

Interstate 680 High Occupancy Vehicle & Auxiliary Lanes, Sunol Grade Northbound

Santa Clara and Alameda Counties, California
District 4-ALA-680-KP 0.0/31.1(PM 0.0/19.3)
District 4-SCL-680-KP 12.1/15.9 (PM 7.5/9.9)
EA 04-286000

Initial Study with Proposed Negative Declaration Environmental Assessment

**Prepared by the U.S Department of Transportation,
Federal Highway Administration and
The State of California Department of Transportation**



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) have prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Alameda and Santa Clara Counties, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, and the proposed avoidance, minimization and/or mitigation measures.

What should you do?

- Please read this Initial Study/Environmental Assessment. Additional copies of this document are available for review at the below address and at additional locations listed in Chapter 3 of this document beginning at page 45.
- We welcome your comments. If you have any comments regarding the proposed project, please attend the public hearing/open house and/or send your written comments to Caltrans by the deadline.
- Submit comments via postal mail to:
Susan Chang, Deputy Director, Environmental Planning and Engineering
Attention: Robert Gross, Chief, Office of Environmental Analysis
Department of Transportation, District 4
Office of Environmental Planning, Mail Station 6
111 Grand Avenue
Oakland California, 94612
- Submit comments via email to robert_gross@dot.ca.gov.
- Submit comments by the deadline: September 3, 2004.

What happens next?

After comments are received from the public and reviewing agencies, Caltrans and FHWA may: (1) give environmental approval to the proposed project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, District 4, Attn: Robert Gross, Chief, Office of Environmental Analysis, (Mail Station 6) P.O. Box 23660, Oakland California, 94623-0660, (510) 286-6454 Voice, or use the California Relay Service TTY number, 1-887-735-2929.

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04-SCL-680-KP 12.1/15.9 (PM 7.5/9.9)
EA 04-286000

Construct a High Occupancy Vehicle lane, Auxiliary Lanes and related improvements in the northbound direction and widen the southbound roadway at various locations along Interstate 680 from State Route 237 in Milpitas (Santa Clara County) to the Stoneridge Drive Interchange in Pleasanton (Alameda County)

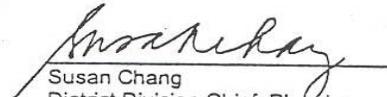
**INITIAL STUDY with Proposed Negative Declaration
ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C) and 49 USC 303

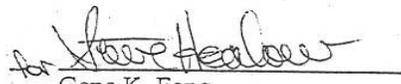
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and

THE STATE OF CALIFORNIA
Department of Transportation,

June 17, 2004
Date of Approval


Susan Chang
District Division Chief, Planning
California Department of Transportation

June 30, 2004
Date of Approval


Gene K. Fong
Division Administrator
Federal Highway Administration

SCH Number: TBA
 Department of Transportation

04-ALA-680-KP 0.0/31.1(PM 0.0/19.3)
 04-SCL-680-KP 12.1/15.9 (PM 7.5/9.9)
 EA 04-286000 (F 1)

Proposed Negative Declaration
 Pursuant to: Division 13, Public Resources Code

Project Description

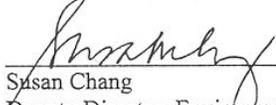
The California Department of Transportation (Caltrans) proposes to construct a high-occupancy vehicle (HOV) lane, auxiliary lanes and related improvements along a 35-km (21.7-mi.) stretch of Interstate 680 known as the Sunol Grade. The project area begins at the Interstate 680/Route 237 interchange in the City of Milpitas, Santa Clara County, California. It passes through the City of Fremont in Alameda County, California and ends at the Stoneridge Drive interchange in the City of Pleasanton, in Alameda County. Facilities to be constructed include a northbound HOV lane from the Interstate 680/Route 237 interchange to Route 84, and five auxiliary lane segments extending from the Jacklin Road on-ramp to the Mission Boulevard/Route 238 off-ramp. The southbound roadway will also be widened at various locations: 1) between the Andrade Road Interchange and the Calaveras Road Interchange, 2) at the Sheridan Road Interchange, and 3) in the median between Auto Mall Parkway and Route 237. Ramp metering equipment will be installed at fourteen northbound on-ramps beginning at Calaveras Road and ending at Stoneridge Drive. Existing bridges will be widened. Sound barriers and retaining walls will also be constructed as necessary. Right-of way acquisition will also be required. The objective is to encourage carpooling and transit use through the HOV lane incentive and reduce congestion by providing more maneuvering room near high volume on/off-ramps.

Determination

This proposed Negative Declaration (ND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a ND for this project. This does not mean that Caltrans' decision regarding the project is final. This ND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- There will be no adverse impact on agricultural resources, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation and traffic, utilities and service systems.
- There will be less than significant impact on aesthetics, biological resources, cultural resources (paleontology) and noise.



 Susan Chang
 Deputy Director, Environmental Planning and Engineering
 California Department of Transportation

June 30, 2004

 Date

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Chapter 1 Proposed Project

1.1 Project Background

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose to construct a high-occupancy vehicle (HOV) lane, auxiliary lanes and related improvements along a 35-km (21.7-mi.) stretch of Interstate 680 known as the Sunol grade. The project area begins at the Interstate 680/Route 237 interchange in the City of Milpitas, Santa Clara County, California. It passes through the City of Fremont in Alameda County, California and ends at the Stoneridge Drive interchange in the City of Pleasanton, in Alameda County. Figure 1 is a map depicting the project location.

Facilities to be constructed include a northbound HOV lane from the Interstate 680/Route 237 interchange to Route 84 and five auxiliary lane segments extending from the Jacklin Road on-ramp to the Mission Boulevard/Route 238 off-ramp. The southbound roadway will also be widened at various locations: 1) between the Andrade Road Interchange and the Calaveras Road Interchange, 2) at the Sheridan Road Interchange, and 3) in the median between Auto Mall Parkway and Route 237. Ramp metering equipment will be installed at fourteen northbound on-ramps beginning at Calaveras Road and ending at Stoneridge Drive. Existing bridges will be widened to accommodate the additional traffic lanes. Sound barriers and retaining walls will be constructed as necessary. Right-of way acquisition will also be required.

1.1.1 Introduction

The Sunol grade is a major commuter route connecting South Bay cities with the Tri-Valley area to the northeast in Alameda County. The northbound segment of Interstate 680 in this area currently has three through lanes plus a truck climbing lane extending from Mission Boulevard to the truck scales near Sheridan Road.

The growth trend analysis accompanying the Metropolitan Transportation Commission's (MTC's) 2001 Regional Transportation Plan (RTP), concluded that both Alameda and Santa Clara Counties are net importers of workers and are expected to remain so. Figure 2 summarizes MTC's jobs and employment growth projections for all Bay Area counties from the year 2000 to 2025. According to Figure 2, Santa Clara County is second only to San Francisco in jobs surplus. In the year 2000 there were 1.16 jobs for every employed Santa Clara County resident.

