historic Road

Prepared for:
The California Department of Transportation, District 7 and California State Scenic Byways Program through a cooperative agreement with the Santa Monica Mountains Conservancy

By:
The National Trust for Historic Preservation, Rural Heritage/Historic Roads Program

With:
The Arroyo Guild
California Archives
The Center for Preservation Education and Planning
Design Aid Architects
Glatting Jackson Engineers
Heritage Tourism Program, National Trust for Historic Preservation
Huitt-Zollars, Inc.
Jones and Jones Architects and Landscape Architects

In Association With:
Arroyo Seco Foundation
North East Trees

Through a Grant From:
The National Scenic Byways Program of the Federal Highway Administration
2003

Notes About this Corridor Management Plan

The Corridor Management Plan for the Arroyo Seco Parkway has been developed as a document envisioning the possibilities and opportunities that may be undertaken for the Arroyo Seco Parkway (SR 110) and the Arroyo Seco corridor. This advisory document seeks to present a comprehensive vision for the corridor and recommend potential actions and present maintenance and treatment guidelines to see that vision become a reality. The implementation of the actions identified within this document will be dependent on the local, state and federal agencies or private land owners that own, manage or have oversight for the areas or resources referenced.

National Scenic Byways Program
The Arroyo Seco Parkway was designated as a National Scenic Byway under the National Scenic Byways Program of the Federal Highway Administration by the U.S. Secretary of Transportation in June 2002. This corridor management was developed as a partial fulfillment of the requirements for designation as a National Scenic Byway that requires the preparation of a corridor management plan.

The National Register of Historic Places
The Arroyo Seco Parkway was formally determined Eligible for listing on the National Register of Historic Place by the United States Department of the Interior in the 1980s. Part of the scope of work for this project was to take the necessary steps necessary for formal listing. As of this date, the State Office of Historic Preservation is reviewing the application. All state and federally funded activities must follow the US Secretary of the Interiors Standards for Rehabilitation (Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470f

Table of Contents

Introduction…… 5

PART 1
History Background, Principles and Policies …….…… 11

1.1 A Brief History of the Arroyo Seco Parkway and Corridor…… 12
1.2 Laying the Groundwork …… 18
1.3 Applicable Policies……. 22
1.4 Definitions and Terminology…….. 28

PART 2
Recommended Actions for the Arroyo Seco Parkway and Corridor … 29

2.1 Actions for Restoring and Rehabilitating the Parkway……... 30
2.2 Actions for Building a Safer Parkway…….38
2.3 Actions for Building a Landscape Framework……53
2.4 Actions for Improving the Environment……..61
2.5 Actions for Welcoming the Visitor……..71
2.6 Actions for Engaging the Public……. 79
2.7 Actions for Maintaining the Parkway……. 82
2.8 Fulfilling the Vision…… 86

Introduction

"It is an unexpected joy (and occasional terror) to drive the Arroyo Seco Parkway. Many who drive it really don't understand the nuances of its design—its varied contours, parklands and civil engineering advancements—as it threads its way along the historic watercourse from Los Angeles to Pasadena. For most, heavy traffic, speed and accidents conspire to diminish what was intended to be a pleasure road.

--Jeffery Samudio, author, Images of America, Los Angeles, California

If one were to do an inventory of the most significant historic automobile roads in the United States the Arroyo Seco Parkway would undoubtedly rank near the top. Joining the likes of the other great roads in the American highway pantheon such as the Bronx River Parkway and the Historic Columbia River Highway—roads that influenced roadway design and established the culture and parameters for a nascent highway system —the Arroyo Seco Parkway established innovations and expectations that would become hallmarks of the twentieth century landscape.

The Arroyo Seco Parkway opened on December 30, 1940. A hybrid highway design incorporating elements of early twentieth century parkway design and foretelling the modern freeway, the Arroyo Seco Parkway opened to great fanfare and expectation as it ushered in a new era of transportation linking downtown Los Angeles and Pasadena. Early accounts liken the parkway to the Hanging Gardens of Babylon due to its lush planting palette and scenic views of the leafy parks paralleling its course. The parkway winding along the Arroyo Seco and in the shadow of the San Gabriel Mountains was also envisioned as a new economic engine bringing efficiency and commerce to a burgeoning Southern California economy.

By mid 1950's the parkway had been renamed the Pasadena Freeway and many of its characteristic features began to fade as it was incorporated into the innovative and much admired Los Angeles freeway system. Over the years age, population growth and maintenance constraints have all contributed toward the diminution of this once noteworthy road. Today, the Arroyo Seco Parkway has lost much of its original aesthetic charm and has become a problematic corridor regarding safety and maintenance to both the parkway managers and the traveling public.

A renewed interest in the Arroyo Seco Parkway is reflected by the significant increase in attention and recognition the parkway has received in recent years, including designation as a California State Historic Parkway in 1993, listing as a National Historic Civil Engineering Landmark in 1999, documentation by the Historic American Engineering Record in 2000, and designation as a National Scenic Byway by the U.S. Secretary of Transportation in 2002. This corridor management planning project reflects the commitment to the management of the Arroyo Seco Parkway by Caltrans and the communities of the corridor.

While the corridor management plan will focus most particularly on issues of safety, design, preservation and management for the Arroyo Seco Parkway, it will be developed in consultation with and recommend coordinated efforts for the restoration of the Arroyo Seco channel, multi-modal regional transportation goals, public park and recreation needs and preservation and enhancement throughout the Arroyo Seco regional corridor that the road traverses.

The Public Perception: Safety and Litter

While this plan was designed around and developed to advance the preservation and appreciation of the historic Arroyo Seco Parkway, it must be remembered that the general public perception of the parkway is not that of a nationally recognized historic resource, but rather that of a tired, often frustrating, and unattractive freeway. The two most common and universal comments regarding the parkway are "safety" and "litter". How to address these very pragmatic, but real concerns, on a facility that has a narrow right-of-way and an absence of shoulders will require serious consideration.

A safety analysis of the Arroyo Seco Parkway suggests a transportation corridor with relatively consistent accident patterns. Not surprisingly, high speeds, sight distance, weaving and entry and exit points along the parkway have been identified as problems.

One parkway traveler recently equated the Arroyo Seco Parkway to "a dusty old attic where nobody has ever thrown anything out." For any traveler along the historic parkway, this analogy to grandmother's attic is most apt. One need simply view layers of chain link fence where replacement fencing has been erected without the demolition of the original fencing, duplicative signs, abandoned irrigation lines and simply large quantities of trash and refuse strewn along the right-of-way and often trapped between fences and walls.

Litter along the Arroyo Seco Parkway

Until the basic issues of safety and litter can be addressed the historic features and landscape of the Arroyo Seco Parkway will never be fully enjoyed by its drivers, provide a safe environment for Caltrans staff and be viewed as an asset to the communities through which it passes.

About This Corridor Management Plan

The Corridor Management for the Arroyo Seco Parkway has been designed to provide both the overarching vision needed for a complex historic road through a multi-jurisdictional corridor and the specific actions and guidelines needed to direct the activities necessary to ensure the implementation of that vision.

Project Philosophy

The Arroyo Seco Parkway Corridor Management Plan was undertaken with a philosophy that the preservation, restoration and rehabilitation of the historic parkway's bridges, lights, landscape, views and other character defining features can, by distinguishing the parkway from the other freeways in the greater Los Angeles basin, improve the safety and function of the parkway—making the parkway a positive feature of the larger Arroyo region. The historic Arroyo Seco, through its parkway, parks and neighborhoods can reclaim the best of its former beauty and ecology by improving community linkages, safety and recreation and restoring a healthy environment. The introduction of a refreshed and pleasing setting for the neighborhoods that the parkway and parks traverse, can improve driver behavior and will return civility and enjoyment to the parkway originally envisioned as a scenic drive between downtown Los Angeles and Pasadena.

Accomplishing the particular goals of this corridor management plan, no matter how large or small, will require that the Arroyo Seco Parkway and the Arroyo Seco corridor be a recognized as a unified landscape shaped and defined by nature and influenced by human settlement. The individual elements of a successful corridor plan should interact in a harmonious and seamless relationship, where divisions of ownership and management are not apparent to the traveler through the corridor, and where the safety, stewardship and enjoyment of the corridor are assured.

Arroyo Seco Parkway

To ensure the implementation of the recommendations contained in the ASPCMP, the plan was developed with the assistance of the communities along the Arroyo and through a careful review of and in consultation with the regulatory agencies that must eventually weigh in and approve many of the activities needed to fulfill the ultimate vision for the Arroyo Seco Parkway.

Vision

The historic parkway between Los Angeles and Pasadena, known as the Arroyo Seco Parkway, shall be restored and rehabilitated to showcase the finest characteristics of its design when first opened to the motoring public in 1940. The rehabilitated parkway will distinguish the Arroyo Seco as one of the most unique cultural and environmental landscapes in the Los Angeles area in a setting that provides for public safety and security, and fosters a respect for the character defining features crucial to the preservation and education befitting a nationally recognized historic resource.

The Four Goals

Four goals have been identified to implement the vision in its broadest sense and to provide the California Department of Transportation District Seven Office, the owner of the historic parkway, a framework from which recommendations for the enhancement of the greater Arroyo Seco corridor as viewed from the Arroyo Seco Parkway may be undertaken. The four goals of the corridor management plan are:

1. Improving Safety on the Arroyo Seco Parkway
2. Maintaining the Cultural Resource that is the Arroyo Seco Parkway
3. Create a Streamlined environmental review process to implement 1 and 2.
4. Provide recommendations for the enhancement of the historic Arroyo Seco Parkway viewshed.

1. Improving Safety on the Arroyo Seco Parkway

The first goal of the ASPCMP is to improve the safety of the Arroyo Seco Parkway. Improved safety will not only reduce risks to the parkway traveler, it will also reduce risks to Caltrans maintenance staff—thereby enabling a better maintained parkway where repairs, litter collection and landscape maintenance can be better accomplished.

2. Maintaining the Cultural Resource that is the Arroyo Seco Parkway

The Arroyo Seco Parkway is a significant historic resource representing transportation, engineering and landscape design in the early twentieth-century. Many of the distinctive features that made the parkway a landmark achievement in California transportation when it opened in 1940 still remain. Modern transportation theory, advancements and policy now make it possible to meet the goal of improved safety while restoring, rehabilitating and preserving historic parkway features.

3. Create a streamlined environmental review process to implement 1 and 2

For a resource as complex and diverse as the Arroyo Seco Parkway, multiple layers of environmental, transportation and historic preservation reviews are mandated by the local, state and federal governments. In order to streamline the review process and speed implementation of the recommendations contained within this plan, the recommendations for the Arroyo Seco Parkway will be coordinated through the appropriate regulatory agencies. For recommendations for the Arroyo Seco corridor, regulatory and approval bodies will be identified.

4. Provide recommendations for the enhancement of the historic Arroyo Seco Parkway viewshed.

The Arroyo Seco Parkway, like all classic parkways, is based on a theory of aesthetic interaction with the larger landscape. From the snow-capped San Gabriel Mountains and views of the Los Angeles skyline beyond Elysian Park to the chain of smaller parks and neighborhoods in Los Angeles, South Pasadena and Pasadena, it is the unified corridor that gives form to and helps to define parkway. Therefore recommendations for landscape, scenic and recreation enhancements will be made to further reinforce the idea of the parkway as a positive element of the Arroyo Seco.

Plan Structure

For the corridor management plan to be effective it must not only direct activities and actions to fulfill the vision, it must also provide, depending on the nature of the recommendation, a philosophical, procedural or legal rationale behind the recommendation. To affect the maximum utility, the corridor management has been divided into two principal parts.

PART 1
Historic Background, Principles and Policy

Existing conditions, programs and policies define the physical structure or status of parkway and corridor resources as they exist today and have been shaped by the physical and political history of the Arroyo corridor. Current laws, policies and practices that are applicable or relevant, and the history of the parkway are presented.

PART 2
Recommended Actions for the Arroyo Seco Parkway and Corridor

This section outlines the recommended actions necessary to fully implement the parkway vision. Specific recommendations for maintenance, policy, preservation and safety are addressed.

PART 1

HISTORIC BACKGROUND, PRINCIPLES AND POLICY

OPENING DAY, DECEMBER 30, 1940
Motorcade on the Arroyo Seco Parkway

1.1
A Brief History of the Arroyo Seco Parkway and Corridor

*"**F**rom the relatively narrow Figueroa tunnel you suddenly find yourself launched like a speedboat in a calm, spacious divided channel. Channel is the word too, for it's in the arroyo, below the level of traffic tormented streets. No brazen pedestrians nor kids riding bikes with their arms folded! No cross streets with too-bold or too-timid drivers jutting their radiators into your path. And no wonder I made it from Elysian Park to Glenarm Street in Pasadena in 10 minutes without ever edging over a conservative 45 miles an hour…*

-- John Cornell, Westways Magazine, Automobile Club of Southern California, 1941

The Arroyo Seco Parkway is a landmark accomplishment in American transportation history. It represents a transitional period in automobile travel and highway design in which the traditional parkway concepts developed in the East were melded to the emerging California automobile culture. California Department of Roads (the predecessor to Caltrans) engineers visited the parkways of metropolitan New York to learn the latest techniques of scenic, safe and high speed travel. The desire to create a scenic parkway was undertaken in a region with the highest per capita automobile ownership in the United States—the two car family a Los Angeles reality shortly after World War I.[1]

Long before the Arroyo Seco Parkway, the Arroyo Seco was a transportation crossroads for Native Americans and later Spanish and Mexican Period settlers and explorers. When railroads became the mode, this region created a rail and electric car legacy that shaped the future of the greater Los Angeles . The Arroyo region served as the inspiration for the Arts and Crafts Movement in Southern California due to its remarkable geography and settlement by early pioneering artists and artisans. The parkway and corridor presents a fascinating and little told story.

[1] Longstreth, Richard, City Center to Regional Mall (Cambridge, Massachusetts, MIT Press, 1997). p. 14.

Summary

When opened in 1940, the Arroyo Seco Parkway linking downtown Los Angeles with Pasadena was hailed as an aesthetic, engineering and commercial triumph. The rapid limited-access route, with characteristics that would ultimately define the modern freeway, was a boon to business interests; the lush plantings, adjacent parklands and distant views led many to refer to the parkway as the "hanging gardens."

While the history of the parkway is significant to the story of the road in America, the history of the corridor, its landscape, the views from the parkway are much cloudier. The Arroyo Seco valley from the mid-nineteenth century was revered for its natural beauty and historic associations with Native Americans and, perhaps more in romance than reality, Spanish Colonial settlement. It was here the Arts and Crafts Movement would be establish by luminaries such as Charles Lummis who would transfer the Arroyo, through intellect, design and architecture, into a model of environmental sensitivity (at least according to nineteenth century values) and thoughtfulness. The corridor was so celebrated that Teddy Roosevelt when visiting Los Angeles and crossing the Arroyo Seco stream with his friend Charles Fletcher Lummis suggested that the Arroyo would make a wonderful park.

It was from this reality that the idea of a parkway through the Arroyo first emerged. The original vision, as articulated in the 1930 Olmsted-Bartholomew Plan for the Los Angeles Region, recommended a serpentine two-lane parkway winding among the hills, trees and parks of the Arroyo valley. By the time it was constructed in 1940, the Arroyo Seco Parkway had morphed into a six-lane quasi parkway/prototype freeway and the waters of the Arroyo Seco were restricted to a concrete and stone channel. Lands recommended for park acquisition were never fully secured and by the 1950's the road was routinely referred to as the Pasadena Freeway.

History of the Arroyo Seco Parkway and Corridor

The following history is taken from the Historic American Engineering Record of the National Park Service's documentation of the Arroyo Seco Parkway for the Library of Congress in the summer of 1999 and "Putting Back the Pleasure in the Drive: Reclaiming Urban Parkways for the 21st Century," by Anastasia Loukaitou-Sideris and Robert Gottlieb.

The Origin of Parkways

The first use of the word parkway in the American context was made before the advent of the automobile. Frederick Law Olmsted and Calvert Vaux in a report to the Board of Commissioners of Prospect Park in Brooklyn, New York in 1866 recommended the addition of a *parkway* to the plans for the park. Inspired by the celebrated landscaped boulevards of Paris and Berlin, Olmsted and Vaux viewed parkways as carriageways, surrounded and contained by the park and designed for pleasure riding.

Pleasure parkways designed by Olmsted and Vaux were built in Boston and Chicago. Other landscaped boulevards called parkways were also built in eastern cities, and, with the advent of the automobile, the parkway concept as a specialized roadway was revived. The first parkway for automobiles was the Bronx River Parkway in Westchester County New York, completed in 1923, and designed to provide leisure driving and recreational opportunities. The Bronx River Parkway's great success in combination with a growing number of motorists led to the development of more of these roadways, most notably in New York City where Robert Moses oversaw the construction of a parkway network. In the 1930s the modern parkway movement began to expand out of New York with the construction of several federal parkways, such as the Skyline Drive in Virginia, Blue Ridge Parkway in North Carolina and Virginia, Merritt Parkway in Connecticut, and others. During the same decade Los Angeles planners, aware of the parkway construction in eastern cities, started to envision the creation of 'greenbelts across the city' –parkways that would address the region's increasing traffic while at the same time encourage "highway recreation" and "outdoor sightseeing." These ideas were elaborated in Frederick Olmsted Jr. and Harlan Bartholomew's 1930 report for the Los Angeles Chamber of Commerce, linking parkway development with opportunities to create open spaces and parklands, including along the Arroyo Seco and Los Angeles River watershed from Pasadena to downtown Los Angeles. After a series of debates regarding feasibility, finances, and transportation and land use goals, the "first freeway of the west," the celebrated Arroyo Seco Parkway, was commissioned and broke ground in 1938.

The Arroyo Seco Parkway

"Now I know how a package feels when it gets an unobstructed ride through a chute to the shipping department. I've just made a run out to Pasadena on the completed Arroyo Seco Parkway . . . . From the relatively narrow Figueroa tunnels you immediately find yourself launched like a speedboat in a calm, spacious, divided channel. Channel is the word, too, for it's in the arroyo, below the level of traffic-tormented streets. No brazen pedestrians nor kids riding bikes with their arms folded. No cross streets with too-bold or too-timid drivers jutting their radiators into your path. And no wonder I made it from Elysian Park to Broadway and Glenarm Street in Pasadena in 10 minutes without edging over a conservative 45 miles an hour."[2]

So wrote John Cornell in *Westways*, a magazine published by the Automobile Club of Southern California, less than one month after the Arroyo Seco Parkway was opened to traffic. Cornell's remarks captured the experience of driving this new road -- an experience which, for Cornell, was both efficient and leisurely – offering a new opportunity for motorists in Southern California. The Arroyo Seco Parkway was the first grade-separated, limited-access, high-speed divided road in the urban western United States and the initial stretch of road for what would become the world-renowned Los Angeles metropolitan area freeway system.

[2] John Cornell, "Riverbed Route" *Westways*, January 1941

Built in three major stages from 1938 to 1953, the 8.2-mile parkway was envisioned both as a scenic pleasure road traversing the Arroyo Seco and as a vital traffic conduit linking the expanding cities of Pasadena and Los Angeles. Combining ideas reminiscent of an older parkway tradition with those more appropriate for modern freeway design, the Arroyo Seco Parkway marks an important transitional moment in the history of American engineering, landscape architecture and transportation planning.

The roadway, as completed in 1953, extended from Glenarm Street in Pasadena to the Four-Level Interchange just northwest of downtown Los Angeles. The six-lane, approximately $9 million roadway required over thirty bridges and underpasses, four tunnels, and numerous safety features. Its construction was facilitated by the installation of the concrete Arroyo Seco Flood Control Channel, completed as a Works Progress Administration (WPA) relief project.

Arroyo Seco Parkway, 1940

The initial six miles of road, completed from 1938 to 1941, were described by engineers as "picturesque" and characterized by a comprehensive landscape program that included a primarily native plant palette and elegant modern bridges. At the official opening ceremonies on December 30, 1940 California Governor Culbert L. Olson declared the Arroyo Seco Parkway to be the "first freeway in the West." The connection of the parkway in 1953 to the Four-Level Interchange (and thereby to the larger Los Angeles regional freeway network) marked the final chapter in a series of plans and proposals dating back to the late nineteenth century for a limited access road connecting Los Angeles and Pasadena.

The first spade of earth was turned for the Arroyo Seco Parkway in March 1938 under the aegis of the State Division of Highways. The approval for the Arroyo Seco Parkway was hammered out earlier that year by a characteristically large and unwieldy coalition of state and local lawmakers, planners, the Automobile Club of Southern California, the Union Pacific and Santa Fe railroads, the cities of Pasadena, South Pasadena, and Los Angeles, the growing communities of the San Gabriel Valley, and residents along the right-of-way. It was not a particularly smooth process, and there was rarely agreement about whether the road should be a high-speed thoroughfare, a recreational parkway, or some combination of the two. Part of this apparent confusion stemmed from the fact that the Arroyo Seco Parkway was built at a transitional time in the history of road building, both in the city of Los Angeles and throughout the United States more generally. While borrowing certain features of the parkway tradition on the East Coast (such as limited access and the elimination of at-grade intersections), the Arroyo Seco Parkway was different from most earlier parkways in that its design was ultimately influenced more by the need for a high-speed commuter route than any other factor.

It was envisioned as part of a larger scheme of metropolitan high-speed roadways, and its construction was spurred by the desire to alleviate traffic congestion on the streets between Pasadena and Los Angeles. It was thus no coincidence that the opening ceremonies for both the six-mile original stretch and the 2.2-mile "Southerly Extension" took place on December 30, just in time for the New Year's Day Tournament of Roses Parade and college football game in Pasadena – events which always attracted a tremendous amount of traffic. Safety features also played a large role in the overall parkway design.

Safety concerns were particularly important because it was made to accommodate 45-mile-per-hour travel – the maximum allowable speed for California state roads in the 1930s and 1940s. It was hailed both as a "modern" and "model" road by state highway engineers. The parkway eliminated all at-grade crossings and incorporated other safety features that had been recently adopted as new policy measures by the California Division of Highways at a time when these features had not been implemented together in a single road design in the western United States.

In the construction of the Arroyo Seco Parkway traffic safety was of paramount importance. To reduce the possibility of head-on collisions a 6-foot median strip was designed. The shrubbery planted in the median was intended to shield drivers from the headlight glare of oncoming traffic. Fences were erected to separate traffic (children or animals) from nearby properties. The lanes were 11-feet wide, and a shoulder of 10-feet was originally planned for each side of the roadway. Different-colored types of pavement (concrete and asphalt) were used for different lanes to encourage drivers to stay in their lane. Other safety features included special safety lighting at all inlets and outlets of the parkway, warning and directional signals, and red reflectors and amber-colored flashers installed in curbs. A 1945 study pointed to these safety features as an explanation of the remarkably low ratio of traffic accidents that the parkway enjoyed in comparison to other major highways with similar traffic volumes.

Even if it was conceived as part of a larger network of high-speed roads, there are noticeable differences between the Arroyo Seco Parkway and the newer metropolitan freeways that surround it. There was a strong emphasis on the parkway's landscape in the project's planning stages. It was important to engineers that anything unsightly should be concealed from view: sometimes by plant materials, at other times through design. Only with the commencement of construction for the Southerly Extension did the "parkway" ideals began to fade into the background.

Consistent with the dictums of parkway planning the Arroyo Seco Parkway offered driving pleasure to motorists by exposing them to the scenic beauty of the surrounding landscape. Existing parklands were enhanced by the planting of approximately 4,000 plants of various varieties, which were selected and placed so that "a brilliant showing of color would be maintained throughout the year." A major program of roadside beautification eliminated billboards, advertisements and other objects of commercial blight. To enhance the pleasure of the ride engineers adjusted the road's

contours to fit the landscape, installed "rustic" rails on rubble parapet walls and wooden railings along on- and off-ramps. [3]

To understand why the Arroyo Seco Parkway looks the way it does, one cannot ignore the lingering influence of late nineteenth and early twentieth century proposals for a series of parkway roads intended to connect a number of city parks. The road's curving design, its carefully crafted landscape with native plants, and the decorative railings on some of its bridges suggest a very different kind of road than the utilitarian high-speed freeways that followed in the Los Angeles region.

Arroyofest, June 2003

[3] Charles C. Cohan, "Ceremonies Launch Work on Arroyo Seco Highway," *Los Angeles Times*, May 3, 1936.

1.2
Laying the Groundwork

I *wonder why it is that when I plan a route too carefully it goes to pieces, whereas if I blunder along in blissful ignorance aimed in a fanciful direction I get through with no trouble.*

--John Steinbeck, Travels With Charley, In Search of America

The Arroyo Seco Parkway is but one element in a corridor rich in history, activity and investment. In recent years extraordinary new efforts have been launched, from the local to the regional level, to enhance and revitalize one of the Los Angeles basin's oldest settled areas.

No planning process, particularly within a corridor with a history as rich and complex as the Arroyo Seco, occurs within a vacuum or without the benefit of earlier endeavors. Numerous community and governmental studies and planning efforts have been undertaken in recent years. Issues as diverse as community recreation, watershed protection, the planting of trees and the design of the new Gold Line, have been seriously undertaken by community leaders, government and non-profit organizations. Many are already demonstrating accomplishments.

Many of these efforts have been undertaken with a spirit of cooperation and coordination with parallel efforts within the corridor, and it is the intention of this plan to do the same. Such an approach is more than courtesy, it is wise planning. It is, after all, impossible to "compartmentalize reality" into governmental or community units. Parkway run-off impacts water quality. Water quality impacts parks and wildlife. Parkway safety affects the safe enjoyment of parklands and parkway noise impacts the quality of life in the neighborhoods of the Arroyo.

Arroyo Seco Parkway Task Force

In 1996, the Arroyo Seco Parkway Task Force was formed by State Senator Richard Polanco. Formed as a result of community concerns about safety, trash, noise and parkland integrity, the Task Force consisted of approximately forty stakeholders including local, county, state, and federal agencies, elected officials, community residents, and local nonprofits and businesses.

The task force was charged with developing a long-term vision for the parkway corridor. The task force studied three core topics: improving the safety and appearance of the parkway; restoring and interpreting the corridor's historic and cultural resources; and, enhancing the corridor's scenic and recreational resources.

It met approximately twice a month over a nine-month period to develop a list of recommendations for the Arroyo Seco Parkway. On July 15, 1997 a list of draft recommendations, goals and actions was presented to Caltrans management. The District has responded positively to many of the task force recommendations, including sponsoring the HAER recordation project, the Cal Poly Pomona Landscape Framework Plan, the UCLA/Occidental traffic analysis and this Corridor Management Plan.

Several tasks necessary to the implementation of this Corridor Management Plan have already been undertaken or are in process and include:

National Register of Historic Places Determination of Eligibility
In 1983, the Arroyo Seco Parkway was "determined eligible" for the National Register of Historic Places by Caltrans, the Federal Highway Administration and the Keeper of the National Register —a concurrent agreement.

The National Register of Historic Places, administered by the National Park Service, recognizes places of historic significance in the United States. As a property previously determined eligible for the National Register, all federal and state requirements associated with the National Register are already applicable (determination of eligibility for the National Register automatically invokes federal and state protections).

SR 110 Changes Name from Pasadena Freeway to Historic Arroyo Seco Parkway
In 1992, the California State Legislature officially designated State Route 110 as the Historic Arroyo Seco Parkway. This action was led by then State Senator Richard Polanco and was intended to bring back the original name of this parkway.

Preserving the Historic Road in America Conference
Due to the national significance of the Arroyo Seco Parkway, the first national conference on historic roads, "Preserving the Historic Road in America", was hosted in Los Angeles in 1998. Sponsored by the National Trust for Historic Preservation and the National Park Service in cooperation with Caltrans District 7 and the Center for Preservation Education and Planning, the conference drew over 100 transportation and preservation professionals to discuss global issues and needs of historic roads with the Arroyo Seco Parkway as the conference's symbolic backdrop.

American Society of Civil Engineer's National Landmark Designation

In 1999, the American Society of Civil Engineer's honored the Arroyo Seco Parkway with national distinction by naming the resource a National Engineering Landmark.

HAER documentation
In the summer of 1999 the Historic American Engineering Record of the National Park Service documented and recorded the Arroyo Seco Parkway for the Library of Congress. A written history of the parkway complete with 24 (24" x 36") interpretive pen and ink drawings and over 100 black-and-white photographs documenting current conditions of the parkway and contributing features was assembled.

A Landscape Framework Plan for the Arroyo Seco Parkway Corridor
In 2001 the graduate students in the School of Environmental Design, Graduate Landscape Architecture Program at Cal-Poly State University prepared a landscape framework plan for the Arroyo Seco Parkway corridor. This plan, developed for Caltrans District 7, provided an overview of the history of the parkway's landscape and made broad recommendations for potential improvements and restoration. The observations and recommendations made by the student project provided one of the first comprehensive analyses of the landscape of the Arroyo Seco corridor.

The Arroyo Seco Watershed Feasibility Study
The Arroyo Seco Watershed Feasibility Study, completed in 2001, discusses watershed quality, hydrology, flood control, biological diversity and native habitat restoration, and recreational and open space opportunities for the Arroyo Seco. This groundbreaking document provided the natural environment background analysis for the Arroyo Seco Parkway Corridor Management Plan.

Arroyo Seco Parkway Meeting in Sacramento
On October 21, 2002 representatives of Caltrans District 7 and representatives of the ASPCMP project team met with representatives of Caltrans, the California State Office of Historic Preservation Office (CalSHPO), Federal Highway Administration- California District Office (FHWA-CA) to introduce the Arroyo Seco Parkway corridor management planning process.

"Meeting of the Parkways"
In November 2002 representatives of Caltrans and the project team met with representatives of the Massachusetts Parkway and Park Roads Initiative and the Olmsted Center. The meetings were held in Boston and at Harvard University to discuss issues of parkway management and preservation techniques. This meeting gave Caltrans and project team members the opportunity to study firsthand, alternative safety and planning tools for managing high speed urban parkways—in particular, Storrow Drive in Boston and Memorial Drive in Cambridge, Massachusetts. Both these parkways exhibit alignment, speed and volume conditions similar to the Arroyo Seco Parkway. Additionally, like the Arroyo Seco Parkway, both are located in a primary watershed and are immediately adjacent to residential districts and recreational facilities. Funding for this research exchange was generously underwritten by the National Trust for Historic Preservation.

UCLA/Occidental College Transportation Study
In the 2001-2002 academic year, the University of California Transportation Research Center in Berkeley funded an analysis of safety and public policy issues for ageing urban parkways, using the Arroyo Seco Parkway as a case study. Undertaken by the Department of Urban Planning at UCLA and the Urban and Environmental Policy Institute at Occidental College, the study analyzed five years of Caltrans statistics to determine if there were any recognizable accident patterns (due to time of day or year, weather, drunk driving, or other factors) that might help better explain the operation and function of the parkway.

The study found a strong correlation between accidents on the Arroyo Seco Parkway and the entry and exit points during peak travel periods—with most accidents occurring within .15 miles of an entry/exit point. The study also found more accidents occur southbound during morning peak hours (between 6am and 8am), that accident rates increase on northbound lanes between 6am and 8am as well, and that intoxication, in general, is not a significant factor. Importantly, the study found the parkway has the highest number of accidents for any facility in Caltrans District 7 (adjusted number of total accidents compared within District 7).

Four locations, in particular, appear problematic: the parkway intersection at Glenarm Street, the curve at Arroyo Seco Park, the segment between Avenue 60 and Avenue 52 southbound, and the Avenue 43 ramp northbound. Problems appear to be associated with a variety of conditions (or combinations thereof) including sight distance, geo-metrics, speed and weaving. Speed in particular, it was noted, was a significant factor in the number of accidents and degree of severity, indicating that the highway's classification as a freeway was wrong. The conclusion was to re-classify the road as a parkway and reduce its speeds commensurate with its original design and intent.

ArroyoWalk
To introduce the visitor to the Arroyo Seco Parkway and corridor Kari Fowler, for her 2002 Graduate Urban Planning Thesis at UCLA, developed "ArroyoWalk," a linear heritage trail with proposed educational kiosks showcasing the historic, natural and cultural resources of the greater Arroyo.

ArroyoFest
On June 15, 2003 the Arroyo Seco Parkway, for the first time in history, was closed to allow the communities of the Arroyo to experience their Parkway on foot and bicycle. The Sunday event drew several thousand people to the Arroyo and welcomed curious Southern Californians for this unique event. In addition to allowing a closer interaction with the beautiful parkway details and features difficult to appreciate at high speeds, the event also enabled the first phase of community outreach for this plan. Community members were invited by this CMP consultant team to vote on a "logo" design to represent the Parkway and provided information to participate in the future planning process and review of this plan.

1.3
Applicable Policies

Statutes and Regulations Mandating Treatment of The Arroyo Seco Parkway

Funding from Federal and State sources require that all identified eligible historic resources be treated using standard preservation guidelines as outlined in this document. As a matter of practice, it is recommended that the unique attributes of the Arroyo Seco Parkway be widely disseminated and recognized to reduce potential funding conflicts or public liability. Resolutions of merit describing the value and attributes of Arroyo Seco Parkway not only reduce potential conflicts, but also allow for flexibility in future planning and management of the resources if compromises need to be reviewed for future public works projects with alternatives.

The National Register of Historic Places

The National Register of Historic Places is maintained by the National Park Service. Listing in the National Register is the principal form of recognition for historic properties in the United States. Historic roads, bridges, buildings and structures and the landscapes associated with historic roads are all potentially eligible for listing in the National Register.

Criteria for Evaluation of Historic Designation, National Register of Historic Places

The National Register has established the following criteria to evaluate the worthiness of properties for listing in the National Register:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and

A. that are associated with the events that have made a significant contribution to the broad patterns of our history; or
B. that are associated with the lives of persons significant in our past; or
C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. that have yielded , or may be likely to yield, information important in prehistory or history.

Summary of Arroyo Seco Parkway Criteria for Evaluation
Arroyo Seco Parkway qualifies for the National Register of Historic Places under Criterion A in the contexts of transportation planning in the Los Angeles Basin, 1928-1953 and roadway planning and construction from Los Angeles to Pasadena, 1934-1953.

The first fully grade-separated, limited access landscaped Parkway built as a non-toll state highway, it is a direct descendant of early limited access roadways in the Eastern United States and provided the initial link in California's statewide freeway system of grade-separated, limited access urban highways. The Arroyo Seco Parkway represents the earliest expression of the technology for an urban freeway with the construction of the Four Level Interchange, the prototype direct freeway interchange and the original freeway-to-freeway interchange in California. The completion of the Arroyo Seco Parkway determined that future mass transportation development in the Los Angeles Basin would be a regional metropolitan freeway system, having its foundation founded upon the hybrid Arroyo Seco Parkway.

The Arroyo Seco Parkway is significant under Criterion B, Politics and Government, in the context of the development of a regional roadway system through the political process in Southern California, 1936-1953. The successful completion of the Parkway and the later development of a regional freeway system are associated with the professional work of Lloyd Aldrich, Los Angeles City Engineer from 1933 to 1955. In 1928 as Deputy City Engineer in charge of construction under the aegis of Federal Relief Agencies during the Great Depression. Aldrich convinced the City of Los Angeles to undertake the first phase of construction for the Arroyo Seco Parkway, and then enlisted neighboring cities, the County, the State and Federal Government to cooperate and compromise in the route selection to commence construction. While supervising Los Angeles' construction efforts for the Parkway, Aldrich promoted and successfully carried through the concept of a regional freeway system for transportation development in the Los Angeles area.

The Arroyo Seco Parkway is significant under Criterion C, Engineering in the context of the application of innovative and original engineering, later to be associated with early freeway design concepts in Los Angeles, 1936-1953. Recognized as the prototype freeway in California, the Parkway's engineering features served as a design and construction models for later freeways. The Parkway is also significant under Criterion C in the fields of Design/Construction for its bridge and tunnel architecture. Several important architectural styles are exhibited in the structural form and ornamentation of these structures: Art Deco ornament for the Figueroa tunnels, abstract classical and Art Moderne bridge ornament for pre-existing parkway bridges, P.W.A. Moderne for the Works Progress Administration structures built by the Los Angeles Bureau of Engineering, and finally the Modernistic aesthetic demonstrated in the new bridge construction along the Parkway built under the supervision of the State Highway Department. The Arroyo Seco Channel, built concurrently with the Parkway contributes to the significance of the Parkway as a vital undertaking that insured the year-round operation of the roadway free from the danger of flooding.

Integrity – Phase One, Portion Constructed between March 1938 and December 1940
With the exception of the Santa Fe Railroad Bridge, all of the major bridges, constructed before and concurrently with the Parkway have kept substantial integrity in the aspects of location, design, setting, materials, workmanship, feeling and association. Condition is generally good. Maintenance repairs are visible on the roadways and superstructures, but these have not been major impacts.

Integrity - Phase Two, Portion Constructed between October 1940 and December 1943
Portions of the Parkway constructed during Phase Two have lost some integrity. Between 1999 and 2002, extensive construction added a lane to accommodate traffic joining the historic 110 southbound to Los Angeles from off-ramps northbound from the Interstate 5 and southbound connector lanes from the Glendale (2) Freeway joining the 110 freeway approaching downtown. Original rubble walls were destroyed and new light figures replaced historic fixtures. Castelar Street Bridge was incorporated into the Hill Street off-ramp and its original configuration is no longer discernible. The construction for Dodger Stadium severely impacted Bishops Road bridges, although the original lower bridge is still discernible and has kept its original dimensions and girder structure.

The Park Row Bridge has kept almost total integrity. It is significant as a structure that conveys the intent of its designers in the State Highway Bridge Department to create a pared-down, unornamented aesthetic felt suitable to a modern Parkway. At the same time bridge designers and engineers respected the dramatic nature of the park setting while emphasizing the bridge's function as a structure unifying parkland. The bridges at Amador and Solano Avenues, as well as the pedestrian under crossing are also substantially unchanged.

Integrity – Phase Three, Portion Constructed between 1931 and December 1953
The Four Level Interchange was determined individually eligible for inclusion in the National Register Of Historic Places as a result of the California Department of Transportation 1986 Historic Highway Bridge Inventory as the first freeway-to freeway interchange in America. In 1996, its integrity was slightly compromised when the columns, formerly scored in a vertical pattern, were encased in steel jackets. The railing of the 2nd and 4th decks were removed and replaced with concrete railing incised with a small modified arch form. The State Office of Historic Preservation made a finding of no adverse effect for this seismic strengthening project. The SHPO review at that time restated the CalTrans determination that the Four Level was individually eligible for the inclusion in the National Register of Historic Places, but restated the CalTrans finding that both the Stadium Way Overcrossing complex and the 1942 Arroyo Seco Parkway Extension were ineligible for the inclusion in the Register. Sunset and Alpine Bridges appear to have kept substantial integrity.

Agreement Documents

When a project may have adverse effects on historic features, an agreement document, usually a Memorandum of Agreement (MOA), will be developed among the consulting parties. Agreement documents for historic features may be complex if they can cover multiple resources and various property types, but standard procedures apply. A Programmatic Agreement (PA) may be appropriate for recurring activities within large landscapes or similar features or for complex or phased projects. For example, ongoing maintenance activities on a historic highway or new alignment across historic districts may warrant a Programmatic Agreement to take the effects of recurring or phased activities into account.

The Department of Transportation Act of 1966

Section 4(f) Considerations

Section 4(f) of the Department of Transportation Act of 1966, 49 USC § 303, is a substantive requirement that prohibits federal approval or funding of any transportation project that requires the "use" of any historic site, public park, recreation area, or wildlife refuge unless there is "no feasible and prudent alternative to the project" and "all possible planning to minimize harm to the project" has been addressed (DOT Act, 1966, Sec. 4[f]). In addition to the direct physical taking of land, the term "use" also includes any indirect effects that would "substantially impair" the value of the protected sites.

When a transportation project involves land that is part of an eligible historic site or district, Section 4(f) is the responsibility of a federal transportation agency, typically the Federal Highway Administration (FHWA), consult the appropriate division of that agency for guidance in Section 4(f) determinations.

The California State Historic Building Code

The State Historical Building Code (SHBC) is unique among state regulations. The authoring of the original SHBC required state agencies promulgating regulations for all construction and resource types to work in harmony with representatives of all design, engineering, and construction disciplines. Caltrans and its Historic Road resources come under the jurisdiction of the SHBC. Case studies of resource types range from historic buildings, to bridges, to landscapes, to trains and automobiles. The result was a totally new approach to codes for historical resources, one that maintains currently acceptable life-safety standards. These regulations are also unique in that they are performance-oriented rather than prescriptive. The provisions of the SHBC are to be applied by the enforcing authority of every city, county, city and county, or state agency in permitting repairs, alterations and additions necessary for the preservation, rehabilitation, relocation, related construction, change of use or continued use of a qualified historical resource.

The authority for use of the SHBC is vested in Sections 18950 through 18961 of the Health and Safety Code. Section 18954 states that the enforcing agency of every city, county or responsible agency shall apply the provisions of alternative codes, engineering standards, building standards, and building regulations adopted by the SHBC Board pursuant to Section 18959.5 in permitting repairs, alterations and additions necessary for the preservation, restoration, rehabilitation, moving or continued use of an historical resource. A state agency shall apply the alternative regulations adopted by the SHBC Board pursuant to Section 18959.5 in permitting repairs, alterations, and additions necessary for the preservation, restoration, rehabilitation, moving, or continued use of an historical resource. However, be aware that in order to use the SHBC, the resource under consideration must be qualified by being designated as an historical resource. Section 18955 states that for the purposes of this part, a qualified historical resource is any structure or collection of structures, and their associated sites or landscape deemed of importance to the history, architecture, engineering achievement, or culture of an area by an appropriate local or state governmental jurisdiction. This shall include structures on

existing or future national, state or local historical registers or official inventories, such as the National Register of Historic Places, State Historical Landmarks, State Register of Historic Places, State Points of Historical Interest, and city or county registers or inventories of historical or architecturally significant sites, places, historic districts, or landmarks. The regulations of the SHBC have the same authority as state law and are to be considered as such. Liability is the same as for prevailing law. The intent of the SHBC is to save California's architectural and engineering heritage by recognizing the unique construction and technical problems inherent in maintaining historical resources and by providing a code to deal with these problems.

In the Spring of 2003, Caltrans District 7 formally requested that the State Historic Building Code Board consider how the State Historic Building Code applies to historic properties like historic roads and bridges. The code is clear that it pertains to all designated historic properties in the State of California, and that all state agencies are subject to the code in treating historic properties under their jurisdiction. It is unclear what specific criteria should be used in the case of structures like roads and bridges, where criteria are determined by highway engineers through such documents as the American Association of State Highway Transportation Officials *Green Book*, the *Manual of Uniform Traffic Control Devices* and various FHWA design manuals.

Although many pieces of historic infrastructure are safe under contemporary driving conditions, they do not meet current standards for highway design. Considered "functionally obsolete," they are being needlessly "improved" by widening, flattening or straightening, when other less drastic and less costly measures, like rehabilitation, sensitive minor modifications and traffic calming, would improve perceived or real deficiencies. A body of information on traffic calming, multi-modal transportation and context sensitive design has evolved over the past decade. The work of such groups as the Congress for New Urbanism, the Surface Transportation Policy Project, the National Trust for Historic Preservation and the Federal Highway Administration under ISTEA and TEA-21, have advanced this new transportation agenda.

Reviews and Appeals, SHBC (SECTION 8-104)

State Historical Building Safety Board (SHBSB). In order to provide for interpretation of the provisions of the SHBC and to hear appeals, the SHBSB shall act as a review body to state and local agencies or any affected party.

Review

When a proposed design, material or method of construction is being considered by the enforcing agency, the agency chief, the building official or the local board of appeals may file a written request for opinion to the SHBSB for its consideration, advice or findings. In considering such request, the SHBSB may seek the advice of other appropriate private or public boards, individuals, or state or local agencies. The SHBSB shall, after considering all of the facts presented, including any recommendation of other appropriate boards, agencies or other parties, determine if, for the purpose intended, the proposal is reasonably equivalent to that allowed by these regulations in proposed design, material or method of construction, and it shall transmit such findings and its decision to the enforcing agency for its application. The Board shall recover the costs of such reviews

and shall report the decision in printed form, copied to the California Building Standards Commission.

Appeals
If any local agency administering and enforcing this code or any person adversely affected by any regulation, rule, omission, interpretation, decision or practice of the agency enforcing this code wishes to appeal the issue for resolution to the SHBSB, either of these parties may appeal directly to the Board. The Board may accept the appeal only if it determines that issues involved are of statewide significance. The Board shall recover the costs of such reviews and shall make available copies of decisions in printed form at cost, copied to the California Building Standards Commission.