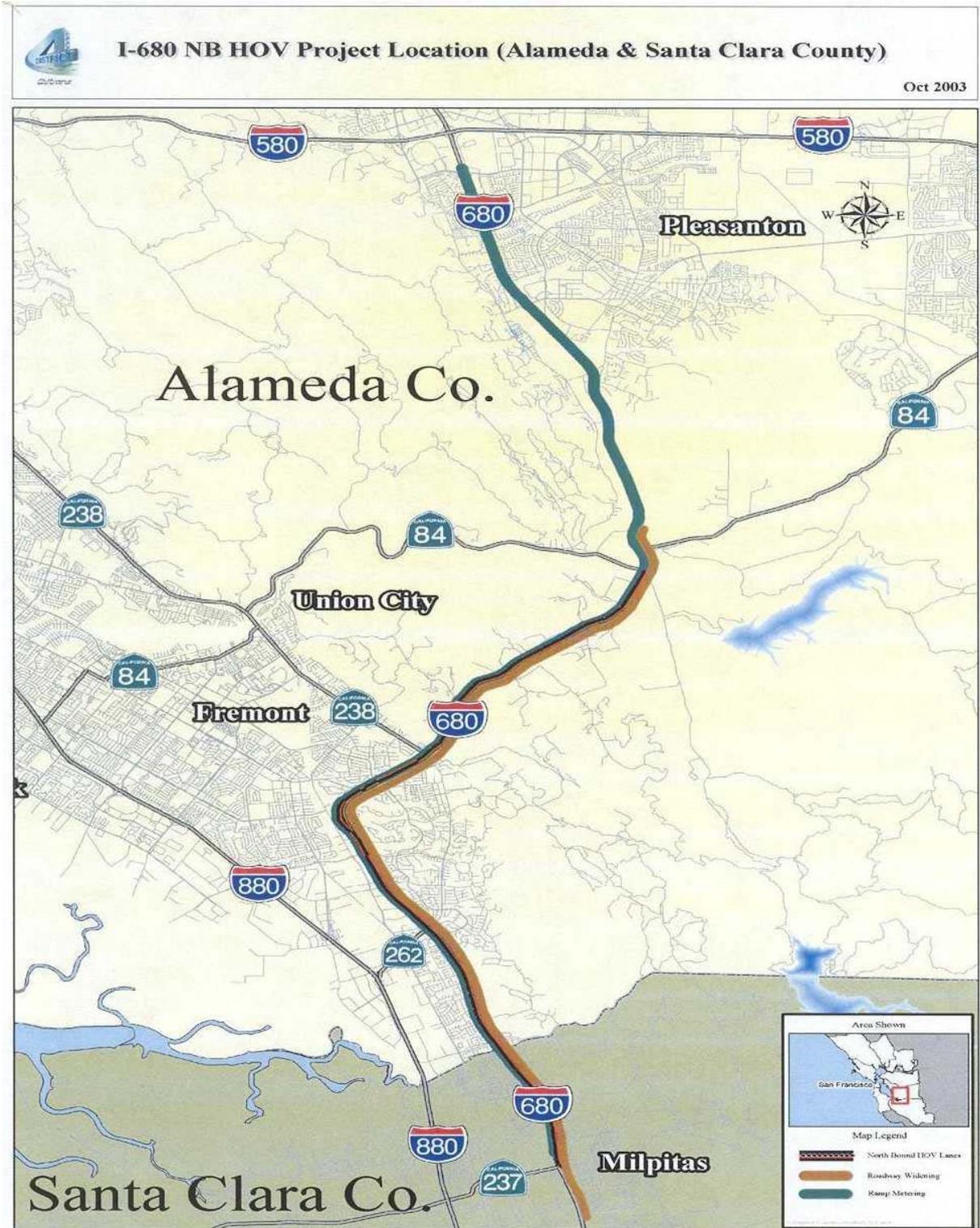


Figure 1: Project Location Map

| Figure 2: Projected Population and Employment Growth | | | | | | |
|---|------------------------|------------------|-------------|------------------------|------------------|-------------|
| County | Year 2000 | | | Year 2025 | | |
| | Employed Residents (R) | Jobs (J) | J/R | Employed Residents (R) | Jobs (J) | J/R |
| San Francisco | 422,100 | 628,860 | 1.49 | 464,998 | 747,291 | 1.61 |
| San Mateo | 393,703 | 380,369 | 0.97 | 485,506 | 470,291 | 0.97 |
| Santa Clara | 928,699 | 1,077,227 | 1.16 | 1,187,219 | 1,353,591 | 1.14 |
| Alameda | 694,602 | 725,789 | 1.04 | 909,708 | 991,191 | 1.09 |
| Contra Costa | 475,888 | 360,090 | 0.76 | 680,507 | 537,386 | 0.79 |
| Solano | 185,606 | 129,510 | 0.70 | 305,049 | 228,397 | 0.75 |
| Napa | 61,598 | 59,710 | 0.97 | 90,101 | 95,999 | 1.07 |
| Sonoma | 235,400 | 203,530 | 0.86 | 333,197 | 325,690 | 0.98 |
| Marin | 140,401 | 123,510 | 0.88 | 168,901 | 156,993 | 0.93 |
| Bay Area Total | 3,537,997 | 3,688,595 | 1.04 | 4,625,186 | 4,906,829 | 1.06 |

Source: MTC 2001, page 2-151, Table 2.10-6

This indicates a need to import roughly 16% of the County’s workforce at a minimum, since a fraction of county residents undoubtedly work elsewhere. By 2025 the ratio will decrease slightly to 1.14. This pattern is generally the same for Alameda County.

This project originated from a transportation systems management report prepared for the Alameda County Congestion Management Agency (ACCMA) in 1997. The report was the result of a cooperative effort among ACCMA, the Santa Clara Valley Transportation Authority (SCVTA), the Contra Costa Transportation Authority (CCTA), and Caltrans. Among other things it identified the need for operational improvements in both directions of Interstate 680 along the Sunol grade.

Funding of this project became possible with passage of the Traffic Congestion Relief Act of 2000 (AB 2928 and SB 1662). This project is also included in the FY 2000/2001 Federal Statewide Transportation Improvement Program (FSTIP) and is proposed for funding from the System Operational Improvements Program. It is also included in the 2001 RTP and the 2001 cost-constrained Regional Transportation Improvement Program (RTIP).

The project will be implemented by Caltrans in cooperation with its partners: FHWA, SCVTA, ACCMA, and ACTIA. The estimated total cost as of June 2004 is \$150.0 million. Anticipated funding sources are: 1) Measure B, the Alameda County sales tax for transportation, 2) the State Transportation Improvement Program (STIP), and 3) the State Traffic Congestion Relief Act. Construction is expected to begin late in

the year 2007 and be completed three to four years thereafter. The project will have to be built in stages, as funds become available.

1.1.2 Purpose of the Project

This project is intended to reduce congestion, encourage carpooling, increase transit rider-ship, and complement the recently completed southbound HOV segment as envisioned in the RTP. Adding an HOV lane will increase the northbound vehicle carrying capacity of Interstate 680 within the project area. In addition, operating efficiency and safety will be improved by adding auxiliary lanes, widening selected on-ramps, installing ramp metering hardware at all northbound on-ramps and by widening the southbound roadway to provide standard lane and shoulder widths.

Most existing congestion is attributed to high peak period travel demand. By adding the HOV lane, commuters will have the additional options of carpooling or riding buses to decrease commute time. This project proposal will encourage the use of these alternative transportation modes by providing travel-time savings compared to the mixed flow lanes. Traffic studies also indicate that the added lane capacity will improve traffic conditions for all motorists utilizing this corridor including those in the mixed flow lanes. Compared to the no project alternative, all travelers will experience less congestion and delays, and there will be a corresponding reduction in the number of congestion-related accidents during the RTP's twenty-year planning period. All things considered, Caltrans and its partners have determined that this project is a cost effective means to enhance freeway operations and safety while at the same time encouraging ridesharing and transit use.