City of Los Angeles, Historic-Cultural Monument Ordinance

Historic Preservation Overlay Zones (HPOZ's)
Significant character defining features of Historic Preservation Overlay Zones are found directly adjacent to the Arroyo Seco Parkway. These include streetscapes, neighborhoods, parks, utility poles, street lights and all elements that comprise a cohesive environment, reflective of an historic district with high integrity. Since a stretch of the Arroyo Seco Parkway right-of-way goes through the Highland Park HPOZ, treatment to features within these areas and must be reviewed by the Highland Park HPOZ Board. In addition, should any listed Los Angeles Historic-Cultural Monuments be highlighted as projects in this plan, review by the Cultural Heritage Commission of the City of Los Angeles will be necessary.

Updates to Historic Inventory Surveys

Regular updates to the Historic Inventory of features identified in these guidelines must be planned. It is recommended that updates be made to the Inventory every five years with full field surveys scheduled not more than ten years apart.

Professional Qualifications
Studies and Surveys of any historic features and assessment of character defining features should only be conducted by or under the direction of staff or consultants meeting the Secretary of the Interior's Standards for Professional Qualifications. In many agencies, qualified staff historians, architectural historians, Engineers, Architects, Landscape Architects, Geologists, Geographers, Archaeologists, and Planners work together on interdisciplinary teams as needed. Other professional staff, outside experts or published works, can be consulted for additional expertise as well as reviewing of National Park Service and Office of Historic Preservation websites and publications. Whether work is done in-house, or by consultants working under contract, work must be accomplished or overseen by professionals meeting the Secretary of the Interior's standards in one or more of the appropriate disciplines.

1.4
Definitions and Terminology

Project Terms

-Arroyo Seco Parkway
The recommendations, actions and treatment guidelines outlined in this corridor management plan have been designed and developed for the Arroyo Seco Parkway defined as California State Route 110 beginning at mile-marker 23.69, the intersection of California State Route 110 with US Route 101 (4-level) and continuing northeast to Glenarm Street in Pasadena.

-Viewshed
The viewshed for the Arroyo Seco Parkway is defined the view from the centerline of the parkway to the left or the right and extending to the horizon or ridge line—all elements that can be seen unaided by the human eye.

-Arroyo Seco Parkway National Scenic Byway
The Scenic Byway designation was intended to connect downtown Los Angeles with downtown Pasadena, with the Arroyo Seco Parkway and its viewshed as the connector.

PART 2

RECOMMENDED ACTIONS FOR THE ARROYO SECO PARKWAY AND CORRIDOR

FIGUEROA STREET TUNNELS

The Figueroa Street Tunnels through Elysian Park

2.1
Actions for Restoring and Rehabilitating the Parkway

"The desirability therefore of a few specially agreeable routes of pleasure travel within cities has long been recognized, and experiments in great variety have been tried in the older, larger, and wealthier cities of the world. But most of those experiments were designed to meet the requirements of horse-drawn vehicles, low speed, and a short radius of travel. Therefore, they fall short of meeting the needs of the automobile. More recently some progressive communities have been creating routes deliberately designed upon a regional scale and of a character intended to meet the metropolitan conditions of the automobile age.

--*from the Olmsted Bartholomew Plan for the Los Angeles Region, 1930*

INTRODUCTION

Preservation, Restoration, Rehabilitation and Reconstruction

While the term "historic preservation" is widely accepted to entail all the actions and activities surrounding the recognition, care and prevention of the loss of the buildings, structures, districts and landscapes of the past, "preservation" also has a more specific definition associated with the nature of work and maintenance at a historic site. In fact, *preservation*, *restoration*, *rehabilitation* and *reconstruction*, terms that tend to get tossed about quite liberally in the world of historic preservation, have very specific meanings and implications for historic resources. It is important to use the appropriate terminology for the activities and actions recommended based on the Secretary of the Interior's Standards for the Treatment of Historic Properties[4]. These standards refer to how a property will be used, altered, maintained and protected.

-preservation

Preservation applies to properties that are largely intact and reflect the period(s) of significance. This would refer to historic roads and road resources that maintain their original design and materials in good condition. Under preservation, activities and actions associated with the resource are largely focused on maintenance and care.

For the Arroyo Seco Parkway, an example of preservation is the regular sweeping of dirt and debris from the parkway gutters and bridge balustrades.

-rehabilitation

Rehabilitation applies to properties that are largely intact and reflect the period(s) of significance, but may require some repair or alteration. This would refer to historic roads and road resources that maintain their original design and materials in fair condition, or roads and resources requiring modification for safety. Under rehabilitation,

[4] U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties, 1995

activities and actions associated with the resource are focused on maintenance, care and sensitive replacement or modification on a limited basis.

For the Arroyo Seco Parkway, an example of rehabilitation is the seismic retrofit and structural upgrade of the parkway bridges.

-restoration

Restoration applies to properties that retain significant components of the period(s) of significance, but may require some repair or alteration, or the removal of features/additions not identified as contributing features. Under restoration, activities and actions associated with the resource are focused on maintenance and care of intact historic features, replacement of lost features, and removal of inappropriate features.

For the Arroyo Seco Parkway, and example of restoration is the return of historic parkway lights.

-reconstruction

Reconstruction applies to properties that are largely beyond repair or have been lost. Under reconstruction the design, appearance and materials of the original road or road features are recreated.

For the Arroyo Seco Parkway, an example of reconstruction is the recasting of the historic parkway lights.

RECOMMENDED ACTIONS

ACTION 2.1-1

Survey and Record Parkway Right-of-way

Conflicting, missing or contradictory records make it nearly impossible to determine the extent of Caltrans property associated with the Arroyo Seco Parkway. Effectively managing and maintaining the parkway and its historic landscape requires an accurate and comprehensive survey to determine the parkway right-of-way lines.

- Review all current maps and plans indicating parkway rights-of-way for consistency.
- Conduct a thorough deed search that includes original parkway rights-of-way, lands transferred, abandoned or relinquished. For areas with unclear or contradictory ownership, establish a formal transfer and establish a recognized right-of-way line.
- Consider maintenance, land use and access issues when determining rights-of-way that need to be reestablished—land more easily accessed and maintained by a park agency, for example.

ACTION 2.1-2

Restore, Reconstruct and Preserve Historic Bridge Features

The historic bridges of the Arroyo Seco Parkway are one of the most prominent and recognizable elements of the parkway. All historic bridge features (balustrades, railings,

piers, abutments, lighting and decorative features) shall be restored, reconstructed, preserved, or recast and installed following the Secretary of the Interior's Standards.

- All existing historic bridge rails or balustrades shall be preserved, missing or replaced historic bridge rails or balustrades shall be reconstructed and reinforced to meet modern crash requirements based on the functional classification of the facility. For historic barriers not meeting modern crash requirements, a box beam barrier constructed along the curb line or a raised curb (which ever meets safety requirements with the minimal visual impact) shall be installed.
- All existing historic bridge lights shall be preserved. All historic bridge lights that have been removed shall be replaced or recast and reinstalled.
- All historic bridge finishes (metallic, natural or painted) that have been altered shall be restored.

ACTION 2.1-3

Develop a Historic Parkway Landscape Master Plan

When first opened in 1940, the Arroyo Seco Parkway was famous for its beautiful roadside plantings. To restore them, as nearly as possible, a Historic Parkway Landscape Master Plan shall be developed for the Caltrans parkway right-of-way that presents an overall design concept based on the 1940 parkway landscape plan. The plan shall outline historic landscape design principles and identify an appropriate plant palate based on historic design precedent, modern hybrids and water use; a demolition plan for redundant irrigation lines, diseased, exotic or inappropriate plant materials; site specific planting plans indicating exact species, quantities, locations, sizes and cultural requirements; and a landscape preservation plan for historic plant communities and features.

- Remove all redundant and abandoned irrigation lines and sprinklers. Analyze the current function of the parkway irrigation system for efficiency, water quality, waste (excessive runoff), coverage, pressure, timing sequence and reliability.
- Identify all remaining original plant materials within the parkway right-of-way and assess their current health, life expectancy and form and shape (natural, mutilated, improperly pruned or trimmed, overgrown or blocking intended views). Remove all damaged, diseased or overgrown (if negatively impacting the parkway landscape) plant materials.
- Identify all non-historic plant materials, groupings and landscape treatments (mulch beds, rock blankets, asphalt or concrete surfaces).
- Identify historic plant materials that meet modern conditions for drought tolerance and highway conditions (exhaust, runoff, wind).
- Identify modern hybrids of historic plant materials that meet modern conditions for drought tolerance and highway conditions (exhaust, runoff, wind).
- Identify new plant materials that replicate in color, form, size and texture historic plant materials that are no longer available commercially or no longer meet the requirements of the roadside environment.
- When considering the use of historic native plant materials the plan shall consider the impacts the construction of the parkway and flood control channel had on

disturbing or destroying the natural environmental systems of the Arroyo (soils, water, air quality). The use of native plant materials shall be considered where the environmental conditions for their successful propagation either remain or can be substantially recreated to provide the essential soil, water and air quality conditions required of the native plant.

- The plan shall identify all trees, shrubs and groundcovers within the parkway right-of-way to be planted or preserved. The master plan should also provide specific recommendations for hard surfaces (rock blankets, asphalt, concrete) based on historic precedent and modern needs for maintenance.
- Replant according to the Landscape Master Plan and using historic plant materials, modern hybrids or new plant materials, the original parkway landscape design.

(See also Action 2.3-1: Develop a Master Landscape Design and Planting Plan for the Arroyo Seco Corridor and Action 2.4-3: Restoration of Native Plant Communities)

<u>ACTION 2.1-4</u>
Recast and Restore All Historic Parkway Light Fixtures

Historic lighting and bridge detail

All historic light fixtures (pole lamps, lanterns and pendants) shall be recast and restored to their original locations as identified by the HAER documentation and historic parkway lighting plans and specifications. In addition to the physical restoration of the historic fixtures, care shall be taken to ensure that the quality of light provided by the restored fixtures matches in quality and color spectrum as nearly as possible that of the original light fixtures.

Historic light fixtures, during the daytime send a strong visual signal suggesting the Arroyo Seco Parkway is different from the freeway system of greater Los Angeles. Night time travelers without the opportunity to discern the landscape and architecture of the region due to the darkness should have a night time clue distinguishing the parkway from the freeway system.

- All Parkway historic light posts, fixture bases and globes, as identified by HAER documentation and the City of Los Angeles Bureau of Streetlighting Survey, should be recast and reinstalled per Los Angeles City Bureau of Streetlights Treatment and Standard for Recasting of Historic Streetlights (where applicable) and US Secretary of the Interior's Standards.
- All galvanized steel light poles and cobra-head lights along the parkway and parkway overcrossings should be removed.
- Secretary of Interior standards shall be consulted in coordination with Illuminating Engineering Society of America (IES) -and California State Historic Building Code regarding light intensity, color and distribution; i.e., light quality should closely match color spectrum of original incandescent light.

- Ornamental portal lanterns for the Figueroa Street Tunnels and tunnel ceiling lamps shall be recast and restored and (due to modern lighting requirements provided through new systems) be illuminated using their original incandescent technology (or modern light offering the same "true" color quality of incandescent) and wattage.
- The use of incandescent-quality lighting should be utilized for all historic and recast parkway lights to distinguish the parkway from the harsh pink and white light of the high pressure sodium currently used throughout the Los Angeles Freeway system. The use of a more "natural" light will wash the parkway with a more calming night time image—thus potentially enhancing the safety of the parkway for the night time driver.

ACTION 2.1-5
Rehabilitation of the Figueroa Street Tunnels

Figueroa Street Tunnels

The Figueroa Street Tunnels are principal character defining features that predate construction of the Parkway and were designed as ceremonial gateway features replete with the Coat of Arms of the City of Los Angeles. The tunnel portals, interiors and approach walls shall be rehabilitated to their original appearance.

- All decorative features such as entry portal lanterns and tunnel pendant lights, interior tunnel materials such as tiled surface, scalloped designed approach retaining walls and pedestrian walks and stairs shall be restored per U.S. Secretary of the Interior's Standards for Rehabilitation.

- All directional signs affixed to the tunnel portals shall be removed. Further, all signs and sign bridges shall be designed to minimize the visual impact on the arch form of the tunnel.

ACTION 2.1-6
Replace all Informational, Directional and Warning Signs and Sign Hardware on the Parkway

All existing signs, sign posts, sign bridges and hardware within the right-of-way and those directions signs leading to the Arroyo Seco Parkway shall be removed and replaced with a new comprehensive sign and sign mounting system that meets modern guidance for safety and information while respecting the historic character of the parkway.

- Utilize existing inventory of all signs (information, direction, cultural resources, safety, hazard, warning) currently installed along the Arroyo Seco Parkway. Signs should be inventoried based on location, size, mounting hardware (post, sign bridge), letter font, illumination, reflectivity and color.

- Identify all redundant, duplicative or inaccurate signs currently installed along the Parkway.
- Identify all safety, hazard and warning signs required under current state policy or MUTCD guidance.
- Identify locations or sites currently not signed from the Parkway that qualify for directional or informational signs based on current state policy or MUTCD guidance.
- Identify locations or sites currently not signed from the Parkway that should be identified by Parkway signage based on the interpretative and marketing recommendations of this plan.
- For all direction and information signs (excluding all warning, safety, standard route shields) select a secure state and federal approval a sign background color and letter font that reflects, as nearly as possible, the historic parkway character and original sign designs from 1940.
- Design standard posts and sign bridges for all parkway signs based on historic parkway design precedents.
- Develop a comprehensive Arroyo Seco Parkway Design Manual for Signs. Manual will identify design philosophy for all Arroyo Seco Parkway signs, reference all state sign policies and MUTCD guidance, identify all fonts, colors, letter sizes, borders, word spacing, margins and justification, abbreviation standards, spacing, location and hardware mounting. Standard mountings, heights and anchoring for all warning, speed limit, exit, merge and other standard regulatory and informational signs to be provided. Individual designs for every directional and information (location, exit name, destination, attraction, cultural and recreational resources) shall be developed.
- Clearly sign the parkway as "passenger cars only" or "no trucks and busses" and identify the minimum height clearance at appropriate entry points. Remove all height warning signs at all bridges on the parkway—the height notice is not applicable to passenger cars and therefore serves no safety purpose.
- Develop a sign illumination plan for all parkway signs that require nighttime illumination. Illumination schemes shall respect the night sky and minimize upward glare to both the sky and nearby residences.
- Select both color and/or material structures to screen or paint the back of all parkway signs to eliminate reflection and lessen visual impact within the landscape and parkway corridor.
- Investigate modern coatings and finishes, as well as sign placement, to reduce or eliminate graffiti. Minimize the use of all obvious barriers such as fences, razor wire or collars around signs or on sign posts or bridges.

ACTION 2.1-7

Design and Install Gateway, Identity and Visitor Information Signs

Building a culture of appreciation and constituency for the Arroyo Seco Parkway will be dependent of raising the awareness for a resource still routinely referred to as the "Pasadena Freeway" and "the 110." While small white-on-brown signs identifying the "Historic Arroyo Seco Parkway" were erected in 1993, they are easily overlooked and,

due to their utilitarian design, do little to suggest or impart the history and wonderful legacy of the Arroyo Seco Parkway.

For many users, awareness of and interest in the Arroyo Seco Parkway as a unique historic resource will be dependent on the parkway's clear identification through a comprehensive gateway, identity and visitor information sign program. Identification of, direction to and introduction to the diverse resources of the Arroyo Seco corridor is contingent on the development of a clear, identifiable, consistent and attractive sign system.

Please note that interpretive signs designed and developed to build and awareness and appreciation for the historic, cultural and environmental resources of the corridor are addressed in Section 2.5 (elcoming the Visitor).

- The Arroyo Seco Parkway, in addition to the California State Route 110 shield, should have an easily recognized logo sign/shield distinguishing the road as California's first designated historic parkway. Logo signs should appear adjacent to all "110" shields that identify or direct traffic to the historic designated parkway. The logo should be designed in a style that reflects the history of the parkway and corridor, is legible at the speeds by which parkway drivers' travel, meet appropriate state and federal (MUTCD) sign policies and be of sufficient quality (and copyright restrictions/use and approval) to be used for marketing, promotion and fundraising capacities.
- Gateway signs shall be designed and installed between the four-level interchange and the historic Figueroa Street Tunnels for northbound traffic and at Glenarm Avenue in Pasadena for southbound traffic. The signs shall be designed in a manner to represent both the history of the parkway and the corridor. They shall be of high quality and design and utilize materials reflective of the corridor's design heritage; e.g. arroyo rock, tile, aluminum, and concrete. The signs shall not be considered a component of the parkway's "official" directional, information or warning sign system to allow greater design flexibility—freeing the gateway signs of many of the requirements of MUTCD. The signs shall note "Historic Arroyo Seco Parkway" and include the parkway logo. At the beginning of the historic parkway at a simple sign stating "Entering Historic Arroyo Seco Parkway" with the parkway logo/shield shall be erected.
- A comprehensive inventory of all signs providing direction to the historic designated Arroyo Seco Parkway shall be conducted.
- All directional signs within greater Los Angeles (Caltrans, LADOT, and local DOTs) that provide direction to the Arroyo Seco Parkway shall consistently reference the name as the Arroyo Seco Parkway, through the use of the California State Route 110 shield *and* parkway logo. In instances where the "Pasadena Freeway" is specifically identified as a term on signage, such references shall be replaced with "Arroyo Seco Parkway." This action will eliminate confusion with references to the "Pasadena Freeway." Additionally all non-specific references shall be changed from "Freeway" to "Parkway" (such as the signs at the entrance ramps).

ACTION 2.1-8

Planning and Construction Public Information Signs

In order to keep the general public informed and interested in the Arroyo Seco Parkway and Corridor planning and restoration efforts, public information signs for the planning, implementation and construction phases and projects should be installed along the parkway. Rehabilitation of the Arroyo Seco Parkway according to the recommendations and guidance in the Corridor Management Plan will cause inconveniences to the traveling public. By being proactive and letting the traveling public know that the inconveniences are for a better parkway, much public complaint and frustration can be minimized or even eliminated.

- Identify a "1-800-PARKWAY" phone number and website for information on parkway projects, construction updates, maintenance activities and special events. The phone number or website should offer a menu offering general topics on "Construction and maintenance on the parkway," information on the "National Scenic Byway" designation and "Special Events".
- Develop a special logo, character, or symbol associated with parkway restoration, rehabilitation and reconstruction.

2.2
Actions for Building a Safer Parkway

"The issue of safety is of paramount importance. It must be addressed by the preservation community in order to advance the preservation of historic roads….The preservationist must learn to look for new and creative ways in which safety can be both properly assessed and accommodated in a historic environment.

--*Paul Daniel Marriott, Saving Historic Roads*

Highway safety and historic preservation need not be mutually exclusive ideas. In fact, if properly understood and executed with modern technology and devices, preservation of historic road features can enhance a safe driving environment. This plan identifies management and infrastructure strategies to improve the safety and general function of the Arroyo Seco Parkway.

As an historic resource, the Arroyo Seco Parkway possesses features and design characteristics that are unique to the Los Angeles basin. While generally viewed as a segment of the Los Angeles freeway system, the parkway must be recognized and evaluated as an independent transportation facility. Only through such an understanding and associated analysis can the options for improved efficiency and safety be fully gauged.

Increasingly communities across the United States are recognizing that the safety and efficiency of historic roads can be significantly enhanced if the origins of their design, intended uses and original technologies are evaluated within the context of modern advances in highway engineering. Rehabilitation of historic parkway design features and environmental setting, when viewed holistically, can offer non-traditional and innovative solutions that have been unattainable through traditional approaches to freeway management.

An Analysis of Geometric Design of the Arroyo Seco Parkway

The following analysis was developed by Glatting Jackson Engineers. It evaluates the geometric design and safety concerns of the Arroyo Seco Parkway and recommends roadway and operations modifications to improve safety while enhancing the historic character of the road. The Arroyo Seco Parkway operates at speeds that greatly exceed

accepted safety design standards. There are design, operations and benign issues that contribute to safety problems. This analysis discusses these issues and proposes lowering the posted speed limit, converting the outside travel lanes into auxiliary lanes, and implementing arterial traffic calming measures as solutions to the safety problems.

Design Speed of Horizontal Curves

Using project plans for construction of utilities along the Arroyo Seco Parkway dated July 1999 provided by Caltrans, the design speed of horizontal curves on the Arroyo Seco Parkway from Pasadena Avenue to Orange Grove Avenue, a distance of approximately 6.8 miles, were calculated. The utility plans show the corridor alignment to scale, but do not detail the point of curvature, point of tangent or the radius of curvature of the roadway alignment. Therefore, the point of curvature and point of tangent were estimated and used to determine the cord and tangent length for simple curves. For compound curves, the point of curvature and point of tangent were estimated and used to measure the radius directly.

The utility plans do not provide the superelevation (e) or the coefficient of friction (f). Research on the roadway states that the road was not superelevated. Superelevation and coefficient of friction were estimated using available data and engineering judgment.

Equations used:

T = Tangent length
C = Cord length
R = Radius
Δ = Deflection Angle
e_{max} = Superelevation
f_{max} = Coefficient of friction

$$COS(\Delta/2) = (.5*C)/T$$

$$R = T/ (\tan (\Delta/2)$$

$$\text{Design Speed (MPH)} = (R*15*(e_{max}+f_{max}))^{.5}$$

Table 1: Design Speed of Horizontal Curves

		Calculate Radius				Calculate Design Speed of Horizontal Curve		
Curve Number (west to east)	**Location**	**Cord Length (m)**	**Tangent Length (m)**	**Deflection Angle/2**	**Radius (m)**	**emax (assumed)**	**fmax (assumed)**	**Design Speed of Horizontal Curve (mph)**
1	Approx. 150 m east of Pasadena Ave.	1770	946	0.59	3094	0.04	0.15	52
2	Approx. 50 m west of 43 Ave eastbound off ramp	1700	860	0.55	3048	0.04	0.15	51
3	At 43 Ave westbound on/off ramp	1060	550	0.57	1875	0.04	0.15	40
4	Approx. 500 m east of Ave 45	620	320	0.57	1100	0.04	0.15	31
5	Approx. 900 m east of Ave 45	820	420	0.56	1460	0.04	0.15	36
6	At Ave 52	1420	720	0.55	2542	0.04	0.15	47
7	Approx. 450 m east of Ave 56	2600	1390	0.59	4545	0.04	0.15	63
8	Approx. 250 m east of Shults St eastbound on/off ramp	1130	590	0.58	1994	0.04	0.15	42
9	At BNSF R.R. crossing (compound curve)				1960	0.04	0.15	41
10	At BNSF R.R. crossing (compound curve)				1550	0.04	0.15	37
11	At Marmion Way	1400	940	0.74	2441	0.04	0.15	46
12	Approx. 1800 m east of Marmion Way	720	360	0.54	1300	0.04	0.15	34
13	At Salonica St	1060	540	0.56	1893	0.04	0.15	41
14	At Crescent St	1210	620	0.56	2154	0.04	0.15	43
15	Approx 1200 m east of Hough St	840	430	0.56	1496	0.04	0.15	36

Note: Estimates based on scaled utility construction plans provided by Caltrans dated July 1999.