The project has independent utility and logical termini as defined in FHWA regulations (23 CFR 771.111(f)). With respect to the first, the project addresses an existing congestion problem. It will improve traffic flows and safety at a reasonable expense even if no additional transportation improvements are made in this area. The same holds if the project is constructed in stages or is only partially completed, due to funding constraints for example. With respect to logical termini, the Sunol grade is recognized as being one of the most congested freeway segments in the Bay Area. The project complements the recently completed southbound HOV extension at this location by providing reverse-commute travel benefits.

1.1.3 Need for the Project

According to the RTP, person trips in the Sunol corridor are forecast to increase by 90% between 1998 and 2025, from 118,762 to 225,780 person trips daily. Figure 3 depicts projected increases for all regional corridors. In addition to being highest in the region, the projected trip increase for Sunol (90%) is three times greater than the

region as a whole (30%). Meeting this demand during rush hour will require both increased operating efficiency of current facilities and increased use of higher capacity commute alternatives, namely ride sharing and transit. Currently, commuters traveling this corridor in the northbound direction experience heavy congestion in the afternoon peak period, particularly on weekdays between 3:30 PM and 7:30 PM. Delays of up to ten minutes are not uncommon.

| Figure 3: Growth in Person Trips by Travel Corridor | | | |
|---|-------------------|-------------------|-----------------|
| Description | 1998 Total | 2025 Total | Growth % |
| Golden Gate | 1,997,256 | 2,676,270 | 34% |
| North Bay East-West* | 58,678 | 102,151 | 74% |
| Transbay - Richmond / San Rafael* | 48,076 | 86,089 | 79% |
| San Francisco | 3,299,729 | 3,914,565 | 19% |
| Transbay - San Francisco/Oakland* | 539,570 | 768,911 | 43% |
| Peninsula | 2,994,172 | 3,675,431 | 23% |
| Transbay - Dumbarton, San Mateo-Hayward* | 177,291 | 261,977 | 48% |
| Silicon Valley | 6,154,034 | 7,884,660 | 28% |
| Fremont-South Bay* | 212,102 | 296,010 | 40% |
| Eastshore South | 2,577,298 | 3,033,523 | 18% |
| Sunol Gateway* | 118,762 | 225,780 | 90% |
| Tri-Valley | 502,890 | 872,301 | 73% |
| Diablo | 1,449,164 | 1,950,791 | 35% |
| Delta | 514,382 | 910,122 | 77% |
| Eastshore North | 1,591,018 | 2,195,706 | 38% |
| Napa Valley | 352,300 | 530,545 | 51% |
| Total Region | 22,586,722 | 29,384,832 | 30% |
| *Corridors that are primarily screenlines, reflecting trips across a geographic boundary such as a county line. Other corridors reflect areas with defined boundaries, and the reported trips represent all trips that occur totally within the corridor as well as all trips with one end within the corridor. | | | |
| Source: Metropolitan Transportation Commission, 2001 (Table 2.1-4, page 2-4) | | | |

More delays are expected in the future as travel volumes increase. A majority of commuters are traveling from housing located in Alameda County, Contra Costa County, and the San Joaquin Valley to workplaces primarily located in Silicon Valley. Delays on the mainline, caused by the large number of vehicles exiting the freeway, add to the current congestion. These off-ramp movements create bottlenecks and can cause added delays for commuters traveling through the corridor. Existing traffic data indicate that approximately 65% of all mainline accidents are categorized as “rear end” or “sideswipe”.

The proposed HOV lane supports commute alternatives by giving carpools and transit a distinct time/speed advantage over single-occupant vehicles. This project directly supports the region’s twenty-year Regional Transit Expansion Policy (MTC Resolution No. 3434, December 19, 2001). The policy establishes a regional priority

for transit expansion projects totaling \$10.5 billion, of which \$719 million is provided for a new regional transit initiative called Bus Rapid Transit (BRT). BRT essentially gives busses priority use of existing freeways and surface streets. More information about BRT may be found at the MTC web site. Though not included in the transit policy fund estimate, the BRT plan assumes HOV lanes will be provided on all Bay Area freeways. The project's contribution to the regional transit system is further discussed in Section 1.3.2.

1.2 Detailed Project Description

1.2.1 Key Features

The project consists of the following elements:

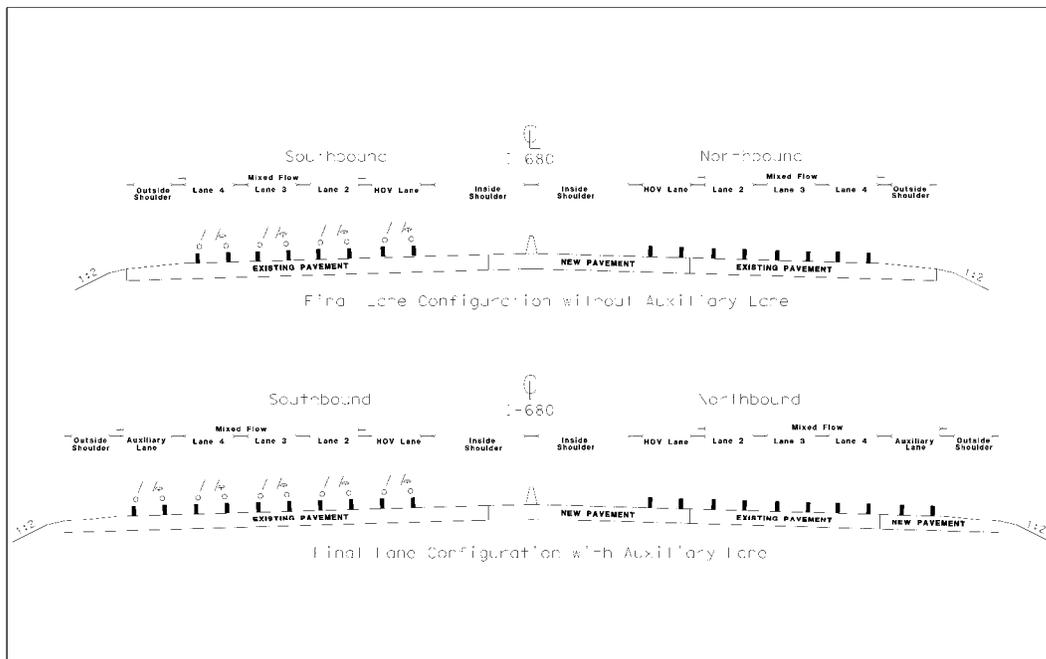
- **High Occupancy Vehicle (HOV) Lane:** A new HOV lane extending from Route 237 in Santa Clara County to Route 84 (Calaveras Road) in Alameda County will be added. Inside and outside widening of existing paved surfaces will be required.
- **Auxiliary Lanes:** Five auxiliary lane segments connecting on-ramps and off-ramps will be constructed between the following six freeway interchanges: Jacklin Road, Scott Creek Road, Mission Boulevard (Route 262), Durham Road (Auto Mall Parkway), Washington Boulevard, and Mission Boulevard (Route 238).
- **Structures:** Overcrossing and undercrossing structures will be widened or modified to accommodate the additional lanes. The Sheridan Road overcrossing, will be demolished and reconstructed because widening would not meet minimum design standards.
- **Alameda Creek Bridge:** The bridge will be widened to the outside in both directions. Rocks will be placed upstream of bridge supports to prevent erosion.
- **Ramp metering:** Ramps will be widened as necessary and metering equipment installed at the following northbound on-ramps: Calaveras Boulevard Separation (Route 237), Jacklin Road, Scott Creek Road, Mission Boulevard Separation (Route 262), Durham Road (Auto Mall Parkway), Washington Boulevard, Mission San Jose Separation (Route 238), Vargas Road, Andrade Road, Calaveras Road Separation (Route 84), Sunol/Koopman Road, Sunol/Pleasant Road, Bernal Avenue, and Stoneridge Drive
- **Soundwall:** A soundwall with an average height of 4.3 m (14 ft) and a length of 280 m (920 ft) is being considered at the northbound Andrade Road on-ramp parallel to Athenour Way. If conditions have substantially changed during final design, noise abatement may not be necessary. The final construction decision will

be made upon completion of the project design and the public involvement processes.

- **Retaining walls:** Retaining walls will be constructed at various locations on both sides of the existing right-of-way. Their purpose is to maintain standard stopping sight distances and minimize the amount of earthwork and right-of-way acquisition required.
- **Median widening:** The median will be paved in both directions between Auto Mall Parkway and Route 237.
- **Southbound roadway widening:** The southbound roadway will be widened at two locations: 1) between the Andrade Road Interchange and the Calaveras Road Interchange and 2) at the Sheridan Road Interchange. The southbound widening is necessary to provide standard lane and shoulder widths and to meet current minimum design standards.

Figure 4 depicts the proposed new HOV lane configuration with and without an auxiliary lane. Figure 5 shows the approximate location of proposed highway improvements listed from North to South.

Figure 4: Typical Lane Configuration



| Figure 5: Location of Improvements | | | | | | | | |
|--|-----------------------|---|-----------------------------|---------------------|---------------------|----------------|-------------------------------|-----------------------|
| Place name | Construct NB HOV Lane | Southbound Widening (median or outside) | Construct NB Auxiliary Lane | Modify Overcrossing | Widen Undercrossing | Modify On-ramp | Construct Soundwall (NB side) | Install ramp metering |
| Stoneridge Drive (northern project boundary) | | | | | | | | |
| Bernal Avenue | | | | | | | | |
| Sunol/Pleasant Road | | | | | | | | |
| Sunol/Koopman Road | | | | | | | | |
| Scotts Corner Separation | | | | | | | | |
| I-680/Route 84 (Calaveras Road) Separation | | | | | | | | |
| Alameda Creek Bridge | | | | | | | | |
| Andrade Road | | | | | | | | |
| Mission Grade Truck Inspection Station | | | | | | | | |
| Sheridan Road | | | | | | | | |
| Vargas Road | | | | | | | | |
| Mission San Jose Separation (Route 238) | | | | | | | | |
| Palm Avenue | | | | | | | | |
| Paseo Padre Parkway | | | | | | | | |
| Washington Boulevard | | | | | | | | |
| Durham Road (Auto Mall Parkway) | | | | | | | | |
| Grimmer Boulevard | | | | | | | | |
| I-680/Route 262 (Mission Blvd.) Separation | | | | | | | | |
| East Warren | | | | | | | | |
| North DWR Undercrossing | | | | | | | | |
| South DWR Undercrossing | | | | | | | | |
| Scott Creek Road | | | | | | | | |
| Route 680/237 | | | | | | | | |
| Alameda/Santa Clara County Line | | | | | | | | |
| Jacklin Road | | | | | | | | |
| SR-237 (Calaveras Boulevard) | | | | | | | | |
| Southern project boundary | | | | | | | | |

1.2.2 Right of Way

Temporary construction easements will be required from 25 separate parcels. Their general characteristics are shown on Figure 6. Partial acquisition will also be required for one of the listed properties controlled by the San Francisco Water District. No improvements will be affected, either by the construction easements or the partial acquisition.

Figure 6: Property Acquisition Summary

| Property type | Number of parcels |
|-------------------------------|-------------------|
| Single family residential | 5 |
| Vacant (residential) | 3 |
| Vacant (agricultural) | 8 |
| San Francisco Water District | 4 |
| Alameda County Water District | 1 |
| Industrial | 2 |
| Public use (Church) | 2 |
| Total | 25 |

1.2.3 Design Exceptions

Highway design standards have changed since this highway segment was first constructed and the proposed project would not bring facilities up to current standards in all respects. Therefore Caltrans is requesting FHWA approval of certain deviations from current design standards: called design exceptions. Figure 7 lists proposed design exceptions by type and location.

Figure 7: Design Exceptions by Type and Location

| Location | Shoulder width | Off-ramp deceleration length | Loop off ramp width | Long single lane off-ramp | Profile (i.e. centerline) grade | Vertical clearance | Interchange spacing | Median width | Stopping sight distance |
|--|----------------|------------------------------|---------------------|---------------------------|---------------------------------|--------------------|---------------------|--------------|-------------------------|
| Andrade Rd. | | | | | | | | | |
| Andrade Rd (right lane under the overcrossing) | | | | | | | | | |
| Calaveras Blvd. Route 237 | | | | | | | | | |
| Calaveras Blvd. Route 237 to Jacklin Rd. | | | | | | | | | |
| Calaveras Rd. /Route 84 | | | | | | | | | |
| Calaveras Rd. Route 84 EB and Route 84 EB | | | | | | | | | |
| Grimmer Rd. (local undercrossing street) | | | | | | | | | |
| Mission Blvd. Route 238 | | | | | | | | | |
| Mission Blvd. Rt. 238 (local undercrossing street) | | | | | | | | | |
| Mission Blvd. Route 262 | | | | | | | | | |
| Scott Creek Rd. | | | | | | | | | |
| Sheridan Rd., south of interchange | | | | | | | | | |
| Vargas Rd. and Sheridan Rd. | | | | | | | | | |
| Washington Blvd. | | | | | | | | | |

Design exceptions relate to pre-existing non-standard conditions that would continue to exist after project completion. Not correcting them will not compromise safety.

The proposed project will not create any new non-standard conditions. Design exceptions are being requested for efficiency reasons. Caltrans has determined that the cost of bringing the roadway up to current standards would exceed the benefits, measured in terms of improved ride and maintainability. For example, deviation from the vertical clearance standard could necessitate removal of pavement under bridges (grinding down) when the roadway is resurfaced. This would cost more than conventional resurfacing. However this higher cost would certainly be less than that of upgrading existing facilities now.

1.3 Project Alternatives

In designing this project, Caltrans undertook a value analysis (VMS 2001) to evaluate various design options that meet the project's purpose and need. This led to identification of a single preferred alternative for environmental review. An analysis of this build alternative and, for comparison, the no-build alternative follows. Final selection of an alternative will not be made until after full evaluation of environmental impacts and full consideration of public hearing comments. The approved final environmental document will reflect the selected alternative.

1.3.1 Benefits of the Build Alternative

Traffic flow improvements

To evaluate project effectiveness Caltrans prepared an operational analysis (Caltrans 2002) covering peak period travel, which typically occurs in the afternoon. A discussion of key points follows.