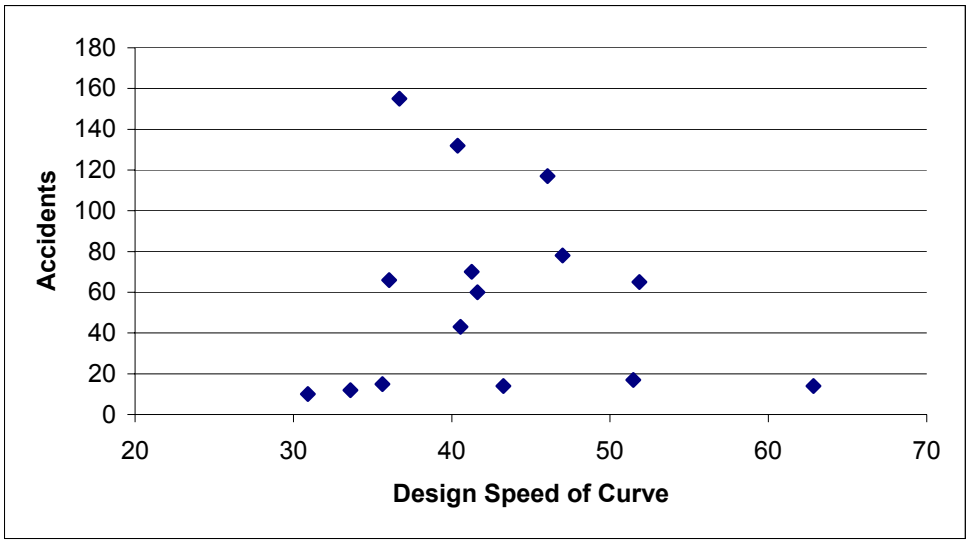
Of the horizontal curves evaluated, the mean design speed is estimated at 43 miles-per-hour (mph), with the minimum design speed for a horizontal curve estimated at 31 mph and the maximum design speed for a horizontal curve estimated at 63 mph.

The roadways original posted speed limit was 45 mph. The current posted speed limit for most of the corridor is 55 mph. Based on today's standards, only 1 of the 15 curves evaluated is designed for speeds over 55 mph. Based on today's standards, 5 of the 15 curves evaluated are designed for speeds over 45 mph., and 5 of the 15 curves are designed for speeds between 31 and 37 mph.

Recommended Posted Speed

Crash data was estimated for each horizontal curve by correlating the crash information per mile-post presented by Dr. Anastasia Loukaitou-Sideris, at UCLA, with the corresponding station identified in the project plans for construction of utilities provided by Caltrans. Figure 1 and Table 2 compare the number of crashes that occurred between 1996 and 2000 at each curve evaluated in relation to the design speed of the curve. The figure shows that, in general, there are relatively lower accident rates for both low design speed curves (those under 40 mph) and high design speed curves (those over 50 mph) when compared to the accident rates for curves with design speeds between 40 and 50 mph.

Figure 1: Design Speed of Curve Vs. Crashes (1996 – 2000)



Source: Anastasia Loukaitou-Sideris, professor at UCLA, Glatting Jackson

Table 2: Design Speed of Curve Vs. Crashes (1996 – 2000)

	Design Speed of Curve		
	30-39	**40-49**	**50 or greater**
Number of Curves	5	7	3
Average Number of Crashes	52	73	32
Median Number of Crashes	15	70	17
Average Crashes per ADT	0.0005	0.0007	0.0002
Median Crashes per ADT	0.0001	0.0006	0.0001

Source: Anastasia Loukaitou-Sideris, professor at UCLA, Glatting Jackson

A possible explanation for the apparent relationship between lower design speeds and lower crash rates may be that drivers perceive these curves as dangerous and approach them at lower speeds. Drivers may not be able to read the design speed for curves with design speeds of 40 to 49 mph, and therefore approach these curves higher speeds. The posted speed limit of 55 mph may also give drivers a false sense of security in approaching these curves at higher speeds.

Under current design standards, the American Association of State Highway & Transportation Officials (AASTO) A Policy on Geometric Design of Highways and Streets recommends that the posted speed of an arterial or limited access roadway be five to 10 mph less than the minimum design speed. Based on this commonly accepted safety practice, the design speed of the horizontal curves and accident data presented above, the current posted speed is not consistent with the roadway design.

If the posted speed was 5 to 10 mph below the minimum design speed, then the parkway's posted speed limit should be 30 mph because over half of the curves have design speeds below 42 mph.

Due to the past speed limits on the Arroyo Seco Parkway, a 30 mph speed limit would likely be unacceptable to the public despite the obvious safety benefits and consistency with accepted safety practices. A speed limit of 40 mph would reduce the number and intensity of crashes, be in better conformity to safe design practices, and be acceptable for a parkway (i.e., not freeway).

On-Ramp and Off-Ramp Design

Based on the traffic analysis conducted by Anastasia Loukaitou-Sideris, professor with UCLA, many of the crashes are concentrated around the on-ramps and off-ramps. Table 3 presents the accident data, design speed of curves and proximity to on-ramps and off-ramps. Of the four curves with the highest number of crashes, three are near an on and/or off ramp.

Table 3: Crashes, Design Speed of Horizontal Curve and Ramp Location (1996 – 2000)

Curve Number (west to east)	Location	Design Speed of Horizontal Curve (mph)	Number of Crashes on Arroyo Seco along curve (1996 – 2000)	Crashes per ADT 2000	Near on or off ramp
1	Approx. 150 m east of Pasadena Ave.	52	65	0.00035	no
2	Approx. 50 m west of 43 Ave eastbound off ramp	51	17	0.00009	yes
3	At 43 Ave westbound on/off ramp	40	132	0.00102	yes
4	Approx. 500 m east of Ave 45	31	10	0.00008	no
5	Approx. 900 m east of Ave 45	36	15	0.00012	no
6	At Ave 52	47	78	0.00063	yes
7	Approx. 450 m east of Ave 56	63	14	0.00012	no
8	Approx. 250 m east of Shults St eastbound on/off ramp	42	60	0.00056	yes
9	At BNSF R.R. crossing (compound curve)	41	70	0.00065	no
10	At BNSF R.R. crossing (compound curve)	37	155	0.00149	no
11	At Marmion Way	46	117	0.00113	yes
12	Approx. 1800 m east of Marmion Way	34	12	0.00012	no
13	At Salonica St	41	43	0.00051	yes
14	At Crescent St	43	14	0.00016	no
15	Approx 1200 m east of Hough St	36	66	0.00078	yes

Source: Anastasia Loukaitou-Sideris, professor with UCLA, Glatting Jackson

Table 4: Curve, Design Speed and Number of Crashes (1996 – 2000)

	Curves Near On/Off Ramp	Curves Not Near On/Off Ramp
Number of Curves	7	8
Average Design Speed	43	42
Median Design Speed	42	39
Average Number of Crashes	73	44
Median Number of Crashes	66	15

Table 4 shows that there while there is little difference in the average design speeds of the curves between these two categories, there is a large disparity in the number of crashes. Significantly greater crashes occur near and in horizontal curves located near on-ramps or off-ramps. The existing on-ramps and off-ramps require vehicles to slow down to very low travel speeds while on the Arroyo Seco Parkway, causing a large differential in travel speeds among vehicles in the outside travel lanes and causing high speed weaving from the outside travel lane into the center travel lanes. This safety problem could be helped by converting the outside thru travel lanes to auxiliary lanes, allowing the introduction of appropriately sized acceleration and deceleration lanes for the on-ramps and off-ramps, respectively.

Based on a posted speed of 40 mph, the recommended design speed for the roadway is 50 mph. For a highway design speed of 50 mph, the ramp design speed should be between 35 and 45 mph (AASHTO – Geometric Design of Highways and Streets 1990, p. 960).

The following is a preliminary estimate of the required length of acceleration and deceleration lanes at each intersection. Calculating the precise length of the acceleration and deceleration lanes requires information on slopes of the roadway and ramps as well as the design speed of the exit curve and would be completed during preliminary or final engineering design.

Table 5: Estimated Acceleration Length

Highway Design Speed, V (mph)	Speed Reached at end of acceleration area, Va (mph)	Acceleration Length (ft) for Entrance Curve Design Speed (mph)								
		Stop Condition	15	20	25	30	35	40	45	50
50	39	720	660	610	550	450	350	130	-	-
45	35	560	490	440	380	280	160	-	-	-

Notes: assumes flat grades of 2 percent or less.
Sources: AASHTO – Geometric Design of Highways and Streets 2001, p. 851

Table 6: Estimated Acceleration and Taper Length

Highway Design Speed, V (mph)	Speed Reached at end of acceleration area, Va (mph)	Acceleration and Taper Length (ft) for Entrance Curve Design Speed (mph) Taper assumed to be 1':25' (for 12' travel lane, taper of 300 ft)								
		Stop Condition	15	20	25	30	35	40	45	50
50	39	1020	960	910	850	750	650	430	-	-
45	35	560	790	740	680	580	460	-	-	-

Notes: assumes flat grades of 2 percent or less.

Table 7: Estimated Deceleration Length

Highway Design Speed, V (mph)	Average Running Speed on Exit Curve, Va (mph)	Deceleration Length (ft) for Design Speed of Exit Curve (mph)								
		Stop Condition	15	20	25	30	35	40	45	50
50	44	435	405	385	355	315	285	225	175	-
45	40	385	350	325	295	250	220	-	-	-

Notes: assumes flat grades of 2 percent or less.
Sources: AASHTO – Geometric Design of Highways and Streets 2001, p. 855

Table 8: Estimated Deceleration and Taper Length

Highway Design Speed, V (mph)	Average Running Speed on Exit Curve, Va (mph)	Deceleration Length and Taper (ft) for Design Speed of Exit Curve (mph) Taper assumed to be 1':25' (for 12' travel lane, taper of 300 ft)								
		Stop Condition	15	20	25	30	35	40	45	50
50	44	435	705	685	655	615	585	525	475	-
45	40	385	650	625	595	550	520	-	-	-

Notes: assumes flat grades of 2 percent or less.

Table 9: Estimated On-Ramp and Off-Ramp Acceleration and Deceleration Lengths

(Highway Design Speed assumed to be 50 mph)

Ramp	Assumed Design Speed of Exit Curve (mph) (assumed)	On-Ramp Acceleration and Taper Length (ft)	Off-Ramp Deceleration and Taper Length (ft)
Avenue 36 Westbound Ramp	5	1020	435
Avenue 43 Eastbound Ramp	15		705
Avenue 43 Westbound Ramp	15	960	705
Avenue 52 Eastbound Ramp	20	910	685
Avenue 52 Westbound Ramp	20	910	685
Herman Ave Eastbound Ramp	20	910	685
Avenue 57 Westbound Ramp	5	1020	435
Shults St Westbound Ramp	5	1020	435
Avenue 60 Eastbound Ramp	5	1020	435
Marmion Way Eastbound Ramp	20		685
Avenue 66 Westbound Ramp	5	1020	
Saloncia St Westbound Ramp	5	1020	435

Notes: assumes flat grades of 2 percent or less and highway design speed of 50 mph.

Capacity Analysis of 4 vs. 6 Lanes

The Arroyo Seco Parkway is located in a highly urbanized area. The Arroyo Seco Parkway connects downtown Los Angeles to the City of South Pasadena and the City of Pasadena and serves a number of parks, cultural destinations and historic communities along the corridor. Therefore, it is a significant piece of the transportation system for the community and the region. Part of designing and implementing the recommended safety enhancements (reduction in posted speed and introduction of auxiliary lanes) will require quantifying the change in vehicular capacity in the corridor.

The first step in calculating the change in vehicular capacity is to quantify the existing capacity of the corridor. Available generalized tables or more detailed modeling techniques, such as Synchro or CORSIM, will not provide an accurate quantification of the existing capacity of the Arroyo Seco Parkway due to the unique design of the roadway. Due to the unique design of the roadway, the roadway's existing capacity is lower than the capacity estimate presented in generalized tables. The outside and center travel lanes have a much lower capacity than estimated by the generalized tables due to the following roadway characteristics:

- Design of on-ramps and off-ramps. The current ramp configurations force vehicles to reduce their travel speed or enter the roadway at speeds under 10 mph at many locations. The ramp configuration impacts the capacity of the outside lane by forcing through vehicles to reduce their travel speeds. The ramp configuration impacts the capacity of the center lanes by introducing weaving movements of vehicles avoiding slow moving entering or existing vehicles.
- Queues. In peak times, queues extend onto the Parkway itself, eliminating the use of the right-hand lane entirely for through vehicles. This also causes a great deal of weaving to and from the center lane.
- Spacing of ramps. The proximity of the ramps leads to an overlap of acceleration and deceleration areas for adjacent ramps, introducing a large number of weaving movements into the center lane in these areas and significantly reducing the travel speed in the outside lane.
- Horizontal curves: The design speed of horizontal curves along the corridor range between 31 and 63 mph. When the corridor is near capacity, the travel speed along the corridor will be controlled by the speeds at the curves. Vehicles will reduce travel speed at the curves. The reduction in travel speeds at curves will cause a domino effect downstream of the curve, forcing vehicles to slow down downstream of the low design speed curves.

Due to the unique character of the roadway, it will be necessary to observe and quantify travel characteristics on the Arroyo Seco Parkway. These characteristics should be quantified both peak and off peak periods, since the characteristics of the roadway will impact traffic flow differently during congestion and free flow conditions. Intuitively, when a queue backs up into the right-hand lane and blocks the lane, the lane no longer contributes to the capacity of the Parkway. Furthermore, the unexpected blockage of the right lane leads to weaving into the center lane at various speeds, reducing the center

lane's capacity as well. Consequently, a specific model of the corridor to see what the "effective capacity" during peak periods should be undertaken. Data to collect include:

- Vehicular volumes per lane (peak and off-peak). This will help quantify how traffic is distributed across the three lanes to obtain a utilization factor per lane during peak and off-peak conditions. Since the corridor is assumed to function at capacity during peak conditions, measuring the traffic volumes per lane will provide a reliable estimate of existing lane capacity for the roadway. This should be done at several locations, including those that have queues that affect the right-hand lane of the Parkway.
- Weaving movements upstream and downstream of intersections (peak and off-peak). This information can be used to complete a weaving analysis to quantify the impact of weaving on the capacity of the outside and center lanes. Quantifying weaving movements also provides a good indicator for potential vehicular conflicts per hour, which is related to crash rates.
- Travel speeds (peak and off-peak). The roadway is assumed to function at capacity during peak conditions. Therefore, vehicles are not traveling at free-flow speeds, but rather by the speeds dictated by vehicular volumes and roadway characteristics (lower speed horizontal curves, ramp design and ramp spacing). Calculating travel speeds at multiple points along the corridor during peak periods will document whether the reduction in posted speed will have an impact on capacity or travel time during the peak period. If travel speeds are lower than the recommended posted speed, the change in posted speed will have no impact on capacity or travel time during the peak periods, when level-of-service and delay are measured. A correlation of design speed, crash data and travel speed during the off-peak period will allow an analysis to be conducted on the safety implications of reducing the travel speed and employing arterial traffic calming measures to reduce travel speeds.
- Collisions. Collisions block lanes and cause slow downs that reduce the capacity of the Parkway. These delays are unpredictable, and therefore tend to be more disruptive and frustrating to motorists than predictable delays caused by commuting patterns. With lower speeds and auxiliary lanes, the number of collisions should drop dramatically. Thus, the capacity of the Parkway will benefit. Consequently, an estimate of the reduced delay derived from eliminating many collisions would be helpful. More importantly, the reduced number of collisions is key because public safety is a key transportation objective.

The capacity of the recommended roadway design and operation should be determined and compared to the existing roadway capacity. The analysis should assume that the right hand lane is used only for queuing, acceleration, deceleration, and merging. Also, assume that the center and left lanes are through lanes. Intuitively the recommended roadway configuration will flow more smoothly and more safely. The proposed roadway design will also work more efficiently, having a higher per lane capacity that the current roadway design. Auxiliary lanes will allow the outside lane to function safely and more efficiently, reducing speed differential of entering and exiting vehicles and reduce weaving into adjacent lanes. They would also accommodate queues

during peak periods, allowing travel flow on the through lanes and helping the capacity of the center lane by avoiding the dangerous and low-speed weaving problems. Modeling techniques, such as Synchro or CORSIM, may be useful in estimating future roadway capacity.

In addition to reducing the posted speed and adding auxiliary lanes, additional benefits can be obtained by making other design modifications. Over time, the Parkway has been altered to look more like a freeway than a parkway. The alternations involve signage, median treatments, and edge treatments. It is recommended that these and perhaps other components of the parkway design be modified to look like a parkway. The benefits will create a softer, less freeway appearance, which will reinforce the lower speed limit. In other words, the freeway look would no longer contribute to the driver expectation of being able to drive at freeway speeds. The idea is to change the appearance of the parkway so that it reads as a parkway and that drivers' expectations will shift towards speeds that are slower, safer and more suitable to a parkway. Samples of changes could include removal of the chain link fences, improving views/vistas, landscaping the edges and medians, median barrier alterations, replacing the signage with parkway signs, and regular maintenance on the Parkway.

RECOMMENDED ACTIONS

ACTION 2.2-1

Reduce Posted Speed

The Glatting Jackson analysis demonstrates that the Arroyo Seco Parkway is posted at a speed that cannot be justified by its geometric design. Therefore a reduction in posted speed, that will improve safety and function, should be determined and agreed upon by all necessary agencies. *(the Glatting Jackson report recommends a posted speed of 40mph)*

- Review existing speed data, or collect new speed data to determine average parkway speeds during both peak hours and off hours.
- Calculate travel speeds at multiple points along the corridor during peak periods to document whether the reduction in posted speed will have an impact on capacity or travel time during the peak period and correlate the findings with crash data and travel speed during the off-peak period.
- Identify enforcement requirements or intelligent transportation systems for speed monitoring/reduction/enforcement along the parkway.
- Calculate the cost-benefit of lower speed in accident/fatality reductions along the parkway through liability, police, fire and rescue, lost travel time and maintenance or repair expenditures.
- Conduct, in conjunction with the parkway advocacy organization, an awareness campaign for lower speeds along the Arroyo Seco Parkway bringing about broad-based support for enhanced safety *and* mobility in the corridor.

ACTION 2.2-2

Conduct a Comprehensive Plan to Investigate the Creation of Auxiliary Lanes

Due to the lack of acceleration and deceleration lanes on the Arroyo Seco Parkway, entrances and exits to the parkway do not meet current recommended safety design practices. To improve safety during peak hours, a comprehensive analysis should be conducted into the conversion of the outside lane to service as an acceleration and deceleration lane allowing improved opportunities for entering vehicles to reach posted speeds and exiting vehicles to properly slow before entering the residential neighborhoods immediately adjacent to the parkway.

- Investigate current accident rates associated with entry and exit movements and stacking in the travel lane (and associated weaving) during peak hours.
- In areas where the auxiliary lane does not serve an acceleration/deceleration or stacking function and serves as a breakdown or shoulder, remove the safety pullouts.
- Analyze weaving movements during both peak and off-peak hours to determine if the current entry and exit configurations cause an increase in weaving activity.
- Sign the right lane as "Exit Only" on parkway directional signs.

ACTION 2.2-3

Improve Safety and Function of Figueroa Street Tunnels

Due to the sharp curve of the entry ramp to northbound Interstate 5 (Golden State Freeway) from the Arroyo Seco Parkway, persistent stacking occurs on the inside (far left) lane of the parkway as traffic must slow to exit. This stacking situation is further complicated by motorists, familiar with the parkway and the exit configuration, who utilized the number 2 lane to bypass the stacked vehicles and merge into the inside lane nearer to the exit. The resultant weaving in the number 2 lane is made more dangerous due to the fact that this situation is occurring through the Figueroa Street Tunnels—the contrast between the three dimly lit tunnels with bright sunlight between during the daylight hours is a hazard that should be carefully considered.

- Develop a comprehensive study investigating options to improve the northbound entry to Interstate 5 from the Arroyo Seco Parkway. Such a study should address the geometrics of the entry ramp configuration, compare accident rates between daylight hours and nighttime hours, the lost efficiency and capacity for northbound parkway travelers due to the weaving approaching the exit and consider relevant traffic flows and capacity on northbound Interstate 5.
- Consider issues of traffic enforcement, restricted access or barriers better channeling traffic exiting to northbound Interstate 5 at an earlier and safer location, or alternate entry points to northbound Interstate 5.

ACTION 2.2-4

Develop a Comprehensive Parkway Safety Barrier Plan

While the original design for the Arroyo Seco Parkway had limited guardrails and barrier walls, modern safety practices and current parkway use dictate their need in a number of key locations. While prudent safety analysis cannot be overlooked, and this plan does recommend the installation of new and additional barriers, the design and appearance of new barriers must be carefully selected in a manner that respects the design integrity and intent of the original parkway.

- Determine, based on standard engineering practices, AASHTO guidance and parkway function the exact locations and crash requirements for center and side barriers along the parkway and all entry and exit access roads within the right-of-way. Differences in crash requirements (an access road vs. the parkway) shall be clearly noted.
- Hire a landscape architecture/historic preservation consultant to develop comprehensive barrier recommendations that meet both engineering and safety requirements and the aesthetic and historic preservation needs of the historic parkway. This plan shall identify specific barrier types, colors, designs (aesthetic and structural), finishes and end treatments and identify the exact location for each barrier type based on both engineering and aesthetic considerations.
- Barrier designs recommended shall include a steel-reinforced white painted post and rail similar to the historic post and rail barrier installed in 1940, concrete median and sidewall barriers that reflect either the streamline moderne characteristics of the original parkway design or the "crazy" rock facing of original parkway retaining walls, and a visually non-obtrusive barrier (such as a box beam). Specific safety, historic preservation and landscape setting justification shall be provided for each barrier type and recommended location and careful consideration shall be made for the joints, transitions and attachments between different barrier types.
- Caltrans District 7 staff shall actively participate in the consultant process on the barrier selection and design process; Caltrans shall design the construction and site plans required for installation.

Historic wooden guardrails, Fair Oaks ramp

Redesigned "historic look" guardrail, Historic Columbia River Highway

Columbia River Highway guardrail with steel-backing to meet federal crash tests requirements

Box beam barrier, Washington, DC

Concrete reinforced, stone-faced barrier wall, Kona, Hawaii

<u>ACTION 2.2-5</u>

Develop a Comprehensive Parkway Safety Plan for Caltrans Staff

While many of the physical improvements recommended in this plan have been designed to enhance the safety of the motoring public or residents and park users, it must also be remembered that Caltrans maintenance, traffic and survey workers encounter some of the highest risks while undertaking day-to-day maintenance and management activities within the parkway right-of-way.

- Identify high risk activities associated with day-to-day maintenance and management activities.
- Install small, visually non-obtrusive variable message signs at principal parkway entry points and at regular intervals along the parkway to provide advanced motorist warning for emergency road work.
- Review all parkway plans to ensure that new project proposals and maintenance activities minimize hazards to Caltrans employees.

2.3
Actions for Building a Landscape Framework

"…On a cliff overlooking an unspoiled natural park, the famed Arroyo Seco, with a perennial stream and groves of magnificent trees, rocks, cliffs, and acres of boulders, wide stretches of oak-dotted sward, and the snow-capped mountains closing every vista."

--University of Southern California, College of Fine Arts bulletin, c.1900

The Arroyo Seco corridor represents one of the most distinctive environmental systems in the Los Angeles Basin. It is the purpose of this plan to outline the characteristics of a corridor landscape—the general look and feel of the historic and natural landscape that is still visible in many segments. The landscape framework will direct all plantings and landscape management decisions within the right-of-way of the Arroyo Seco Parkway and will be recommended and made available to other land management agencies, planning bodies and interested residents within the Arroyo Seco corridor.

The quality of a place's physical setting—its landscape—is the principal feature by which a place is recognized or appreciated, and understood as a distinct district or region. Big Sur, Elysian Park and Pershing Square are easily recognized landscapes in California that each have common elements and unique characteristics (natural or built). Similarly, the Arroyo Seco Parkway occupies a distinctive landscape with many features and elements unique (in their arrangement) to the greater Los Angeles basin.

[BOX]
What is a Landscape?
What constitutes a natural landscape, a cultural landscape or a designed landscape? The term "landscape" is broadly used and has many meanings depending on location or region—even the profession of the individual defining the "landscape" may influence the nature of its characterization. As a general rule, landscapes are influenced by the amount of influence or interaction they have had with human activity—a wilderness having no interaction with humans compared to a city playground designed to have intensive engagement with humans (very active children).

The cultural landscape defines the patterns, design and structure of a landscape influenced, altered or changed by human activity. Hallmarks of a cultural landscape may include the size and shape of fields and groves, the characteristic layout of communities or the nature of the transportation network. Cultural landscapes are generally not

designed by a master landscape architect or planner, but may be "designed" or influenced by the traditions or goals of social, religious or ethnic groups.

A designed landscape represents the work of a professional landscape architect, artist or planner that was consciously created to provide a specific experience or sequence of experiences for the visitor or traveler. Public parks, gardens, campuses and parkways are examples of designed landscapes.
[END BOX]

Traveling north from downtown Los Angeles the Figueroa Street tunnels piercing Elysian Park provide a strong symbolic gateway element heralding the beginning of the parkway. The parkway then travels largely through the Arroyo Seco valley—a distinct landscape with gentle hills rising from both sides of the Arroyo Seco and the parkway. Even when the parkway and the Arroyo Seco diverge in South Pasadena the parkway continues through a "valley-like" corridor passing through the "cut" created when the parkway was being constructed in the late 1930s. Thus for most of its length, the parkway, due to the rising lands on both sides, has a strong sense of *enclosure.*

Within this generalized landscape framework are smaller segments or "rooms" which have distinctive features and qualities—Sycamore Grove Park or the "Cut," for example. At the larger scale, the views of the snow-capped San Gabriel Mountains or the shimmering towers of downtown Los Angeles provide distant views and help to "anchor" the parkway in the larger landscape of the region. Combined, these features define the general landscape character of the Arroyo Seco Parkway.

The Historic Parkway Landscape

Originally, 47 types of plants were selected or propagated for the original parkway landscape plan. Forty-two species were native varieties, which included 11 kinds of ceonothus. Flowering shrubs were the predominant plant form, followed by flowering vines. Only three trees were noted--coco palm, sycamore and toyon. The coco palm were specified for planting in the median adjacent to local highway overcrossings. The sycamore are found primarily in the parkland adjacent to the parkway, while the toyon are located on the sloped embankments in the cut leading from the arroyo into Pasadena. It is difficult to ascertain whether the toyon were intended to be large shrubs, or the small trees that they are today.

The Current Parkway Landscape

The current parkway landscape has evolved both by design and through lack of adequate maintenance resources. Newer hardier species replaced native plant materials that could not adapt to the "new" environmental conditions of the recently constructed parkway shortly after the parkway opened. Site specific planting schemes and plant materials have been designed and implemented in numerous locations in response to lost or overgrown plant materials, "beautification" projects at entry and exit points or routine landscape maintenance. While many projects have been well executed, the overall lack

of landscape coordination and a comprehensive "look" respecting the historic parkway planting plan and plant communities of the native environment has been largely overlooked and probably not funded to an adequate level for overall integration.

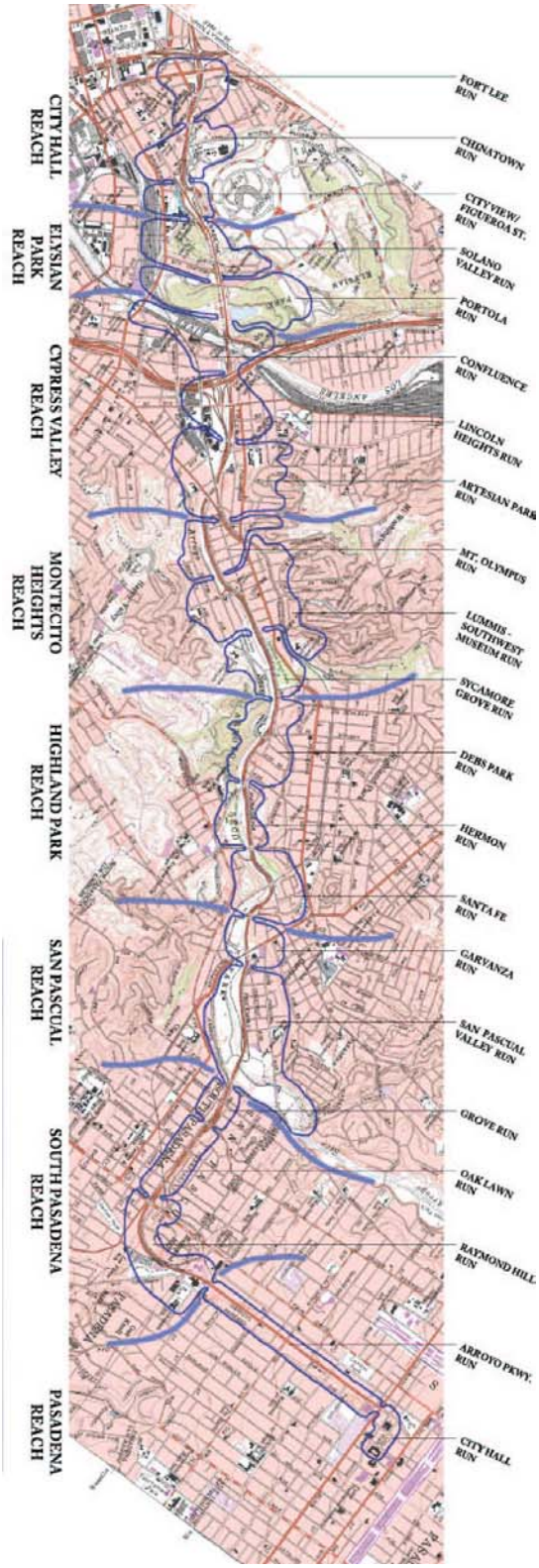
In comparing the original plant palette, which heavily favored native flowering shrubs, with the current plant palette, several interesting observations can be made:

- Only approximately 25% of the original plant palette remains.
- No ceonothus remains, while the non-native varieties--morning glory, lantana, honeysuckle and oleander--have flourished.
- Although 47 plant varieties were noted during a site analysis, the same number of varieties originally planted—there are many more varieties of trees, vines and ground cover than in the original plantings. For example, tree varieties have increased from 3 to 17. It is likely many of these trees have self propagated from adjacent properties. As a result of more tree varieties, the current parkway landscape is more "vertical" than envisioned in the original design.

Reaches and Runs

Recognizing the larger landscape character of the parkway corridor and its unique "rooms" or divisions, the parkway Landscape Framework identifies a series of "reaches" and "runs" to facilitate a better understanding of the parkway and corridor landscape. The terms, not coincidentally, are taken from the reaches and runs used in watershed definition (a logical reference for the Arroyo Seco corridor!), and subdivide the parkway landscape into general character regions (reaches) and the smaller rooms (runs).

The reaches and runs identified for the Arroyo Seco Parkway are:



City Hall Reach
-Fort Lee Run
-Chinatown Run
-Cityview/Figueroa Street Run

Elysian Park Reach
-Solano Valley Run
-Portola Run

Cypress Valley Reach
-Confluence Run
-Artesia Park Run
-Lincoln Heights Run

Montecito Heights Reach
-Mt. Olympus Run
-Lummis-Southwest Museum Run
-Sycamore Grove Run

Highland Park Reach
-Debs Park Run
-Hermon Run
-Santa Fe Run

San Pascual Reach
-Garvanza Run
Pascual Valley Run

South Pasadena Reach
-Grove Run
-Oak Lawn Run
-Raymond Hill Run

Pasadena Reach
-Arroyo Parkway Run
-City Hall Run

RECOMMENDED ACTIONS

ACTION 2.3-1
Develop a Master Landscape Design and Planting Plan for the Arroyo Seco Corridor

Based on the 1940 Arroyo Seco Parkway landscape and planting plans, develop a master landscape design and planting plan for the Arroyo Seco Corridor.

- Develop a corridor wide landscape plan that identifies landscape concepts, designs, and plant materials for public parks and open spaces adjacent to the parkway right-of-way and within the parkway viewshed. The master plan shall articulate recommended plant communities (canopy and understory), relationships (transitions between more formal and more natural plant groupings) and landscape site details including recommended materials and designs for lighting, walls, walks and paths, fences, benches, park structures, parking facilities and playgrounds.
- Provide recommendations and design guidance to assist private property owners and public facilities within the viewshed an opportunity to actively participate in the restoration of the Arroyo Seco landscape. Recommended plant materials, planting styles, pruning practices and screening techniques should be presented.
- Develop site specific landscape recommendations for the parkway landscape (within the right-of-way) for each of the reaches and runs through a thorough analysis and survey for each identified landscape area.
- Develop recommendations for accommodating modern activities and uses within the viewshed (sports fields, park structures, cellular and communications towers and equipment). Modern accommodations should reflect the historic parkway design and natural environment through physical site selection, landscape design and planting patterns, screening and access.

(See also Action 2.1-3: Develop a Historic Parkway Landscape Master Plan and Action 2.4-3: Restoration of Native Plant Communities)

ACTION 2.3-2
Minimize the Visual Impact of Overhead Utilities

Overhead utility lines crossing the parkway and located within the parkway viewshed, in instances negatively impact the views and viewshed in several locations. Overhead utility lines within significant viewsheds or negatively impacting the visual quality of features within the reaches and runs, should be relocated or buried.

- Identify all overhead utility lines that negatively impact significant views from the Arroyo Seco Parkway or from within the Arroyo Seco corridor. Priority should be given to negative visual impacts on natural areas, character-defining land forms and features and significant architectural landmarks. The inventory should identify both the view point (parkway, transit stop, or park) and the object or feature obscured or negatively impacted by the overhead lines (land form, architectural landmark or natural area). Special consideration should be provided

to views from parkway gateway or character-defining views, places of public assembly (parks, transit stops) or historic properties which predate the erection and installation of overhead utility lines.

- Develop a plan to bury or relocate overhead utilities that negatively impact significant views and viewsheds within the Arroyo Seco corridor. The purpose of this plan is not to underground or relocate all utility lines within the corridor or to suggest that utility lines, as a feature, are not part of the history of the corridor, but rather to underground or relocate only those portions of lines located between a significant viewing point and obscuring a significant parkway landmark, landform or feature.

ACTION 2.3-3

Develop a Comprehensive Parkway Fencing Plan

Chain link fencing along the parkway provides a visual barrier to the surrounding landscape, is redundant in many locations and often provides a litter catchment. Every effort, where safety is not an issue, should be made to remove or minimize the chain link fencing along the parkway.

- Inventory all chain link fencing along the Parkway. Identify height, ownership of fence, location (mile-marker, distance from parkway curb), redundancy (parallel fences, fences in front of walls) and safety function (pedestrian or wildlife barrier, or a recreation barrier to prevent balls, Frisbees or other sports objects from entering the parkway).
- Secure a determination from Caltrans legal staff regarding requirements, specifications and locations for chain link fencing. Establish a clear definition for the safety functions/expectations associated with chain link fencing.
- Develop a parkway fencing plan that minimizes the visual impact of chain link fencing through both color and location, eliminates redundant parkway fences and removes unnecessary or ineffective fencing. Whenever possible, existing barriers, such as retaining walls, flood control walls or ornamental fences that serve, in full or part, to meet the objectives of safety fencing shall be utilized as the fencing mechanism. All existing fencing designated to remain or new fencing to be erected should be black vinyl coated attached to black poles with a black stabilization wire/cable through the top course of the chain link.
- Through both physical design and access provision (gates or doors) facilitate litter and rubbish removal for Caltrans, other state or municipal staffs.
- Through location or the provision of approved barriers all required parkway fencing should be protected from errant vehicles.

ACTION 2.3-4

Initiate a Viewshed Protection Plan

While many of the views of the parkway are publicly held or protected (Debs Park, Elysian Park, San Gabriel Mountains), many other "natural" areas, appreciated for their beauty and rhythmic pattern, are potentially developable sites. The preservation of viewshed features that would negatively impact the Arroyo Seco Parkway and corridor, if lost, should be studied and a plan for viewshed protection developed.

- Through the Marketing and Interpretive Planning efforts, identify key viewsheds for interpretation of the National Scenic Byway. These viewsheds then become the foundation for future viewshed protection plans and priorities and are given priority consideration for protection, preservation, or open space acquisition.
- Prepare a map identifying all undeveloped parcels within the Arroyo Seco Parkway viewshed. For all undeveloped lands subject to potential development, identify the maximum development potential based on current zoning and land use policies including potential negative visual impacts such as retaining walls, cellular or transmission towers or facilities, solar fields, reflectivity (such as glass curtain walls), lighting or signage.
- Through visual simulation technology develop illustrations showing the potential visual impact of allowable development on the undeveloped parcels within the parkway viewshed.
- Identify critical undeveloped parcels, that if developed, would negatively impact the historic viewshed of the parkway. Identify undeveloped parcels, that if sensitively developed, would have a minimum negative visual impact on the parkway viewshed. Identify undeveloped parcels, that if developed, would have no negative visual impact on the parkway viewshed.

THE ARROYO SECO, 1898

The Arroyo Seco prior to the construction of the flood control channel

2.4
Actions for Improving the Environment

*"**R**oads and vehicles provide many benefits--allowing economies to function efficiently and providing people and businesses with access to a variety of critical services, goods, and activities--but they also threaten the earth's biological and physical systems. They facilitate greenhouse gas buildup, acid rain, deforestation, erosion of water quality, and loss of habitats and species. The challenge is to retain the benefits while eliminating or mitigating the threats.*

--From Road Ecology.

While the focus of this corridor management plan is on the historic Arroyo Seco Parkway, it sits within the Arroyo Seco Watershed and is a major influence on the functioning of that watershed. Within the immediate parkway environment and within the region there are significant efforts to address the quality and function of the Los Angeles River watershed.

Arroyo Seco Watershed

The Arroyo Seco Watershed is located in northeast Los Angeles, between the San Gabriel Mountains and the Los Angeles River. Lying partially within the watershed are the Angeles National Forest and the cities of Los Angeles, South Pasadena, Pasadena and La Cañada Flintridge, as well as the unincorporated area of Altadena.

A distinctive history and culture links the communities of the Arroyo. The southern tip of the watershed (at the confluence with the Los Angeles River) was a camp location of the first Spanish exploration, and the historic *zanjas*, or irrigation ditches, were located just across from the confluence. As one of the earliest settled parts of the Los Angeles region, the Arroyo Seco contains many cultural and historic attractions, as well as several historic districts. The Arroyo area is known worldwide for its concentration of historic Arts and Crafts resources and many original Craftsman structures. Historic Route 66 runs through the watershed; historically, travelers to Los Angeles entered through the Arroyo's gateway of sycamores.

The Arroyo Seco Watershed is a sub-watershed of the Los Angeles River watershed, which is a coastal watershed partly within the coastal zone. The Arroyo Seco stream runs in a deeply incised canyon that begins in the San Gabriel Mountains and

drains into the Los Angeles River near downtown Los Angeles. Below Devil's Gate Dam, most of the stream has been channelized. Prior to channelization, stands of alder, willow, and sycamore lined a perennial, trout-filled stream. Most stream and riparian habitats are located above the dam. The removal of riparian vegetation has significantly impacted wildlife and plant diversity. Urban development and exotic plant species have all but replaced the once lush vegetation below the dam. Chaparral covers much of the landmass in the adjacent Angeles National Forest.

Current Conditions and Function in the Arroyo Seco Watershed

The Arroyo Seco watershed is a microcosm of southern California's development by humans and the alteration of natural systems. The watershed exhibits natural and cultural variety that changes dramatically from top to bottom

Geology and Soils

Geologic structure remains the same and processes continue today as in the past. However, with today's developed land use throughout the watershed, geologic processes downstream of the mountains are significantly altered. In the precipitous upper mountain watershed, erosion, or wearing down, of the San Gabriel Mountains continues, as snowmelt and rain attempt to carry the resulting sediments to the Pacific Ocean. Where sediments were once transported from the mountains to the sea while being deposited along the floodplains, they are now caught up behind crib dams throughout the Angeles National Forest. Urban development in the lower watershed has capped soils minimizing natural erosion in some places, and aggravating erosion in other places. Land along the Arroyo has an altered soil structure through the re-engineering of the stream, construction of bridges, roads, dams and the flood control channel, and many other land uses, involving earth moving. Soils are either graded for cut and fill, excavated or imported, often as poor quality "engineered" soil. Outside of naturally occurring erosion in the mountains, soil erosion potential is high where man-made disturbances occur, such as highway construction.

Hydrology

The historic hydrologic cycle has been significantly altered in four primary ways: surface and groundwater alterations for conservation, supply and flood control; surface and groundwater contamination; variation in groundwater levels from impermeable surfaces, pumping and diversions; imported water entering the system due to demands exceeding local supplies.

Geomorphology and Sedimentation

Watershed processes continue, despite alterations to the landscape and hydrology over time. Nature has adapted to human disturbances, with varying degrees of functionality. One of the most dramatic alterations involves the shift from a permeable landscape to a virtually impermeable one. Paving over the land and the construction of thousands of structures within the watershed, have dramatically reduced the system's ability to naturally recharge the groundwater. The Arroyo Seco Parkway was literally built in the floodplain of the Arroyo Seco. The elimination of foothill and riparian vegetation has had a detrimental effect on our wildlife populations. Dams play an important role in

managing floodwaters in the watershed. They also play a role in groundwater recharge, water quality, and sediment transport. Although relatively undeveloped, the upper watershed still feels the effects of human disturbance. Because of the check dams in the Angeles National Forest that remove sediments from flows. When flood waters free of sediments actively scour and erode streambanks, this weakens riparian habitat through erosion, degrading its viability to support native plants. As a result of these dynamics and other human disturbances, silts and sand no longer replenish the beaches of southern California.

Water Supply, Surface and Groundwater

Surface and groundwater water structure can be grouped into five general categories, each transporting water differently. These include natural streams, the built storm drain system, dams and diversions, impermeable or built surfaces and permeable open space. The most dramatic structure alteration within the watershed is of course the containment of the Arroyo Seco stream and tributaries into concrete flood control channels and underground storm drains. This engineered system quickly conveys storm water flows off of impermeable urban lands straight to the Arroyo Seco where it is rushed to the ocean via the Los Angeles River. Devil's Gate Dam and other smaller dams throughout the Angeles National Forest conserve water, detain sediments, and recharge the Raymond Basin aquifer. Finally, permeable surfaces of vegetated open space slow down runoff, and aid in groundwater percolation.

The Los Angeles County Department of Public Works (DPW) has jurisdiction over the actual Arroyo Seco channel. DPW, along with the cities of La Cañada Flintridge, Pasadena, South Pasadena and Los Angeles, maintain storm drains throughout the watershed. The US Forest Service manages Brown Mountain Dam, crib structures and streams in the Angeles National Forest (Angeles NF). Crib structures in the Angeles NF, which were constructed to slow floodwaters and collect sediments, are now altering stream functioning as sediments continue to deposit and accumulate upstream. Most water resource infrastructure is located in Pasadena, although groundwater pumping occurs in Los Angeles.

The Arroyo Seco Watershed is a major source of water for Pasadena, La Cañada Flintridge, Altadena and other surrounding communities. Surface flow coming from the mountains is diverted into spreading basins in the Hahamongna area, which replenish the Raymond Basin. This diversion dramatically reduces the natural flow available for aquatic habitat.