HOV lane performance

Figure 8 compares peak-hour performance for the build and no-build project alternatives at project completion and for the year 2025. Estimates shown are one-hour averages for the entire 35-km (21.6-mi.) project length. In considering this analysis the reader should be aware that the primary purpose is to differentiate future traffic operations between the build and no-build alternatives. Results cannot be directly compared to the existing observed congestion, which is likely to be higher than indicated by the peak-hour analysis. The difference is due to the fact that the analysis does not account for any congestion accumulating prior to peak hour. Calculated speeds, delays and travel times shown on Figure 8 assume both high peak hour travel demand and no congestion before hand. Anything less than free flow conditions prior to peak hour could substantially degrade real-world highway performance. However, because pre-existing conditions would affect both the build and no-build alternative, this analysis is still valid for comparison purposes.

| Figure 8: Interstate 680 Northbound P.M. Peak Hour Traffic Conditions (from Berryessa Road Interchange to north of Route 84 Interchange) | | | | | | | | | | |
|---|----------------------------|----------------|---------------|---------------|---------------|---------------------|-------------------------|--------------------------|---------------------|--------------|
| Year | Alternative | Mainline Delay | Ramp Delay | Total Delay | Average Speed | Maximum Travel Time | Total Distance Traveled | | Total Time Traveled | |
| | | vehicle-hours | vehicle-hours | vehicle-hours | mph (km/h) | minutes | veh-miles (veh-km) | person-miles (person-km) | vehicle-hours | person-hours |
| Base Year | No-Build - all vehicles | 550 | 225 | 775 | 42 (68) | 26 | 116,330 (187,210) | 134,730 (216,820) | 3,010 | 3,480 |
| | Build - non-HOV (mix flow) | 0 | 0 | 0 | 61 (98) | 17 | 107,170 (172,470) | 112,170 (180,520) | 1,750 | 1,830 |
| | Build - HOV | 0 | 0 | 0 | 65 (105) | 17 | 15,320 (24,650) | 30,870 (49,680) | 240 | 480 |
| Year 2025 | No-Build - all vehicles | 1,090 | 30 | 1,120 | 34 (55) | 35 | 113,490 (182,640) | 128,020 (206,020) | 3,390 | 3,830 |
| | Build - non-HOV (mix flow) | 720 | 70 | 790 | 40 (64) | 28 | 117,080 (188,420) | 129,300 (208,080) | 3,000 | 3,200 |
| | Build - HOV | 0 | 0 | 0 | 57 (91) | 19 | 25,380 (40,840) | 57,020 (91,760) | 450 | 1,010 |

A summary of traffic conditions presented on Figure 8 follows:

- All travelers will experience no delay and an approximately 35% travel time saving in the base year. The model forecasts zero delay and speeds at or near the speed limit for both HOV and non-HOV travelers: 65 and 61 mph respectively. Average time to traverse the corridor would be reduced 9 minutes, from 26 to 17 minutes or 35%.
- By the year 2025, the HOV lane will continue to experience no delay and an even greater time saving of approximately 46% compared to the no build alternative. The mixed flow lane will experience some delays and therefore less time saving: about 20%.
- Travel corridor efficiency will increase. Total peak hour travel by the year 2025 is estimated to be 142,460 vehicle-miles¹ compared to 113,490 under the no build alternative: an increase of about 26%. The projected increase in person trip efficiency is from 128,020 to 186,320 person-miles or about 46%. This increased efficiency is attributable to two things: reduced congestion in the free flow lanes, and increased HOV or transit travel. However, the model predicts that by the year 2025, travel demand in the free flow lane will again exceed capacity, as evidenced

¹ This total is the sum of the year 2025 mixed flow and HOV lane estimates shown on the table (117,080 + 25,380 =142,460)

by the 790 hour total delay estimate. At this point any further increase in travel demand will result in either greater congestion, increased HOV lane use, or both. This dynamic supports the assumption that the project will provide increased incentives for HOV and transit use.

Figure 9 provides a graphic illustration of freeway levels of service. Relating it to traffic flow estimates shown on Figure 8, the base year level of service (LOS) for all travelers is expected to improve from LOS F (considerable delays) to LOS D (minimal delays). Over time it will again deteriorate to LOS F in the mixed flow lanes and LOS E in the HOV lane.

Figure 9:

| LEVELS OF SERVICE for Freeways | | | |
|--|---|-----------------------|--|
| Level of Service | Flow Conditions | Operating Speed (mph) | Technical Descriptions |
| A |  | 70 | Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. No delays |
| B |  | 70 | Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. No delays |
| C |  | 67 | Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. Minimal delays |
| D |  | 62 | Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. Minimal delays |
| E |  | 53 | Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. Significant delays |
| F |  | <53 | Very congested traffic with traffic jams, especially in areas where vehicles have to merge. Considerable delays |

Auxiliary Lanes

The Caltrans Operational Analysis Report (Caltrans 2002) also analyzed weaving conditions associated with auxiliary lanes. Auxiliary lanes facilitate movements at freeway interchanges by providing more maneuvering room and vehicle storage capacity at on-ramps and off-ramps. Since these lanes are not carried through the interchanges, there is no increase in overall highway carrying capacity and bottlenecks can occur where the auxiliary lanes are dropped. Two freeway segments with short weaving distances and significant weaving activity were analyzed:

- From the Route 237 On-Ramp to the Jacklin Road Off-Ramp, and
- From the Route 84 Calaveras On-Ramp to the Route 84 Vallecitos Off-Ramp, which is near the end of the HOV lane.

The analysis indicates that conditions will improve from LOS F in the base year under the no build alternative to LOS D at the first location and LOS E at the second. Predicted services levels by the year 2025 are LOS E and F respectively.

1.3.2 Regional Transit System Relationship

This project is directly linked to the regional Bus Rapid Transit (BRT) initiative, which is essentially a plan to provide high-speed bus connections between existing urban centers. BRT costs less and is more flexible than conventional rail transit because it uses existing highways. The ability to use HOV lanes gives it a decided time/speed advantage over automobiles. For these reasons BRT is considered to be the most cost effective means to increase transit ridership, particularly in lower density suburban areas such as South Bay and Tri-Valley.

The Caltrans traffic flow analysis forecasts significant benefits for BRT as evidenced by the average speed and travel time estimates shown in Figure 8. For example base year BRT travelers in the HOV lane will traverse the Sunol grade at an average speed of 65-mph experiencing a time saving of 9 minutes, compared to the no build alternative. By the year 2025, BRT riders would save 9 minutes compared to mixed flow lanes under the build alternative and 16 minutes compared to the no-build alternative. As the HOV network is expanded region-wide and other planned transit improvements are completed; these advantages will increase proportionately.

1.3.3 HOT Lanes

The high occupancy vehicle or toll (HOT) lane concept involves charging tolls for use of excess HOV lane capacity. The Regional Transportation Plan (RTP) establishes a long-range priority to test and possibly implement HOT lanes throughout the Bay Area. This project and its companion southbound HOV lane

project are linked to this effort. This project is being designed with the possibility of future conversion to HOT lanes in mind.

The Alameda County Congestion Management Agency (ACCMA) is pursuing the possibility of implementing HOT lanes in the Sunol corridor and has received an FHWA grant for this purpose. The project budget includes funding earmarked for HOT lanes in local Ballot Measure B, which was approved by the voters in November 2000. Among other things, the ballot measure specifies that car pools will travel free, excess capacity may be sold to low occupancy vehicles and express lanes should be implemented in the southbound direction of Interstate 680 first.

In evaluating the express lane concept, ACCMA considered various design and management options including fixed versus reversible lanes, single or multiple access, separation by barriers or striping, and high-tech versus traditional toll collection and enforcement. The recommended configuration is currently as follows: one express lane in each direction separated from adjacent mixed flow lanes by solid striping with limited access points. Electronic sensors, video surveillance and enhanced highway patrol coverage would be used for toll collection and enforcement.