About 150 yards south of Devil's Gate Dam, the Arroyo Seco flood control channel begins. Stream flow from this point all the way to Long Beach travels in a concrete lined channel, with the single exception of the unlined stretch that extends from the Holly Street Bridge to the Colorado Street Bridge. Below the Raymond Fault, a narrow stream lined by steep hills characterizes the Arroyo Seco corridor. In addition to the concrete-lined stream, there is some subsurface flow but no connection to a definable water basin, as the stream flows to the Los Angeles River at the base of the Elysian Hills near Dodger Stadium.

Water Quality

The water quality of the Arroyo Seco Watershed is directly impacted from the surrounding land use. With nearly half of the watershed (22.3 sq mi. - 48%) in the Angeles National Forest, the upper watershed tends to be relatively free of human-generated pollutants, but with steep slopes and natural cycles of fire, drought, and flooding, the upper watershed can generate fine suspended solids to major debris flows. Wildfires may also affect water quality, due to the loss of vegetative cover, increase in erosion and ash deposits.

Moving south in the watershed, horse corrals and golf courses may contribute nutrients (nitrogen, phosphate, ammonia) from manure and fertilizers. Urbanization has resulted in an accumulation of polluted runoff from roads, commercial areas, industry, and residential neighborhoods. The Arroyo Seco Parkway, with its extreme proximity to the stream, clearly impairs the water quality and can load the system with trash and a mixture of petrochemicals. Both surface and groundwater have serious water quality impairments. Water from the Arroyo is non-potable and it is not safe to come into bodily contact with the water in its current state. Trash, coliform, and algae have been found to be the Arroyo Seco's three main pollutants, according to the state's 303(d) list of impaired water bodies.

Water quality is degraded in the Arroyo Seco watershed, as in all of southern California. Human settlement and disturbances to natural processes are the main reasons for poor water quality. In addition, valuable stream and riparian habitat was destroyed. The lack of sand, gravel and boulders eliminated the habitat for macroinvertebrates (critters at the bottom of the aquatic food chain which fish and other aquatic animals eat), and fish. The elimination of riparian vegetation at the edges of the stream meant hotter temperatures of water due to lack of shade. Riparian vegetation can help reduce runoff velocity and filter pollutants flowing towards a stream. Reduced groundwater recharge due to impermeable surfaces and stream channelization over alluvial soils has compounded the issue of groundwater overdraft due to surface flow diversion and groundwater pumping. Currently there are at least fifteen users of pumped groundwater from the Raymond Basin, including several in the City of Pasadena, and other cities throughout the San Gabriel Valley. The aquifer provides 40% of local water supplies, with the remainder coming from imported water sources provided by Metropolitan Water District. The City of Pasadena is interested in developing additional groundwater recharge potential for the Raymond Basin aquifer.

Restoring the Arroyo Seco stream and tributaries is probably the most challenging, but most rewarding of the watershed restoration tasks. Stream restoration is the key recommendation of the Arroyo Seco Watershed Feasibility Study. The Raymond Basin would benefit from more natural recharge. Removing the concrete channel is a complex issue, and requires that a number of studies and watershed wide projects take place first. As stated by consulting geomorphologist Martin Kammerer, "...complete restoration is not feasible because substantial portions of the floodplain are urbanized.

Final design requires a juggling act between restoration goals and physical constraints," (Appendix I: *Geomorphologic Opinion on Feasibility of Stream Naturalization-The Lower Arroyo Seco*). However, it is also noted that implementing Best Management Practices (BMPs) within urbanized areas of the watershed will definitely contribute towards restoration. Ultimately, the entire fabric of our hydrologic system, flood channels, storm drains, dams and diversions, and even the asphalt, concrete and structural caps over permeable soils, must be evaluated for maximum benefit.

Improvements to surface water can be made in a relatively short amount of time by retrofitting properties to clean up storm water runoff. Areas of heavy automobile traffic such as the parkway are good candidates. Measures to collect trash from runoff will greatly reduce the pollutant-load on the streams. Current infrastructure rushes storm water directly off of roads and buildings, allowing for little or no filtration of pollutants to take place. Implementing Best Management Practices (BMPs) are critical to the improvement of surface water quality in a relatively short time period.

Habitat

According to project conservation biologist Verna Jigour, "…while the Arroyo Seco watershed retains a relatively high degree of native biological diversity, it may be thought of as teetering on the brink of ecological destruction, evidenced by a high rate of extirpations of historically present wildlife species and significant degradation of many remaining habitats." This is evidenced by the fragmented open spaces of habitat. The uppermost watershed has vast open space due to the Angeles national Forest. In the middle, the San Rafael and Verdugo Hills still contain open space habitat, although their connections to the San Gabriels are tentative at best. Lower in the watershed, Mt. Washington, Montecito and Monterey Hills mapping indicate that habitat patches exist, but are so fragmented that their viability of habitat for healthy populations of wildlife is severely limited. The Arroyo Seco is a tentative corridor for wildlife passage, possibly connecting the San Gabriel Mountains to the Elysian Hills to the southwest. Of foothill habitat, only fragments in the watershed are left today.

The Angeles National Forest has the best contiguous mountainous habitat. Before settlement of the foothills, there were lateral habitat connections via tributaries, valleys and ridgelines. These historic passageways have been severed by the development of Los Angeles and vicinity.

As the region's population grew, demands on natural resources and open space increased. More and more open space was developed for residential neighborhoods, severing habitat corridors that allowed wildlife movement through the foothills. Channelizing the Arroyo Seco meant that it could no longer function as riparian and aquatic habitat. Before dense settlement occurred, the Arroyo Seco and its floodplain most likely served as an aquatic and terrestrial habitat corridor to/from the San Gabriel Mountains to the Santa Monica Mountains and to the Pacific Ocean.

In terms of habitat, the most important step towards a restored watershed is the need to restore and protect missing linkages of fragmented habitat. Without these wildlife

movement linkages established, the trend will continue towards extinction of native plant and animal species from this region. At the same time, restoration and protection of existing open space and riparian habitat needs to occur, with new habitat being created where appropriate.

Open Space and Recreation

Open space has many benefits to the public, including increased air quality, a visually pleasing landscape, opportunities for active and passive recreation, and relief from the urban spaces of Los Angeles. A complete network of trails is also beneficial, as it provides a range of recreational uses, access to everyone, alternative methods of transportation, and connections between public open spaces and other trails. It is not difficult to find public open space within the Arroyo Seco watershed, including the Angeles National Forest, numerous city parks, Descanso Gardens, and undeveloped hillsides. However, because most of the public open space is clustered around the Arroyo Seco, many residential neighborhoods are without small neighborhood parks.

A high demand exists for recreational use of the natural areas and trails of the Arroyo Seco watershed. However, recreational activities in the Arroyo must compete for open space, because the amount of natural, open, public land is insufficient. Additional public open space is needed to meet the demands of the public. Of high priority is the need to protect current open spaces. The need exists to maintain existing open space for habitat, recreation and vision quality values. In addition, creating new open space through future land use conversion needs to be examined. Recreational users in the watershed have a strong interest in the management and future of the area's natural resources.

Arroyo Seco Watershed Restoration Feasibility Study
Figure I-1: Location Map
Prepared by: Mountains Recreation and Conservation Authority (MRCA).
Source: Los Angeles County Department of Public Works

Arroyo Seco Watershed Restoration Feasibility Study
Figure I-3: Topographic Relief
Prepared by: Mountains Recreation and Conservation Authority (MRCA).
Source: US Geological Survey, Digital Elevation Model (DEM)

Arroyo Seco Watershed Restoration Feasibility Study
Figure III-1: Land Use
Prepared by: Mountains Recreation and Conservation Authority
Source: Los Angeles County Department of Public Works III-6

RECOMMENDED ACTIONS

ACTION 2.4-1
Improve the Quality of Parkway Storm-water Runoff

The parkway negatively impacts the Arroyo Seco through stormwater runoff and trash that blows from the parkway into the channel. The roadbed and road surface wear in addition to motor vehicles contribute 23 pollutant constituents according to the Federal Highway Works Administration. These include heavy metals, PCBs, chloride, and petroleum, to name a few. While the parkway is not a truck route, spills and leaks from traffic accidents can also negatively impact water quality. The parkway is perhaps the greatest obstacle to restoration of ecological function of the Arroyo Seco due its close proximity to the channel.

- The California Stormwater Quality Association (CASQA) has developed Best Management Practices (BMPs) for stormwater management. In the volume for municipalities, the most effective BMP applicable here is to have a regular and frequent program of street sweeping. Caltrans does sweep the Arroyo Seco Parkway, but trash often collects along the chain link fence next to the road. Because clearances are so tight, it can be nearly impossible for road crews to clean the right of way and shoulders of the parkway. More frequent sweeping and an enhanced schedule for litter collected in the parkway fencing and vegetation should be studied (seasonal variations, specific sites) and implemented.
- Study, locate and install stormwater interceptors for trash and pollutants from the parkway into the storm drains that feed the Arroyo Seco to provide an even higher level of protection and opportunities for restoration of ecological function for the Arroyo Seco.

ACTION 2.4-2
Alternative Noise Attenuation

Traditional soundwalls will not be a compatible or acceptable approach to sound attenuation in this historic parkway corridor. Concrete sound walls are frequently used for the most efficient noise reduction, but can be visually obtrusive, reflect heat and glare, provide a surface for graffiti and are inappropriate in a historic district or within a cultural landscape setting due to their scale and material composition. While many people believe that plants attenuate noise, in fact, plants by themselves offer little noise reduction. In areas where space permits or land can be acquired, the berming of soil and subsequent planting should be used as a strategy to reduce noise AND add to the beauty of a natural environment such as the Arroyo Seco.

- Investigate and identify areas of the parkway where noise attenuation is needed.
- Where space permits, or can be acquired, install berms to meet noise attenuation needs. Berms to be constructed of mounded soil that is compacted and planted. Care shall be taken to provide a top layer of non compacted quality soil suitable for plant growth and development and the selection of plant materials and

planting design shall both maximize noise attenuation goals and reflect and be compatible with the original parkway planting aesthetic.

- Where required, chain link fencing shall be located on berms and screened with plant materials. Chain link fencing, once plant materials mature, should not be visible from either the parkway or the neighborhoods or public spaces adjacent to the parkway. Chain link fencing shall be vinyl coated in a black, dark green or brown finish to further minimize any negative visual impactWhere sound walls are unavoidable, a maximum practicable setback should be achieved with vines planted on the walls and additional plants in front to maintain the scenic character of the parkway and minimize the negative visual impact of the walls. Walls shall further be constructed of a material that "blends" with the general colors of the landscape and be articulated wherever space permits to minimize the appearance of a channel.
- Remove and replace the traditional soundwall constructed on the southbound side from Via Marisol to Avenue 52 with a more appropriate sound attenuation device; or at a minimum, plant it with vines.

ACTION 2.4-3

Restoration of Native Plant Communities

The original Arroyo landscape, prior to the construction of the parkway and flood control channel, would have been a riparian plant community—the remnants of which are still visible not only in the channel but in the parks the border the parkway and Arroyo Seco. Large sycamores help define the character of the parkway itself.

Nonetheless, one must look to the underlying ecology of the present condition of the parkway when designing a planting palette for the vegetated areas of the parkway. Not only has the soil structure changed from the building of the parkway, but in the intervening years particulate deposition from vehicular traffic has probably changed the chemical composition as well. Maintenance practices for controlling plant growth, whether mowing, disking, or the use of herbicides impacts the ecology of the roadside as well.

Where the original soil may have been a loose alluvium renewed with subsequent sand and silt deposition from the arroyo, and a rich riparian habitat provided shade, the condition now is that of compacted soil, hot, dry conditions, and weedy undergrowth. The original parkway planting included native plants, few of which have survived today. It is no longer known what plants exactly were used, and where. Thus, the selected plant palette must be responsive to existing conditions, recognizing that underlying structure is so altered that a true restoration back to original conditions is no longer possible. If native plants are to be used, correlating current conditions of the parkway with analogous natural conditions elsewhere may be a more appropriate strategy for development of a planting plan. In some severe circumstances, such as narrow medians in the center of the parkway with little opportunity for maintenance or replacement of plants, non-native Mediterranean climate plants may be the best choice for planting.

- Identify all pre-construction native plant materials within the parkway right-of-way, the flood control channel and parks and assess their current health, life expectancy and form and shape (natural, mutilated, improperly pruned or trimmed, overgrown or blocking intended views). Remove all damaged, diseased or overgrown (if negatively impacting the parkway landscape) plant materials.
- Identify native plants from the region, that while not present in the historic riparian landscape of the Arroyo, would be well suited to the contemporary cultural conditions (soil, water, sunlight) of the Arroyo. Additionally, native plant materials that meet modern conditions for drought tolerance and highway conditions (exhaust, runoff, wind) should be identified.
- Identify modern plant hybrids that meet many of the physical (form, color, texture) and environmental (soil stabilization, water retention, habitat) of native plants from the original riparian landscape.

(See also Action: Restore Historic Landscape Design)

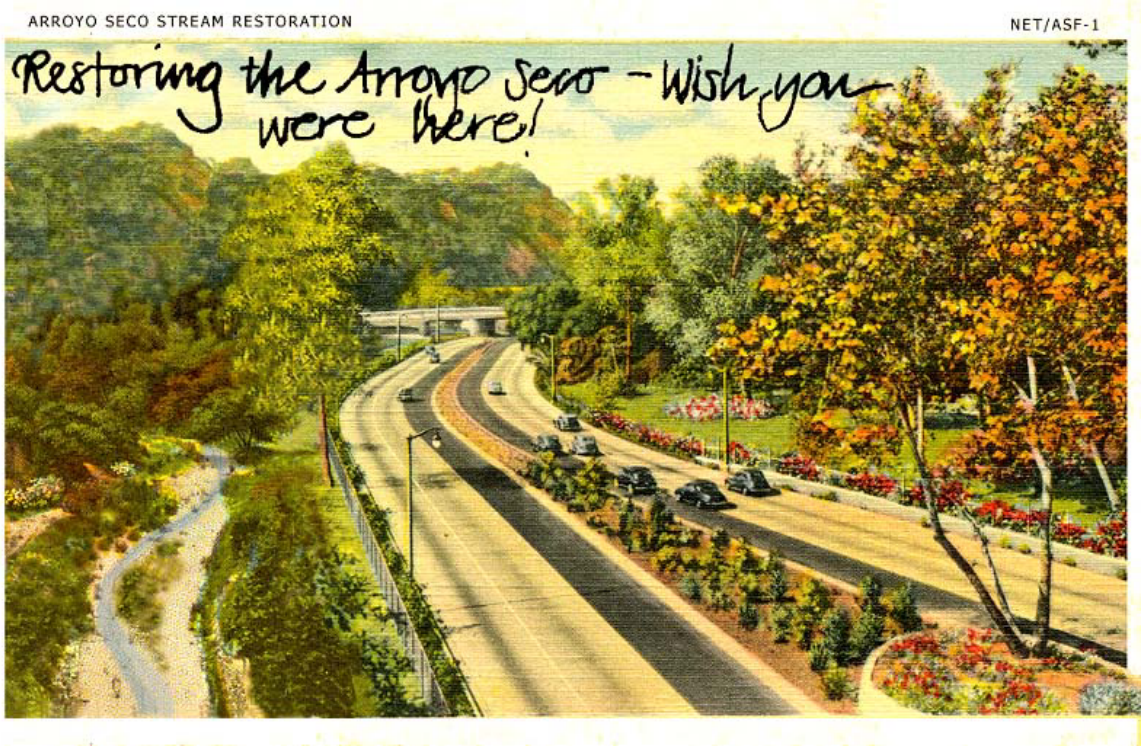
ACTION 2.4-4

Mitigate Single Source Light Pollution within the Arroyo Seco Parkway Viewshed.
The Arroyo Seco Parkway traverses on of the largest concentrations of urban parklands and natural spaces in the greater Los Angeles area. While the natural vegetation and landforms make such a concentration obvious to the parkway traveler during daylight hours, nighttime lighting in the corridor can diminish such an association as hillsides a punctuated with points of illumination—introducing a distinctly human element into the natural landscape. While many of these lights perform needed functions, a more thoughtful consideration of their direction, halos and intensity on the parkway, may enhance the nighttime experience of the Arroyo Seco without compromising their utility.

- Identify streetlights, flood lights and other sources of illumination from public facilities and commercial properties within the Arroyo Seco Parkway viewshed that are visible at night.
- Where possible, redirect, shield or reduce the wattage of security lighting from public facilities and commercial properties within the parkway viewshed to enhance the natural character of the Arroyo Seco at night.

WELCOMING THE VISITOR

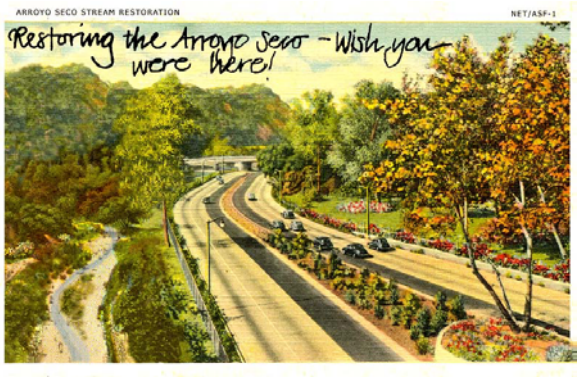
A vision of a restored and rehabilitated historic parkway and corridor.



2.5
Actions for Welcoming the Visitor

"The point is that a place must develop a set of objectives and strategies toward visitors rather than promoting haphazardly. Once a place decides on visitors and how many visitors it wants, it can begin to build up its facilities and infrastructure. It does this by researching what its target visitors seek in different destinations and what they seek in coming to one place. Many a community has built up its visitor infrastructure without clear target groups in mind, only to be left with half-empty hotels and facilities.

--Philip Kotler, Donald H. Haider and Irving Rein, Marketing Places



The Arroyo Seco Parkway and Arroyo Seco corridor represent one of the richest concentrations of heritage and cultural resources in Southern California. From the landmark Southwest Museum towering over the parkway to the Gamble House in Pasadena the corridor presents the visitor with an infinite array of stories, resources public access and activities at a number of key visitor destinations. In addition to traditional visitor attractions such as the Charles Lummis House, Heritage Square and the Los Angeles River Center and Gardens, the parkway's historic bridges, engineering design and associated parks, and the design of the flood control channel represent untapped stories rich in interest. Even the history of the communities of the Arroyo—their evolution and the initial impacts of the parkway's construction present opportunities to educate and inform resident and heritage visitor alike.

Due to the corridors intensive use and urbanization, however, many visitors and residents are not aware of the corridor's visitor resources and visitor potential. This plan identifies the stories and themes by which the history, environment and culture of the corridor may be better showcased and offer recommendations for techniques, programs and sites by which the interpretive plan may be implemented.

The National Trust for Historic Preservation defines as cultural heritage tourism as *traveling to experience the places, artifacts and activities that authentically represent the stories and people of the past and present. It includes cultural, historic and natural*

resources. As a newly designated National Scenic Byway, the Arroyo Seco Parkway has an unprecedented opportunity to share the heritage of this nationally significant corridor through museums, sites and interpretive facilities.

Cultural Heritage Tourism in the United States

Tourism is big business. In 2001, travel and tourism contributed $537.2 billion to the U.S. economy, making travel and tourism the third largest retail industry in the U.S. behind automotive dealers and food stores. Travel and tourism directly employs more than 7.9 million people and indirectly supports another 10.1 million jobs, creating a total of 18 million jobs – that's 1 of every 7 people in the U.S. (*Source: 2002 Tourism Works for America Report)*.

In addition to creating new jobs, new business and higher property values, well-managed tourism improves the quality of life and builds community pride. According to a 2001 *Report on Cultural and Historic Tourism,* visitors to historic sites and cultural attractions stay longer and spend more money than other kinds of tourists. Cultural and heritage visitors spend, on average, $631 per trip compared to $457 for all U.S. travelers, and they spend and average of 4.7 nights away from home as compared to 3.4 nights for all other travelers. (*Source: Travel Industry Association of America*). Perhaps the biggest benefits of cultural heritage tourism, though, are diversification of local economies and preservation of a community's unique character.

Travel Trends Create Opportunities and Challenges

Americans are busier than ever, and this is reflected in current travel trends. Weekend travel has been on the rise as time-squeezed Americans fit in several long getaway weekends to replace longer vacations to destinations further from home. In an urban area such as Los Angeles, this creates opportunities to design experiences to "explore your own backyard" to discover new places that are not far away. Hectic lives have also made travel packages and itineraries popular, providing turn-key travel products that eliminate the need for extensive planning prior to a trip. The internet is also increasingly becoming a source for travel information that is heavily relied upon.

Aging baby boomers are a growing market for cultural heritage tourism. The Travel Industry Association's travel trends indicate that baby boomers took more trips in 1999 than any other age group, and the profile of boomers fits with that of the cultural heritage traveler. Cultural heritage travelers tend to be slightly older than other travelers, and aging boomers, like cultural heritage travelers, spend more on their trips than other age groups. A 1998 Market Assessment Plan on baby boomers prepared by the National Tour Association noted that "*because boomers are more experienced travelers, they will expect more from their experiences and terms such as cultural tourism, heritage tourism, sports tourism, active tourism, adventure travel and ecotourism will be commonly used within the next decade."*

The growing boomer market certainly provides tremendous growth potential for cultural heritage tourism, but it also raises the bar in terms of visitor expectations. The sophistication of this emerging market will demand an experience that is authentic, high quality, and in many cases, customized to meet individual interests and needs. The most successful cultural heritage tourism destinations are providing a variety of changing visitor experiences that will draw repeat visitors as well as appealing to a range of first time guests.

Additionally, there is a broadening perspective of history that is increasing visitor interest in sites that represent everyday life rather than simply the lives of the rich and famous. As corporate expansion and other growth is creating new neighborhoods and businesses that are increasingly homogeneous, older neighborhoods that have held on to their unique attributes and heritage are becoming increasingly appealing for visitors as well as for potential residents.

In the aftermath of 9/11 and the ensuing economic recession, travelers have turned the focus of their travel plans closer to home. According to the Travel Industry Association of America, "with the war over and consumer confidence rising, Americans are getting back to travel with 82 percent planning to take at least one trip this summer, according to the Travel Industry Association of America (TIA). A record number of Americans will be staying within the U.S. and driving to their destinations. Research indicates that travelers are looking for flexible, affordable, hassle-free vacations to create their own unique memorable experiences."

Challenges

While research clearly indicates that there is a strong and growing market for cultural and heritage tourism experiences, reports on attendance at individual historic sites and museums are mixed, with many sites showing a flat or even decreasing attendance. While no research has yet been completed to address this issue in a comprehensive way, cultural and heritage site managers across the country have offered their own theories about why this is happening.

1) Increasing Competition

While the number of heritage visitors seems to be growing, the number of cultural and heritage attractions is also increasing. Thus rather than boosting attendance at one site, the additional cultural heritage travelers are spread out between more attractions. Additionally, attractions that previously would not have been considered heritage attractions are looking for ways to incorporate "edutainment" or learning opportunities into the visitor experience.

2) Customer Service

While cultural heritage sites have traditionally excelled in the areas of conservation and preservation, customer service and marketing are newer concepts for many. The sophisticated cultural heritage traveler will demand an experience that is not only authentic, but also one that provides a high level of customer service.

3) Changing Travel Market
Cultural heritage sites have been slower to adapt to changes within the US travel market. With the shift away from longer family vacations to multiple, shorter trips throughout the year, cultural heritage attractions need to find ways to attract local visitors as repeat guests as well as appealing to travelers from further away. The sites that have been the most successful have diversified their offerings to include changing attractions along with special events and new experiences.

4) Supporting Destination Attractions
Corridors rich in history, such as the Arroyo Seco, are usually comprised of a variety of visitor attractions with varying levels of visitation. Often the area's mix of small attractions and sites, which may not be viewed as "destination attractions," benefit from "spillover" visitation (and thus financial support) by physical proximity to attractions that may offer more of a regional draw or be better recognized. While many tourism initiatives are geared toward supporting smaller and emerging attractions and sites, it must be remembered that destination attractions continue to be the primary source of most visitation to a region—their long-term viability and sustainability thus having a direct impact on smaller facilities. The Arroyo Seco region is well positioned with a solid mix of both destination attractions and smaller attractions that have a solid authentic sense of place.

To respond effectively to these challenges, heritage and cultural attractions nationally must be educated about the changes in the current travel market and how to respond effectively. Additionally, many sites could benefit greatly from customer service training to respond to the needs of visitors effectively. Additional research will be required to ascertain how the attractions along the Arroyo Seco scenic byway fit in to the national outlook for cultural and heritage attractions.

Heritage Tourism and the Arroyo

The Arroyo Seco Parkway offers a distinctly urban experience quite unlike most other National Scenic Byways. The Arroyo Seco Parkway was "the first divided-lane, high speed, limited access road in the urban western United States and the prototype of the world renowned Los Angeles Freeway system." The Arroyo Seco Parkway, was the precursor to the modern Interstate.

The Arroyo Seco is anchored on each end by an established destination; Pasadena on one end and downtown Los Angeles on the other. The museums and attractions in Pasadena are visitor ready and already have a strong draw for visitors. Downtown Los Angeles is also a business and pleasure destination, with attractions such as the Museum of Contemporary Art (MoCA), the Dorothy Chandler Pavilion, the much anticipated Walt Disney Concert Hall. While downtown L.A. has had ups and downs over the years, this area is currently experiencing a renaissance. In addition to the construction of new landmarks by famous architects, there has been a movement to create living spaces downtown, many in lofts in historic structures. According to a November 11, 2002

article in *Newsweek* magazine, 300,000 people work in downtown L.A. and there are 5,000 living units currently in downtown with another 5,000 planned to be completed in the next three years.

Many of the communities between downtown Los Angeles and Pasadena are "diamonds in the rough" with a rich heritage and a varied mix of attractions with a tremendous amount of potential. Chinatown is located adjacent to the downtown area, offering a variety of restaurants and shops. The Highland Park neighborhood includes a number of arts and crafts style homes as well as prominent historic sites such as the Charles Lummis House, the Southwest Museum (an anchor destination) and Heritage Square. Highland Park has a historic business district on Figueroa Street poised for rehabilitation. South Pasadena has a historic business district with visitor amenities such as bed and breakfasts.

As Pasadena already has such a strong and established image, one of the greatest challenges of the Arroyo Seco is to present an image of the entire byway corridor as a collective experience. By investing in the attractions and the communities in the few miles in-between the two established anchors, the byway experience can be greatly enhanced as a unified corridor.

Opportunities and Partnerships

Partnerships with the Gold Line

A new light rail line opened in July 2003 along the Arroyo Seco corridor, crisscrossing the parkway at key locations. This provides a great tourism and interpretation opportunity for several reasons. First, the Gold Line is one way to help alleviate the overcapacity currently occurring on the Parkway.

Discussions are already underway to put a "cultural corridor" concept in place on the Gold Line, which provides tremendous opportunities to create linkages with Highland Park and other neighborhoods between downtown and Pasadena. Virtually every stop along the Gold Line is adjacent to significant cultural attractions.

The Gold line also offers opportunities to explore multi-modal transportation, and the stops along the Gold Line offer incentives for travelers to slow down and explore new areas. Finally, the views of the Parkway from the Gold Line passenger trains provide several key places for interpretation of the National Scenic Byway, including the train crossing the Arroyo via the historic Santa Fe Railroad Bridge.

Partnerships with the Museums of the Arroyo

This loose coalition has a fifteen-year history, and has sponsored an annual "Museums of the Arroyo Day." In addition, they have discussed other opportunities such as a passport program and interchangeable memberships, and have expressed an interest in reviving or expanding this discussion.

Developing and Promoting Group Tours
Identify organizations and companies that have an interest in offering group tours in the Arroyo Seco area, with an emphasis on the sections that have been less developed for tourism. This would include, but not be limited to, the walking tours that the L.A. Conservancy will be offering in Highland Park and tour operators such as Daytrippers (out of San Diego) and Connect L.A. Look at opportunities to encourage other tour operators and organizations to offer group tours in the area, and seek out ways to encourage existing group tour providers to extend their stay and visit additional sites in the area.

Expanding School Programs
Explore the opportunity to integrate children's education into interpretive efforts for the Arroyo Seco byway. While initial research indicates that it would be extremely challenging to integrate this into the public school system in Los Angeles, there may be ways to work with after school programs, YMCAs, girl/boy scouts, teen programs or other groups to reach out to new audiences.

Branding of the Arroyo Seco National Scenic Byway
The Arroyo Seco takes travelers through an incredibly diverse environment in a few short miles—from the central downtown of one of the largest cities in America through Chinatown and other culturally diverse neighborhoods, ending in Pasadena which is a well known destination for the arts and crafts heritage, shopping, and the Rose Bowl.

The challenge is to create a collective identity for this diverse byway that encourages visitors to see the connections between these seemingly disparate neighborhoods. For example, the City of Pasadena is marketed with an arts and crafts motif, but using this motif for the entire byway might not necessarily reflect the attractions in downtown L.A. or Route 66 or capture the essence of the 1940 roadway.

Components of a branding campaign would include distilling the "essence" of the Arroyo Seco into a tag line and logo, developing guidelines for the use of the tag line and logo, and launching a media branding campaign to develop awareness of the Arroyo Seco "brand."

RECOMMENDED ACTIONS

ACTION 2.5-1
Conduct Audience and Market Research
Prepare a comprehensive audience and market research study for the Arroyo Seco Parkway and corridor to determine the recognition of the corridor and its desirability as a visitor destination.

- Identify current and potential audiences for key interpretive sites along the Arroyo Seco, and provide recommendations to expand audiences and increase length of visit, using existing research to provide baseline data and commissioning additional research as needed.

- Identify existing marketing strategies and partners that currently promote the Arroyo Seco.
- Assess the diversity, marketability, quality, interpretative programs and desirability as a visitor destination for key historic, cultural, recreational and natural sites in the corridor.

ACTION 2.5-2

Identify and Assess Potential Key Interpretive Sites

Identify key interpretive sites along the Arroyo Seco, including, but not limited to the Southwest Museum, Lummis House, Gamble House, Heritage Square and the communities of the Historic Route 66 Corridor. Complete an in-depth assessment of selected cultural and heritage sites along the Arroyo Seco—providing site specific recommendations for interpretation and marketing as well as overall interpretive recommendations to benefit the entire byway.

- Evaluate ease of access from the parkway corridor to the interpretive facility (and ease and access of return).
- Make recommendations for interpretive sites to accommodate visitors and residents for whom English is not a first language and disabled visitors (physical access, Braille, large-print and audio).
- Identify sites that, due to physical location (en route to a school or commercial district or adjacent to a Gold Line station) will engage the resident population in a better understanding of the history and significance of the Arroyo Seco corridor.

ACTION 2.5-3

Develop an Interpretive and Marketing Plan

Recognizing that marketing and interpretation are most effective through a coordinated planning process, an Interpretive and Marketing Plan for the Arroyo Seco Parkway shall be developed making recommendations for tourism and economic development opportunities within the corridor.

- Explore the specific areas of opportunity identified during the initial assessment visit to welcome and provide visitor services/direction and amenities for targeted visitors, including:
  1) Partnering with museums and attractions of the Arroyo
  2) Partnering with the new Gold Line
  3) Cultivation of Group Tour opportunities
  4) Development and Expansion of Children's Programs
  5) Branding of the Arroyo Seco
  6) Partnering with national and local Historic US Route 66 organizations and experts.
  7) Accommodation for multiple languages (both targeted visitors and local residents) and ADA (accessible interpretive panels, Braille, large-print and audio)
- Identify a strategy to build capacity for tourism readiness at visitor resources (sites, museums, parks, trails, visitor service providers) throughout the corridor. Visitor capacity may be needed through restored facilities, new construction,

support services (transportation, interpretation, education, hospitality training), and an organization mechanism to promote and sustain tourism within the corridor.

ACTION 2.5-4

Developing an Arroyo Seco Corridor Visitor and Interpretive Center

Develop a high quality visitor and interpretive center to serve the Arroyo Seco corridor. In addition to general information, maps and comfort facilities, the visitor center should include interpretive exhibits showcasing the history of the corridor, the natural, built and cultural environment, the construction of the parkway, arts and culture.

- The interpretive center should share the history and culture of the corridor through photography, exhibits, film, and interactive media. Additionally the facility should provide office and support services for the scenic byway and affiliated/partnering organizations within the corridor, provide community facilities for school children and continuing education focused on the traditions, natural systems, history and culture of the Arroyo.
- The design of the facility should showcase the design traditions and history of the Arroyo corridor. The exterior spaces (gardens, walks, public areas and parking) should reflect the landscape design heritage of the corridor and the natural environment.
- The facility should be located with convenient access to a Gold Line station and local bus routes.
- The visitor center should be centrally located and convenient to the Arroyo Seco Parkway. Access to and from the parkway should be clearly provided with all turning movements identified in advance.

ACTION 2.5-5

Develop Parkway Recognition Program for Resource and Media Organizations

Coordinate outreach to all local, state and national map companies, news agencies, rental car agencies, online map resources and federal and institutional mapping organizations for consistent reference to the byway as "California Route 110/Arroyo Seco Parkway."

- Contact principal map designers and distributors in southern California such as Thomas Brothers, American Automobile Association (AAA), California Automobile Association (CAA), Rand McNally, United States Geological Survey (USGS) and Mapquest.
- Coordinate with all regional news organizations that report traffic in the greater Los Angeles to refer to the "Arroyo Seco Parkway".

2.6
Actions for Engaging the Public

*"**R**esidents of a metropolitan area will not accept a ...strategy handed to them without significant prior consultation. So there must be some means of enlisting both initial and later inputs from many different groups. These should include subgroups defined in terms of geography, socioeconomic status, occupation, ethnicity, and political perspective.*

--Anthony Downs, New Visions for Metropolitan America

The success of any corridor management plan is incumbent on both a community outreach process and awareness campaign. Local government, community leaders and interested residents must be invested in the activities proposed in any successful plan. In fact, plans are only successful if developed through such input. A corridor management plan must also recognize that no matter how active and invested governments and communities are in the process, there are still many people who will not actively participate—particularly in a corridor utilized by commuters. It is, therefore, essential that a broader outreach campaign through printed and electronic materials, and information signs and events during construction processes clearly present the casual parkway user or corridor resident with basic information.

Public Outreach

The public outreach program for the Arroyo Seco Parkway Corridor Management Plan has been developed locally and designed to ensure that the varied communities, neighborhoods, and other corridor users are represented. From school children who cross over the parkway and the commuters that pass beneath, to the historic preservationists, environmentalists, recreation users and corridor advocates, the public outreach process will strive to accommodate their goals and aspirations—as well as the wealth of information only a daily user or resident can share.

RECOMMENDED ACTIONS

ACTION 2.6-1
Establish An Arroyo Seco Parkway Group/Organization
Establish an Arroyo Seco Parkway group or organization to promote the National Scenic Byway designation, champion the restoration and rehabilitation of the parkway and serve as a representative body of parkway corridor stakeholder groups.

ACTION 2.6-2
Host Public Information Forums
Representatives of the Arroyo Seco Parkway advocacy group or organization should actively participate in Arroyo Seco Corridor related activities such as Council of Arroyo Seco Agencies (CASA), Council of Arroyo Seco Organizations (CASO), local community based groups, and governmental and educational organizations within the Arroyo corridor.

ACTION 2.6-3
ArroyoFest

Coordinate with the ArroyoFest nonprofit and/or steering committee to institute ArroyoFest as an annual or bi-annual parkway and corridor event. Due to the overwhelming success and public good will generated during the June 2003 event, develop a formal planning process for ArroyoFest to celebrate the resources of the Arroyo Seco.

Establish an Arroyo Seco Parkway booth at ArroyoFest to continue public outreach and community participation outreach processes for the Arroyo Seco Parkway Corridor Management Plan. Representatives of the National Scenic Byway and corridor management planning team representatives should be present to introduce the concepts behind the planning process, share existing efforts (Historic American Engineering Record documentation, for example), invite public comment on the planning and implementation processes and establish and update a mailing list for interested parties/stakeholders.

ACTION 2.6-4
Community Meetings
Project team to host community/stakeholder meeting to introduce and seek input on the draft Corridor Management Plan. The meeting will be centrally located and promoted in such a manner as to provide multiple presentation times for maximum public participation. In addition to the draft and final CMPs, additional public materials for related and concurrent activities within the corridor should be made available.

ACTION 2.6-5

Commuter Survey

Develop a user survey to determine the concerns and interests of parkway commuters and users. The survey will also be designed to determine the awareness of and interest in the historic preservation activities associated with the rehabilitation of the Arroyo Seco Parkway.

- Determine local resident vs. through traveler.
- Determine safety perceptions regarding the parkway and what, if any, responses drivers make as a result.
- Assess the willingness (and reality) of drivers to adjust their behavior for reduced speeds, construction activity or special events (such as ArroyoFest).

ACTION 2.6-6

Design and Distribute an Arroyo Seco Parkway Brochure/Mailer

Recognizing that many residents do not engage in advance planning processes, the ASP byway organization will design and distribute a multi-lingual information piece summarizing the byway planning efforts, the history of the corridor with historic photographs, and contact information for more information. This should occur when the first significant implementation projects, associated with the byway, are under active construction.

- Brochure/mailer to have a brief summary of the history of the corridor and the history of the construction of the flood control channel and parkway. History should include period photographs.
- Brochure/mailer to outline safety improvement plans and the benefits to parkway users *and* local residents in the communities along the parkway.
- Brochure/mailer to provide information and direction to a website and toll-free number for information regarding the Arroyo Seco Parkway and the planning process.

2.7
Actions for Maintaining the Parkway

"At most seasons of the year…a small trickle of water among stones in a wide, deep wash, overgrown with button willow and sycamores….Tiny gold and silver backed ferns climb down the banks to drink, and as soon as the spring freshet has gone by, brodiaeas and blazing stars come up between the boulders worn as smooth as if by hand.

--Mary Austin, California author, circa 1900

Great ideas and great accomplishments are of limited value if their care and maintenance after the celebratory ribbon cutting go unheeded. A clear maintenance program, staff and funding is a requirement to ensure community pride in any resource. It is further recognized that comprehensive maintenance plan, over time, reduce overall maintenance expenses and greatly increase the return on the initial investment.

Management Entity

In order to best maintain and manage the unique transportation resource that is the Arroyo Seco Parkway will require a commitment to a high level of service from not only Caltrans maintenance teams, but also a number of other Caltrans divisions and regional organizations involved in planning and management decisions for the parkway. Good maintenance cannot exist without a comprehensive understanding of a resource such as the Arroyo Seco Parkway, and such an understanding requires that all decisions and goals take into account the real needs for long term care of the parkways structures, features and landscape. As one of the goals of this management plan is to view the Arroyo Seco corridor as a comprehensive whole with a distinguishing landscape, it is inappropriate to begin this process with a Balkanized view of the multiple resources throughout the corridor—right-of-way lines, park boundaries and municipal lands. The Arroyo Seco corridor must be viewed in the traditional parkway sense with an apparently seamless relationship among roadway, environment, recreation and community. This will require greater communication among agencies and organizations currently charged with or engaged in maintenance and earlier communication between agencies and organizations proposing changes to the parkway and its environment with the individuals charged with day-to-day maintenance activities.

RECOMMENDED ACTIONS

ACTION 2.7-1

Maintenance and Facility Analysis

Chain-link fence in front of historic rock face wall creates a maintenance problem.

A comprehensive analysis of current maintenance practices and parkway facilities is needed to assess the ability of Caltrans maintenance staff to manage the parkway based on the goals and recommendations of this corridor management plan.

- Review all existing maintenance activities (repair, litter removal, graffiti clean-up, mowing, weeding, pruning, sweeping and irrigation) to determine the ability of current staffing and funding to meet the goals and objectives of managing the Arroyo Seco Parkway as an historic facility.
- Identify current redundant systems or structures that, by their nature, increase maintenance needs or complicate routine maintenance activities.
- Identify needed access points to the right-of-way for better maintenance or to improve the safety of Caltrans staff.
- Identify areas or resources in need of enhanced security, police presence or community involvement to improve maintenance.
- Identify activities and areas in which a parkway organization or community service organization could assist Caltrans maintenance efforts (litter removal, landscape maintenance, incident reporting).

ACTION 2.7-2

Graffiti Removal

Graffiti or "tagging" has visually scarred the Arroyo Seco Parkway and diminished the appreciation for many of its historic features. It has been proven that the prompt, professional and consistent removal does reduce graffiti. Current policies for removal of graffiti within 24 hours or as quickly as possible should be continued and supported.

- Outreach and coordination with municipal and community programs to combat graffiti as a social problem should be undertaken in addition to traditional focus of Caltrans' eradication program.
- The financial, labor and traffic implications (lane closures) for graffiti eradication should be reviewed and quantified within the recommendations and goals of this plan to determine the resources needed to effectively combat the problem.
- Graffiti on natural stone, unpainted concrete or metal surfaces should be scrubbed using approved cleaning solutions and applications methods. Under no circumstances shall natural or metallic surfaces that have been defaced with graffiti be "painted out
- All painted surfaces defaced with graffiti should be repainted. Paint should exactly match the color or colors of the painted surface and shall be consistently applied and paint colors shall be archived and recorded. To minimize the "patch"

appearance of fresh paint directly over and defined by the defaced area, painted surfaces should be repainted in blocks bound by the nearest edges defining a contiguous area of the surface such as, control joints, expansion joints, ledges, bases, pillars, pilasters or decorative features.

ACTION 2.7-3

Parkway Maintenance Yard

In order to properly maintain the Arroyo Seco Parkway in the most efficient manner, a maintenance yard/facility should be specifically designed and located within the parkway corridor or in a location that provides easy access to the parkway. As a unique and special resource, the parkway will require space for the stockpiling of materials unique to the parkway (lighting, barriers, plant materials, signs and cleaning supplies), service vehicles and a shop facility.

- stockpiling of parkway details and features for replacement due to vandalism or damage (guardrail, lights, interpretive information panels, sign shields) shall be accommodated at a specially designated parkway maintenance yard, or a specially designated area of an existing maintenance yard.
- Maintenance yard, if within the parkway corridor, shall be located in an area that has minimal negative impact on the visual or historic integrity of the parkway and should be properly screened. It should also minimize any impact to area residents.
- Opportunities for coordinated of shared maintenance resources/storage with other agencies charged with maintenance in the corridor should be considered.

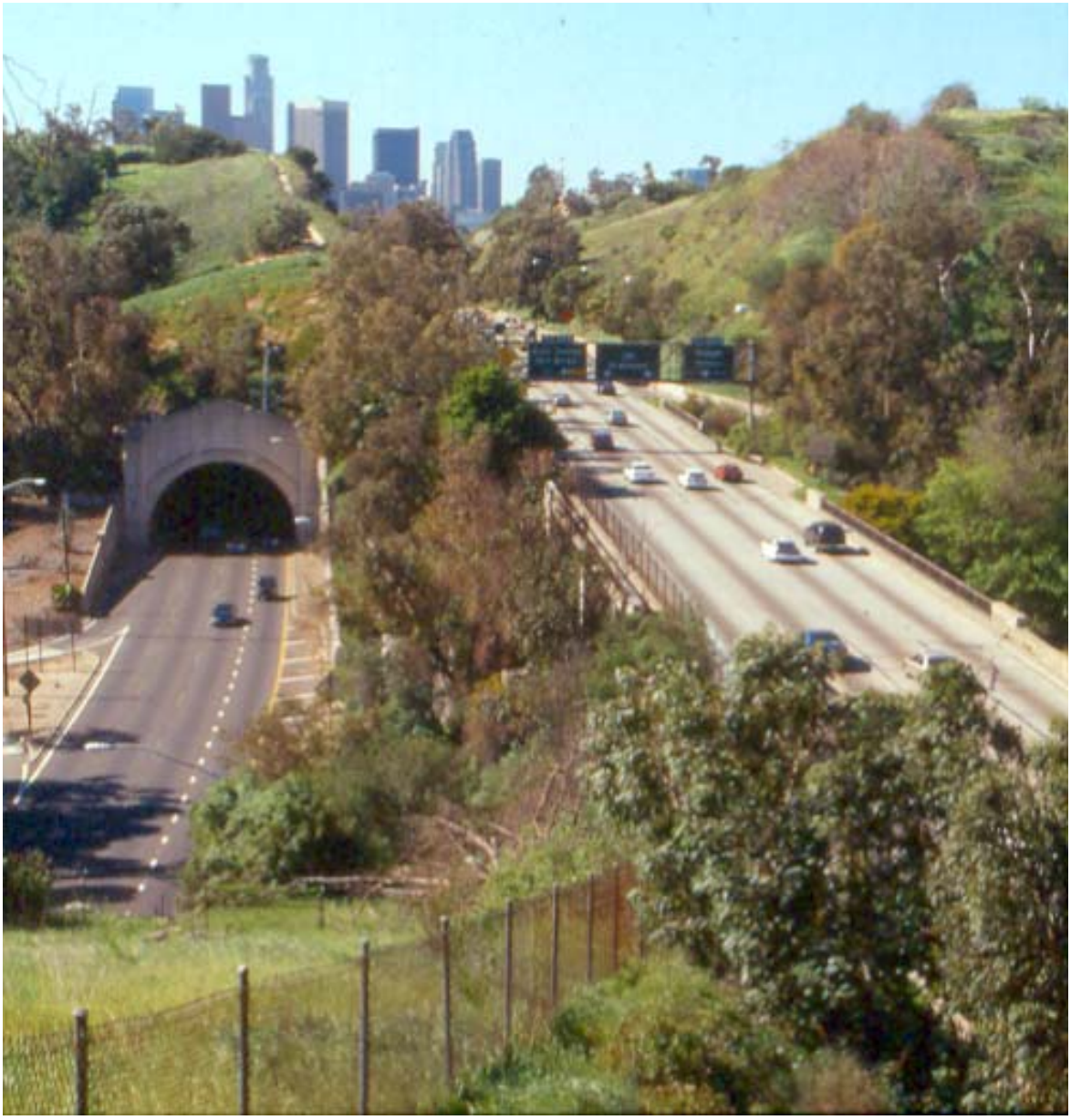
ACTION 2.7-4

Caltrans Maintenance Structure

Develop a management structure which can be responsive to the requirements and needs for proper stewardship of the Arroyo Seco Parkway must be developed to nurture the stated objectives and obligations required in managing all activities for the Parkway. This corridor management plan recognizes that to maintain the Arroyo Seco Parkway in the manner recommended in this plan will likely require additional resources (staffing, equipment, training and facilities) that may be impossible to fully identify at this time. Therefore, it is essential that maintenance needs be regularly reviewed not only during the implementation phase of this plan, but also on a biennial basis over time.