In addition to designing and building a toll facility, other major tasks must be completed in order to effectively test and implement HOT lanes. These include developing administrative and accounting systems, building public acceptance, and amending state law to allow toll charges. With regard to the latter, state legislation (AB 2032 by Assemblyman Dutra) has been introduced to authorize HOT lanes at designated locations on a five-year trial basis. The proposed locations in our region are Sunol grade and the entire Santa Clara County HOV network. The Sunol HOT lane would be operated by the Sunol Smart Carpool Lane Joint Powers Authority (SSCLJPA), which is a cooperative effort between ACCMA, ACTIA, and SCVTA. Key features of the HOT lane demonstration are:

- Operators, in this case SSCLJPA, would typically be required to maintain LOS C or better in the HOV lane. However, LOS D could be authorized by written agreement with Caltrans.
- HOVs would be allowed unrestricted free access to HOT lanes at all times.
- Revenue generated would first be used for direct expenses related to operation, maintenance, and administration of the demonstration program. SSCLJPA's administrative expenses may not exceed 3% of the revenues.
- Any remaining revenues would be used exclusively in the Sunol travel corridor to fund construction of HOV facilities and transit service, including transit operating subsidies.

If enacted, the new law would take effect in January 2005.

Lacking proper legal authority, HOT lanes are not a viable project alternative at this time. However, the proposed project is being designed to facilitate future conversion to HOT lane use. Caltrans will continue working with its regional partners to develop this concept to a point where a policy decision can be made.

1.3.4 The “No Build” Alternative

The no-build alternative creates a benchmark for impact assessment against which the build alternative can be compared. If this alternative were selected, Caltrans would make no modifications to Interstate 680 within the project limits, other than routine maintenance. Adverse environmental impacts associated with the build alternative would not occur; nor would the need and purpose of this project be satisfied. Traffic congestion would increase under the no-build alternative. There would be no travel priority for HOVs or transit and presumably less use of these more environmentally friendly travel alternatives. In addition the following changes, which are considered positive from an environmental perspective, may be delayed:

- Scour protection of the Alameda Creek Bridge will be delayed. Scour protection is an essential maintenance function. It involves placing large rocks upstream of bridge abutments to prevent erosion. Most environmental disruption in the Alameda Creek flood plain is associated with providing scour protection for the bridge rather than widening per se. The no-build alternative therefore does not eliminate the need to confront environmental issues associated with scour protection.
- Traffic noise abatement will not take place. Caltrans’ analysis indicates that this project will not have a significant noise impact. Therefore expenditure of project funds for noise mitigation is not required. However, because this project will increase highway capacity, federal highway funds may be expended for noise reduction or abatement. Under the no-build alternative, new sound-walls would probably not be constructed in the foreseeable future, since noise abatement is typically not an eligible project cost where there is no increase in capacity.
- The highway drainage system would not be upgraded. The project includes upgrading freeway drainage to current standards, which have increased since this highway segment was first constructed. Under the no-build alternative drainage improvements would be delayed until the roadway is rehabilitated.
- The non-standard shoulder condition in the southbound lane would not be corrected as planned. For efficiency reasons, the Alameda Creek Bridge was not widened when the southbound HOV lane was constructed. Rather, a temporary

design exception allowing a reduced shoulder width in that direction was granted by FHWA. Under the no-build alternative, this non-standard condition would continue to exist.

- Ramp metering devices would not be installed. Ramp metering has proven to be an effective traffic management tool. Without it, Caltrans' ability to control traffic flows on both the main line and adjacent surface streets will be decreased.

1.4 Permits and Approvals Needed

Figure 10 summarizes environmental permits and approvals applicable to this project.

| Figure 10: Required Permits or Approvals | | |
|--|---------------------------------------|--|
| Administering Agency | Authority | Permit or Approval |
| U.S. Army Corps of Engineers (ACOE) | Federal Clean Water Act (Section 404) | Nationwide Permit (NWP) 14 (Linear Transportation Projects) & NWP 33 (Temporary Construction, Access, and Dewatering): Controls project impacts on waters of the U.S., including wetlands. |
| California Regional Water Quality Control Board (RWQCB), Region #2 | Federal Clean Water Act (Section 401) | Section 401 Certification: Certification by the RWQCB to the ACOE and U.S. Fish and Wildlife Service that a Section 404 mitigation plan conforms to applicable Section 401 water quality standards |
| RWQCB, Region #2 | Federal Clean Water Act (Section 402) | National Pollution Discharge Elimination System (NPDES) permit # 99-06-DWQ, CAS000003: Assures that completed project meets applicable water quality standards for drainage and run-off. NPDES permit #99-08-DWQ, CAS000002 (Storm Water Pollution Prevention Plan (SWPPP)): Requires measures to reduce discharge of pollutants from the project site during construction. |
| California Department of Fish and Game | California Public Resources Code | "Section 1601" Streambed Alteration agreement; "Section 2080" agreement for threatened and endangered species. |

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

2.1.1 Overview

This chapter presents the result of Caltrans’ analysis of environmental issues relevant to this project. Issues were identified by reviewing applicable federal requirements and completing the California Environmental Quality Act (CEQA) checklist, a copy of which appears in Appendix A. The following checklist topics are discussed in this section: growth, visual/aesthetics, cultural resources, water quality and storm water run-off, paleontology, air quality, noise, and biology. In addition to information presented below, this analysis is also based on supporting technical studies that are not attached to this document. A list of these studies appears in Chapter 5. They are available for examination and copying at the following address: California Department of Transportation, District 4, Office of Environmental Planning, 111 Grand Avenue, Oakland California, 94623-0660; telephone (510) 286-6214 (Voice), or use the California Relay Service TTY number, 1-887-735-2929.

As part of the scoping and environmental analysis conducted for the project, the following environmental resource areas were also considered but no potential for adverse impacts was identified: agriculture, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, public utilities and services, recreation, transportation and traffic. Figure 11 provides a brief explanation for the “no adverse impact” determination in these subject areas. The remainder of this chapter covers environmental issue areas that require further consideration or discussion.

| Figure 11: No Adverse Impact Determinations Summary | |
|--|--|
| AGRICULTURE RESOURCES | |
| The project will neither convert farmland to non-agricultural use nor conflict with current open space or agriculture land use designations. | |
| GEOLOGY AND SOILS | |
| Because the Bay Area is seismically active, Caltrans routinely conducts detailed geotechnical studies and develops project specific construction features to minimize seismic risks. A Preliminary Geotechnical Report (Caltrans 2001B) has been prepared to determine soil conditions and local earthquake fault characteristics in the immediate project vicinity. A design report stating mitigation recommendations shall be prepared in accordance with the following document: California Division of Mines and Geology Guidelines for Evaluating and Mitigating Seismic Hazards. Long-term and cumulative seismic impacts were adequately addressed in the adopted EIR for the RTP. | |

| |
|--|
| HAZARDS AND HAZARDOUS MATERIALS |
| The project will not result in any increased hazards or hazardous materials risks after construction. During the PS&E phase of project development, once the exact location of land to be excavated and structures to be modified is known, detailed soil and asbestos surveys will be conducted by Caltrans' Office of Environmental Engineering. Any hazardous materials found will be encased or disposed of in accordance with applicable federal and state regulations. |
| LAND USE AND PLANNING |
| The project supports local and regional land use plans by improving access to existing urbanized areas that are planned for future development. In particular the HOV lane complements existing and proposed transit improvements in the Sunol corridor. It does not involve acquisition of residential or commercial structures and will not alter community interaction patterns. |
| MINERAL RESOURCES |
| The project does not conflict with resource recovery plans or operations in the vicinity. |
| PUBLIC SERVICES |
| The project will not affect provision of existing public services or measurably increase the need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for any public service. Standard Department management practices will preclude substantial adverse impacts during construction. |
| RECREATION |
| Because the project will not cause a substantial noise level increase (12 dBA or more), it will not directly or indirectly reduce the recreational value of any nearby properties. Because access to adjacent properties remains the same, it will not measurably change the use of existing neighborhood and regional parks or other recreational facilities. |
| TRANSPORTATION/TRAFFIC |
| Traffic flow analysis conducted in conjunction with project design indicates that the project will reduce congestion and encourage carpooling/transit use. It does not conflict with plans, or programs for bicycling or other alternative transportation means. Existing bicycle and pedestrian crossings at freeway interchanges will remain open during construction and be restored to full operating condition afterwards. |
| UTILITIES AND SERVICES |
| Existing utilities/service systems will be restored to pre-existing conditions or better after construction. Standard Caltrans procedures for coordinating temporary service disruptions during construction are considered adequate for this project. |

2.2 Growth

This section describes the project's relationship to existing and planned growth in the immediate project vicinity and the Bay Area generally.

2.2.1 Regulatory Setting

Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (NEPA), require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require

that environmental documents “...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment...”

2.2.2 Affected Environment,

The Regional Context

This project is included in the 2001 Regional Transportation Plan (RTP), which is a 25-year regional plan for maintaining and improving the surface transportation system. The adopted Environmental Impact Report (EIR) for the RTP, dated December 2001 (State Clearinghouse No. 2001032141), describes the regional land use, planning, and growth issues considered in preparing the plan. The following is a summary of relevant regional growth characteristics described in that EIR.

- **Urbanized land area will increase:** Between 2000 and 2020 approximately 180 additional square miles of land will be developed at an average rate of nine square miles per year. This will increase total developed acreage from 15%, or 1050 square miles, to about 18%, or 1230 square miles. The nine county Bay Area consists of approximately 7,000 square miles, excluding the bay itself. (MTC 2001 Page 2-166 & 2-169) By the year 2020, the amount of undeveloped land is therefore forecast to decrease from 85% or 5950 square miles to 82% or 5770 square miles.
- **Population and jobs will increase:** Between 2000 and 2025, the Bay Area’s population is expected to increase by 18.5 % (1.3 million people). Jobs will increase by 33% (1.2 million additional jobs)
- **The Bay Area will continue to be a net importer of workers:** In the year 2000 there were 150,598 more jobs than employed residents. By 2025 this number is expected to increase to 281,643. (MTC 2001page 2-151 table 2.10-6)

To develop a regional strategy for accommodating future growth, the Association of Bay Area Governments (ABAG) is undertaking a visioning effort called the Smart Growth Strategy/Regional Livability Footprint Project. The objective is to develop regional consensus on a long-term (20+ years) regional growth strategy through interaction with various groups, including elected officials, government staff, community representatives, and other regional stakeholders. Four regional development scenarios are currently being discussed, ranging in density from very high, i.e. San Francisco, to continuation of current trends. The significant point for purposes of this analysis is that all regional development scenarios currently being considered by ABAG retain the Sunol corridor as a major transportation link. Further

information on the smart growth strategy can be obtained from the following web site: <http://www.abag.ca.gov/planning/smartgrowth>.

The Sub-regional Context

This project involves the approximately 23-mile stretch of Interstate 680, which links the City of Pleasanton in the Tri-valley region of Alameda County with the Silicon Valley Cities of Fremont and Milpitas, which is in Santa Clara County. The sub-regional study area encompasses land within approximately one mile of the highway on either side. Analysis is based on population and growth trends identified in the RTP EIR and review of general plans obtained from adjacent jurisdictions: the cities of Pleasanton, Fremont and Milpitas; and Alameda County. The following is a summary of land use, planning and growth characteristics derived from those sources:

- **Population will increase:** Alameda and Santa Clara Counties (the two most directly served by this project) are forecast to grow at roughly the same rate as the region. They contained 46% of the region's total population and 49% of its jobs in the year 2000 and are expected to maintain roughly these same percentages through 2025. (MTC 2001 page 2-148, tables 2.10-1&2)
- **Employment will increase:** Both Alameda and Santa Clara counties are net importers of workers and are expected to remain so. Figure 2 (page 3) depicts anticipated growth of jobs and employed residents for all Bay Area counties from the year 2000 to 2025. According to Figure 2 there are currently 1.16 jobs for every employed resident in Santa Clara County and 1.04 jobs per employed resident in Alameda County and the region as a whole. This indicates a need to import workers to fill available jobs. This trend is expected to continue.
- **General plan growth restrictions apply:** Alameda County and the three cities adjacent to this segment of Interstate 680 have adopted general plan growth restrictions to preserve the scenic rural character of undeveloped hillsides visible from the roadway. A summary of growth restrictions by jurisdiction follows:
Alameda County: The county has land use control over the unincorporated land on either side of Interstate 680 on the Sunol grade. This land is planned and zoned by the county for agricultural, open space and recreational use. Urban development would not be allowed without annexation to an adjacent city, i.e. Pleasanton or Fremont.

Fremont: Development in the hills north and east of Mission Boulevard in the City of Fremont is controlled by Ordinance 5344, which was initially adopted by voter approved initiative in 1982 and has subsequently been clarified and expanded by the

City Council. (Fremont 1990) The ordinance essentially limits housing development to a maximum density of between one unit per five (5) acres and one per 20 acres depending on soil stability, topography and related site characteristics. There are various incentives for clustering development, to reduce service costs and increase open space.

Pleasanton: The Pleasanton General Plan establishes an urban growth boundary (UGB), which “is intended to be permanent and to define the line beyond which urban development will not occur.” (Pleasanton 1996, page II-7) For land in the vicinity of this project, the UGB conforms very nearly, if not exactly to land which is currently either developed or undergoing development. One exception here is the Kilkare Canyon area, which lies west of Interstate 680 and abuts the freeway at the Interstate 680/State Route-84 interchange. This area is designated for future development in the general plan; but a specific plan has yet to be prepared. Beyond the UGB, and excluding Kilkare Canyon, land is designated for open space, agricultural or recreational use. The ridge lands west of Interstate 680 are restricted to recreational or agricultural use by Measure F approved by the voters in 1993. “Measure F may not be amended as to land use designations nor repealed except by a vote of the citizens of Pleasanton.” (Pleasanton 1996, page II-8) Land south and east of Interstate 680 from the UGB to the Alameda County line is designated as “Wildlands Overlay” where no development is allowed other than single-family homes on lots of record in 1996, when the General Plan was adopted.

Milpitas: Development in the hills east of the city is limited by an urban growth boundary initiative approved by the voters in 1998, called Measure Z, which was placed on the ballot by City Council Resolution No. 6796 (Milpitas 1994). Measure Z established an urban growth boundary until the year 2019. This boundary may not be changed except by a vote of the people or as required by law. The maximum dwelling unit density allowed on hillsides is one dwelling unit per gross acre. Development normally will not be allowed unless land is within the city limits and all city services are provided.

2.2.3 Impacts

Growth inducing impacts are the individual and cumulative effects of a project on future urban land development patterns. In order for growth inducement to be an issue, the growth in question must first of all be unplanned. Second, there must be a causal relationship between unplanned growth and the project under consideration. Neither situation applies in this case.

Caltrans has analyzed the potential for adverse growth inducing impacts in connection with this project. The analysis considered individual and cumulative impacts from a regional and sub-regional perspective. Our conclusion is that this project will not cause or measurably contribute to undesirable unplanned growth, either by itself or in combination with other transportation improvements proposed in the RTP for the Sunol Gateway Corridor. The reasons for this finding are as follows.