- Identify maintenance staff needs for personnel, funding, supplies, equipment or training to manage the parkway as a historic facility.
- Identify partnership opportunities with local governments and regional nonprofit and advocacy organizations to assist with maintenance related issues and needs.
- Identify, through a byway organization, supplemental funding sources or opportunities to assist with parkway maintenance.
- Adopt-a-highway program to sponsor maintenance activities. To minimize sign clutter, adopt-a-highway sponsors to be recognized at a central location, such as a byway visitor center, rather than along the parkway.

THE ARROYO SECO PARKWAY, 2003
View to Downtown Los Angeles from Elysian Park



2.8
Fulfilling the Vision

"If, as the Greeks believed, the gods in their wandering made the first roads, then I daresay it is an act of piety to follow in their footsteps, and politically speaking, the best of all landscapes, the best of all roads, are those which foster movement toward a desirable social goal.

--John Brinkerhoff Jackson, Discovering the Vernacular Landscape

The truest success of any plan is in its ability to accommodate change and withstand time without losing sight of its original vision. The Corridor Management Plan for the Arroyo Seco Parkway offers a grand vision and many recommendations to see that vision become a reality. The true reality, however, will be in the efficient implementation of the identified actions and in an appreciation for the community, maintenance, political and financial needs to sustain the parkway projects over time.

Streamlining the Process

The current regulatory environment of safety and environmental mandates require the practical application of a multitude of identified issues into this plan in order to allow improved operation of the parkway into the future. Because this plan was created with the desire to provide the residents of the corridor with an improved facility as quickly as possible, it has been designed based on the lofty goals outlined but presented herein with a structure that allows for easy application of parkway goals against review and approval processes needed to fulfill the vision.

This corridor management plan has been designed with an understanding of and in response to the requirements for approval regulatory agencies with jurisdiction over the parkway and its environs have established. This plan will provide specifications and treatment guidelines for many cultural and natural corridor elements by addressing the following regulatory mandates and subsequent revisions:

-California Environmental Quality Act (CEQA)
-National Environmental Protection Act (NEPA)
-National Historic Preservation Act (NHPA)
-Section 106
-National Transportation Act (NTA)
-Section 4(f)

In addition to regulatory mandates, the plan will also address the recommendations and advice of the following:

-American Association of State Highway and Transportation Officials (AASHTO)

The practice of cultural resource management takes into account the varied elements of our historic and cultural legacy. From landscapes to civil engineering elements to buildings and structures it is through the combined methods or sciences that have been developed for these particular elements over the last three decades that this plan has been developed.

RECOMMENDED ACTIONS

ACTION 2.8-1

Create an Independent Parkway Organization

To properly ensure the continued appreciation for the nationally significant Arroyo Seco Parkway, an independent parkway organization should be created. With representatives from the communities along the parkway; local governments; Caltrans; Los Angeles County Watershed Management Division; historic, cultural and recreational organizations; and transportation safety experts, the organization should serve as the single voice representing parkway users and act as a liaison among the various activities (environmental, preservation and community) occurring within the parkway corridor.

- The parkway advocacy organization should be a registered 501c(3) organization and have offices along the parkway corridor.
- The parkway organization should fulfill the management/public participation/information activities required as a National Scenic Byway.

Arroyo Seco Parkway Corridor Partnership Plan (National Scenic Byway) - Technical Advisory Committee & Other Key Contacts - Updated 06/27/2012

For questions, please contact Caltrans, District 7 Planning Division: Linda Taira at 213-897-0813 or Frances Lee at 213-897-0673

Name	Title/Department	Company/Agency	Address	Phone	Email
Caltrans					
Abdi Saghafi	District 7 - Program and Project Management - Area Manager	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-9810	abdi_saghafi@dot.ca.gov
Carolyn Dudley	HQ, Design - Sr. Landscape Architect	Caltrans	1120 N Street, MS 28, Sacramento, CA 95814	916-654-5505	carolyn_dudley@dot.ca.gov
Claudia Harbert	District 7, Environmental Planning - Assoc. Env. Planner, Architectural Historian	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0415	claudia_harbert@dot.ca.gov
Clive Russell	District 7, Freeway Operations	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1946	clive_russell@dot.ca.gov
Dahlia Persoff	District 7, Design - Assoc. Landscape Architect	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0463	dahlia_persoff@dot.ca.gov
Dale Benson	District 7, Local Assistance - Sr. Transp. Eng., Bike Coordinator	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-2934	dale_benson@dot.ca.gov
Dapo Majekodunmi	District 7, Operations - Freeway Investigations	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-5742	dapo_majekodunmi@dot.ca.gov
Debbie Wong	District 7 - Maintenance Design - North Region	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0257	debbie_wong@dot.ca.gov
Dennis Cadd	HQ, Design - Sr. Landscape Architect, Statewide Coordinator	Caltrans	1120 N Street, MS 28, Sacramento, CA 95814	916-654-5370	dennis_cadd@dot.ca.gov
Derek Higa	District 7, Design C - Sr. Transp. Engineer	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0394	derek_higa@dot.ca.gov
Diane Jacobs	District 7, Planning - Transportation System Information/Microsimulation	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-413-4607	diane_jacobs@dot.ca.gov
Edward G. Toledo	District 7 - Maintenance - North Region	Caltrans	100 S. Main Street, Los Angeles, CA 90012	626-794-6545	edward_g_toledo@dot.ca.gov
Elhami Nasr	District 7, Planning - Transportation Office Chief	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0227	elhami_nasr@dot.ca.gov
Elpidio Delos Reyes, JR.	District 7, Planning - Local Assistance - Bike/Ped	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-4055	elpidio_delos_reyes@dot.ca.gov
Fernando Castro	District 7, Planning - Regional	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1905	fernando_castro@dot.ca.gov
Frances Lee	District 7, Planning - Corridor Studies - Assoc. Transp. Planner	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0673	frances_lee@dot.ca.gov
Francesca Smith	District 7 - Environmental Planning - Architectural Historian	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0415	francesca_smith@dot.ca.gov
Grath Hopkins	District 7, Planning, Acting Deputy District Director	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0362	garth_hopkins@dot.ca.gov
Gary Iverson	District 7, Environmental Planning - Sr. Archaeologist, District Native American Coordinator, District Heritage Resource Coordinator	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-3818	gary_iverson@dot.ca.gov
Gloria Scott	HQ, Environmental Analysis - Built Environmental Preservation Services Branch Chief	Caltrans	1120 N Street, MS 28, Sacramento, CA 95814	916-653-1029	gloria_scott@dot.ca.gov
Jack Broadbent	HQ, Design - Sup. Sr. Landscape Architect - Roadside Mgmt & Landscape Architecture Standards	Caltrans	1120 N Street, MS 28, Sacramento, CA 95814	916-653-3170	jack_broadbent@dot.ca.gov
Jiwanjit Palaha	District 7, PPM - Project Manager	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-6926	jiwanjit_palaha@dot.ca.gov
Jonathan Osborn	District 7, Planning - Modeling	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1730	jonathan_osborn@dot.ca.gov
Joseph Kibe	District 7, Traffic Operations - Traffic Investigation	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-5702	joseph_kibe@dot.ca.gov
Judy Gish	District 7, External Affairs - Public Affairs/Media Relations Officer	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-3487	judy_gish@dot.ca.gov
Keith Robinson	HQ, Design - Landscape Architecture Program Chief	Caltrans	1121 N Street, MS 28, Sacramento, CA 95814	916-654-6200	keith_robinson@dot.ca.gov
Kimberly Gamble	District 7, External Affairs - Deputy District Director	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0362	kimberly_gamble@dot.ca.gov
Lauren Wonder	District 7, External Affairs - Public and Media Affairs Chief	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-9092	lauren_wonder@dot.ca.gov
Lewis W. Yee	District 7, Operations - Traffic Investigation - Signages	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0253	lewis_w_yee@dot.ca.gov
Lilly Kam	District 7, Operations - Freeway Operation East - Sr. Transp. Eng.	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0238	lily_kam@dot.ca.gov

Arroyo Seco Parkway Corridor Partnership Plan (National Scenic Byway) - Technical Advisory Committee & Other Key Contacts - Updated 06/27/2012

For questions, please contact Caltrans, District 7 Planning Division: Linda Taira at 213-897-0813 or Frances Lee at 213-897-0673

Name	Title/Department	Company/Agency	Address	Phone	Email
Linda Taira	District 7, Planning - Corridor Studies - Sr. Transp. Planner	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0813	linda_taira@dot.ca.gov
Marco Ruano	District 7, Operations - Freeway Operation Chief	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-9863	marco_ruano@dot.ca.gov
Mark Gonzales	District 7, Maintenance	Caltrans	100 S. Main Street, Los Angeles, CA 90012	818-599-0612	mark_gonzales@dot.ca.gov
Melissa Joshi	District 7, Planning	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1347	melissa_joshi@dot.ca.gov
Noah Allison	District 7, Environmental Planning	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-6337	noah_allison@dot.ca.gov
Patty Watanabe	District 7, Design - Sr. Landscape Architect	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0619	patty_watanabe@dot.ca.gov
Rick Holland	District 7 - Planning - Community Planning - Press Information Officer	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-4230	rick_holland@dot.ca.gov
Sam Alameddine	District 7, Planning - Env. Eng. & Corridor Studies Chief	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-0141	sam_alameddine@dot.ca.gov
Sameer Haddadeen	District 7, Operations	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-9102	sameer_haddadeen@dot.ca.gov
Sheik Moinuddin	Distrct 7, Operations - Traffic Investigation - Sr. Transp. Eng.	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-8092	sheik_m_moinuddin@dot.ca.gov
Tony Van Haagan	District 7, Planning - Modeling	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1342	tony_van_haagen@dot.ca.gov
Vincent Moreno	District 7, Maintenance Engineering	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1660	vincent_moreno@dot.ca.gov
Wilford Melton	Distrct 7, Planning - Community Planning Branch Chief	Caltrans	100 S. Main Street, Los Angeles, CA 90012	213-897-1344	wilford_melton@dot.ca.gov
Metro					
Anthony Jusay		LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		jusaya@metro.net
Bruce Shelburne	Transit - LRT Ops/Planning	LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		shelburneb@metro.net
Cleavon Govan		LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		govanc@metro.net
Conan Cheung	Transit Operations - Deputy Exec. - Service Development & Performance Analysis	LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		cheungc@metro.net
Diego Cardoso	Transportation and Development Implementation - Exec. Officer	LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		cardosod@metro.net
Ernesto Chaves	Planning	LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		chavese@metro.net
Lan Saadatnejadi		LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012	213-922-7337	saadatnejadil@metro.net
Lynne Goldsmith	Bicycle Program Manager	LACMTA ("Metro")	One Gateway Plaza MS 99-22-8 Los Angeles, CA 90012	213-922-3068	goldsmithl@metro.net
Rye Baerg	Bicycle Program	LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012		baergr@metro.net
Teresa Fong		LACMTA ("Metro")	One Gateway Plaza Los Angeles, CA 90012	213-922-2854	fongte@metro.net
SCAG					
Alan Thompson	ITS/Non-Motorized Transportation/TDM Planning	SCAG	818 W. 7th Street, 12th Floor Los Angeles, Ca 90017	213-236-1940	thompson@scag.ca.gov
Phillip Law	SCAG Project Manager	SCAG	818 W. 7th St., 12th Floor, Los Angeles, CA 90017	213-236-1841	law@scag.ca.gov
Ranjini Zucker	Senior Contracts Administrator	SCAG	818 W. 7th Street, 12th Floor Los Angeles, Ca 90017	213-236-1887	zucker@scag.ca.gov
County of Los Angeles					
Abu Yusuf	Bicycle Coordinator	LA County Department of Public Works			ayusuf@dpw.lacounty.gov
Chris Hudson		LA County Department of Public Works			chudson@dpw.lacounty.gov
Dominic Osmena		LA County Department of Public Works			dosmena@dpw.lacounty.gov

Arroyo Seco Parkway Corridor Partnership Plan (National Scenic Byway) - Technical Advisory Committee & Other Key Contacts - Updated 06/27/2012					
For questions, please contact Caltrans, District 7 Planning Division: Linda Taira at 213-897-0813 or Frances Lee at 213-897-0673					
Name	Title/Department	Company/Agency	Address	Phone	Email
Juan Sarda	Watershed Mgmt Div.	LA County Department of Public Works			jsarda@dpw.lacounty.gov
Mary Reyes		LA County Department of Public Works			mareyes@dpw.lacounty.gov
Masashi Tsujii		LA County Department of Public Works			mtsujii@dpw.lacounty.gov
Richard Gomez		LA County Department of Public Works			rgomez@dpw.lacounty.gov
City of Los Angeles					
Carlos Rios	LADOT - Transportation Enhancement & Funding	City of Los Angeles		213-972-4963	carlos.rios@lacity.org
Christopher Hy	LADOT	City of Los Angeles		213-972-8479	christopher.hy@lacity.org
Claire Bowin	Planning (CASP)	City of Los Angeles			claire.Bowin@lacity.org
Edgar Garcia	Planning - Office of Historic Resources - Preservation Planner	City of Los Angeles	200 N. Spring Street, Room 410 Los Angeles, CA 90012	213-978-1189	edgar.garcia@lacity.org
Jane Choi	Planning	City of Los Angeles	200 N. Spring Street, Room 410 Los Angeles, CA 90012	213-978-1377	jane.choi@lacity.org
Jay Kim	LADOT - Office of Parking, Planning and Regulation - Acting Assitant General Manger	City of Los Angeles	200 N. Spring Street, Room 410 Los Angeles, CA 90012	213-972-8438	jay.kim@lacity.org
Jill Sourial	Environmental Deputy	City of Los Angeles CM Reyes Office	200 N. Spring Street, Room 410 Los Angeles, CA 90012	213-473-7001	jill.sourial@lacity.org
Ken Husting	LADOT	City of Los Angeles		213-972-5008	ken.husting@lacity.org
Michael A. Shull	Recreation and Parks - Superintendent - Planning & Development Division	City of Los Angeles			michael.a.shull@lacity.org
Michelle Mowery	LADOT - Bicycle Program	City of Los Angeles			michelle.mowery@lacity.org
Ramon Barajas		City of Los Angeles		818-756-8190	ramon.barajas@lacity.org
Shana Bonstin	Planning - Office of Historic Resources	City of Los Angeles		213-978-1180	shana.bonstin@lacity.org
Simon Pastucha	Urban Design Studio	City of Los Angeles			simon.pastucha@lacity.org
Tomas Carranza	LADOT	City of Los Angeles	200 N. Spring Street, Room 410 Los Angeles, CA 90012	213-972-8476	tomas.carranza@lacity.org
City of Pasadena					
Bahman Janka		City of Pasadena		626-744-4610	bjanka@cityofpasadena.net
Mike Bagheri	Transportation Dept.	City of Pasadena			mbagheri@cityofpasadena.net
Rosa Laveaga	Parks - Arroyo Seco masterplans	City of Pasadena			rlaveaga@cityofpasadena.net
Vincent P. Bertoni	Planning Administration - Director	City of Pasadena	175 N. Garfield Avenue, Pasadena, CA 91101	626-744-4650	vbertoni@cityofpasadena.net
City of South Pasadena					
Dennis Woods		City of South Pasadena		626-403-7236	dwoods@ci.south-pasadena.ca.us
Samuel Zneimer		City of South Pasadena		626-403-7215	szneimer@ci.south-pasadena.ca.us
Tracey Perkosky	Grants Analyst for Arroyo Seco Bike & Pedestrian Path	City of South Pasadena		626-403-7256	tperkosky@ci.south-pasadena.ca.us
Other Agencies/Groups					
Barbara Romero		Mountains Recreation & Conservation Authority (MRCA)	570 West Avenue 26, Suite 100 Los Angeles, CA 90065		barbara.romero@mrca.ca.gov

Arroyo Seco Parkway Corridor Partnership Plan (National Scenic Byway) - Technical Advisory Committee & Other Key Contacts - Updated 06/27/2012

For questions, please contact Caltrans, District 7 Planning Division: Linda Taira at 213-897-0813 or Frances Lee at 213-897-0673

Name	Title/Department	Company/Agency	Address	Phone	Email
Cara Meyer		Mountains Recreation & Conservation Authority (MRCA)	570 West Avenue 26, Suite 100 Los Angeles, CA 90065	323-221-9944 x117	cara.meyer@mrca.ca.gov
Diane Kane					dkane002@san.rr.com
Gayle Greenberg	Field Representative	Congressman Xavier Becerra		213-483-1425	gayle.greenberg@mail.house.gov
Liz Jennings		Mountains Recreation & Conservation Authority (MRCA)	570 West Avenue 26, Suite 100 Los Angeles, CA 90065	323-221-9944	liz.jennings@mrca.ca.gov
Officer Christian Baldonado		CHP			cbaldonado@chp.ca.gov
Sergeant Shawn Holloway		CHP			shholloway@chp.ca.gov
Stuart R. Strum	U.S. Army Engineer District, Los Angeles				stuart.r.strum@usace.army.mil
Tim Brick	Executive Director	Arroyo Seco Foundation			tim@arroyoseco.org
PROJECT CONSULTANTS					
Name	Title	Company/Agency	Address	Phone	Email
Arturo Vivar, P.E.	Civil Enginner	IBI Group	18401 Von Karman, Suite 110 Irvine, CA 92612	949-833-5588	avivar@ibigroup.com
Bill Delo, AICP	Deputy Project Manager	IBI Group	18401 Von Karman, Suite 110 Irvine, CA 92612	949-833-5588	bdelo@ibigroup.com
Christina de Freitas	Transportation Modeling	IBI Group	18401 Von Karman, Suite 110 Irvine, CA 92612	949-833-5588	christina.defreitas@ibigroup.com
Dan Marriott	Historic Roads	Paul Daniel Marriott + Associates	3140 Wisconsin Ave., NW, Suite 804 Washington, DC 20016	202-686-2860-ph 202-686-2857-fx	dan_marriott@historicroads.org
David Chow P.E, AICP	Principal in Charge	IBI Group	1055 Wilshire Boulevard, Suite 1885 Los Angeles CA 90017-5601	213-250-7440	dchow@ibigroup.com
Fred Glick, RLA	Project Manager	IBI Group	801 Second Avenue-Suite 1400 Seattle WA 98104	206-521-9091 206 498	fred.glick@IBIGroup.com
Jeeseong Chung	GIS Mapping	IBI Group	18401 Von Karman, Suite 110 Irvine, CA 92612	949-833-5588	jeeseong.chung@ibigroup.com
Kimberly Demuth	Programmatic Agreement	Cardno ENTRIX	200 First Avenue West, Suite 500 Seattle, WA 98119	206-239-7391-ph 206-269-0098-fx 206-498-3100-cell	kdemuth@entrix.com kimberly.demuth@cardno.com
Lydia LaPoint, P.E., LEED AP	Traffic Engineer	IBI Group	18401 Von Karman, Suite 110 Irvine, CA 92612	949-833-5588	llapoint@ibigroup.com
Mahmoud Ahmadi	Transportation Modeling	AFSHA Consulting, Inc.	101 Sanctuary Irvine, CA 92620	949-333-3831ph 949-336-6323-fx	msa@afshaconsult.com
Moojan Khazra	ITS Planning	IBI Group	1055 Wilshire Boulevard, Suite 1885 Los Angeles CA 90017-5601	213-250-7440	moojan.khazra@ibigroup.com
Nicole Possert	Community Outreach	The Arroyo Guild	124 Roselawn Place Los Angeles, CA 90042	323-255-5792-ph 323-255-5090-fx	aguild@pacbell.net
Rachel Tamigniaux		Cardno ENTRIX	200 First Avenue West, Suite 500 Seattle, WA 98119		rachel.tamigniaux@cardno.com
Shannon Heffernan	Land Use Planner	IBI Group	1055 Wilshire Boulevard, Suite 1885 Los Angeles CA 90017-5601	213-250-7440	sheffernan@ibigroup.com
Sharon Lowe	Community Outreach	Sharon Lowe	4367 Multnomah Street Los Angeles, CA 90032	323-459-7931-ph	smylesq@gmail.com
Tuere Fa'aola	Microsimulation Modeling	IBI Group	701 B Street, Ste 1170 San Diego, CA 92101	619 234 4110	tuere.faaola@ibigroup.com