- **Highway capacity lags Bay Area population and employment growth:** Due to limited funding if nothing else, regional travel demand is likely to increase more than transportation system capacity during the 20 year period covered by the RTP. The regional growth issue was adequately addressed by MTC in the plan's adopted EIR. The following finding from that document applies here: "It is unlikely that the limited transportation system expansion contemplated in the proposed 2001 RTP will be of sufficient magnitude compared to the in place transportation system to stimulate new growth beyond the 19 percent increase in population and 33 percent increase in jobs that are currently projected by the Association of Bay Area Governments (ABAG)". (MTC 2001, page. 3-16) The MTC analysis includes the cumulative impact of providing HOV lanes on all Bay Area freeways.
- **Increased HOV capacity promotes smart growth:** This project is directly linked to major RTP initiatives to reduce dependence on the private automobile, specifically carpooling and Bus Rapid Transit (BRT). It supports all regional land use development scenarios currently being developed by ABAG, including the highest density scenario.
- **Congestion relief resulting from this project will not alter sub-regional growth patterns:** Travel time reductions in free flow lanes resulting from this project will not alter the public perception that the Sunol corridor is congested. Thus it is unlikely that people will weigh this factor any differently in deciding where to locate.

The impact of this project on the broader issue of land use and planning is positive. It directly supports local and regional land use plans by improving access to existing urbanized areas that are planned for future development. In particular the HOV lane complements existing and proposed transit improvements in the immediate vicinity. These include the existing ACE stations in Pleasanton and Fremont, the existing Fremont BART station and the two new BART stations proposed for Fremont's Irvington and Warm Springs communities, the multi-modal transit facility planned near the Alameda County Fairgrounds in Pleasanton and the BRT initiative. These improvements will make transit a more viable travel option, compared to the single

occupant automobile. Improved transit access in turn will increase the relative attractiveness of these existing urban areas for future planned development, thus contributing to the attainment of regional smart growth objectives.

With respect to regional growth patterns and smart growth in particular, it is important to note that Interstate 680 is a major intra-regional travel corridor connecting existing regional centers that are planned for future development at current or higher densities under all regional development scenarios currently being developed by ABAG. Therefore this project will be compatible with future land use plans no matter which is ultimately selected.

2.2.4 Avoidance, Minimization and/or Mitigation Measures

None. The project will not adversely impact land use planning or growth.

2.3 Visual/Aesthetics

Caltrans completed a visual impact assessment and technical report for this project in accordance with Federal Highway Administration (FHWA) guidelines (Caltrans 2004A). The purpose was to evaluate project impacts on scenic and other visual resources and identify means to maintain or improve visual quality through project design. This section summarizes information contained in that report.

2.3.1 Regulatory setting

NEPA requires the federal government to use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. To further emphasize this point, FHWA in its implementation of NEPA [23 U.S.C. 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities.” [CA Public Resources Code Section 21001(b)]

2.3.2 Affected Environment

The regional landscape traversed by Interstate 680 features a variety of visual conditions characteristic of the San Francisco East Bay and South Bay Areas, including suburban communities, undeveloped hillsides and rural valleys. Landscape

in the immediate project vicinity has distinctly different aesthetic characteristics. The approximately 9.5 kilometer (6 mile) northern portion of the right of way has hilly topography and sparse development. Typical views include picturesque, natural appearing hills, rural valleys, and low-density development of various types. The approximately 14.5 kilometer (9 mile) southern portion is characterized by a combination of light industrial and residential development near the roadway with rolling hills visible to the East.

All of Interstate 680 within Alameda County is included in the California Scenic Highway System. Much of the highway, including the northern portion of the project area has been officially designated as a State Scenic Highway. This designation currently ends at Washington Boulevard. However the portion extending southward from Washington Boulevard to the Santa Clara County line is eligible for designation. Approximately 11.8 kilometers (7.3 miles), including nearly the entire segment from North Mission Boulevard (Route 238) southward to Calaveras Boulevard (Route 237), have Landscaped Freeway status, which allows planting and maintenance of ornamental vegetation within the highway right-of-way adjacent to dense development.

2.3.3 Impacts

Implementation of the project would cause changes to the existing visual environment. The change, depending on its type and extent, would be more evident in some areas than in others. To accommodate outside widening, trees and shrubs will be removed. Inside widening, on the other hand will have negligible visual effect since the existing median contains little vegetation. Approximately 540 oak trees will be removed from within the twelve-meter setback from the traveled way.

Construction of retaining walls will alter views from both the roadway and adjacent properties. Construction of a sound wall near the Andrade Road Interchange would have an adverse visual impact since its visual character would be inconsistent with the rural character of the Sunol Valley landscape and it would block views from the roadway and adjacent properties. Overall, the magnitude of change would be relatively small, and would be consistent with the prevailing visual character of the highway corridor.

2.3.4 Avoidance, Minimization and/or Mitigation Measures

Construction features that may adversely impact scenic resources are removal of landscaping, placement of sound walls and construction of retaining walls. The following mitigation measures are incorporated to assure that associated visual impacts are less than significant.

- **Landscaping:** Each of the approximately 540 oak trees to be removed will be replaced at a 1 to 1 ratio beyond the 12-meter setback in groups of three or more. Other trees and scrubs removed will also be replaced at a ratio of 1 to 1 or greater according to Caltrans standards. Replacements done for landscaping purposes will be in addition to natural habitat enhancements discussed in the Biology Section of this document (Section 2.6). Tree placement is dependent on the location of habitat areas, viewsheds, sound walls and retaining walls. The intent is to enhance existing habitat areas, retain any valuable viewsheds and reduce the visibility of any soundwalls.
- **Retaining walls:** Wall surfaces will be given aesthetic surface treatment by means of form liners, sandblasting, or mechanical chipping. Cut and fill slopes will be contour graded for a more natural appearance.
- **Sound Walls:** Color, texture and pattern will be used to create an attractive pleasing design. Actual design will be determined in consultation with local agencies and input from residents living near the walls.

2.4 Cultural Resources

2.4.1 Regulatory setting

The term “cultural resources” as used in this document refers to historic and archaeological resources. A summary of applicable laws and regulations follows.

The National Historic Preservation Act (NHPA) sets forth national policy and procedures regarding "historic properties" -- that is, districts, sites, buildings, structures and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to consider the effects of their undertakings on such properties, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800).

Cultural resources may also be protected by Section 4(f) of the U.S. Department of Transportation Act. Please see Appendix B for additional information.

Under California law, cultural resources are protected by the California Environmental Quality Act (CEQA) as well as Public Resources Code Section 5024.1, which established the California Register of Historic Places. Section 5024.5 requires state agencies to provide notice to, and to confer with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historic resources.

2.4.2 Affected Environment

Caltrans surveyed known archeological sites, and completed a historic architecture survey of structures within the project's area of potential effect (APE), which was determined differently for each discipline. A historic properties survey report (Caltrans 2003A) and archeological investigation (Rosenthal 2002) were prepared. The assessment for this project builds on work completed in conjunction with a southbound HOV lane addition, which has a nearly identical APE. A summary of conditions based on these studies follows:

- One property, Telles Ranch, appears eligible for listing on the National Register of Historic Places.
- No archeological sites are within the APE for the northbound project, although five were found to exist within the APE for the southbound project.

2.4.3 Impacts

Caltrans analyzed changes expected to occur within the Telles Ranch APE as a result of this project and determined that there would be no impact on historic values. This finding is based on the fact that, while the project will change visual characteristics within the APE, this will not cause a greater degradation of historic values than construction of the highway in the first place. FHWA and SHPO have concurred with this finding. Further information on the interagency consultation process appears in Section 3.3.

2.4.4 Avoidance, Minimization and/or Mitigation Measures

None

2.5 Water Quality, and Storm Water Runoff

2.5.1 Regulatory Setting

The primary federal law regulating Water Quality is the Clean Water Act (CWA), issued by the U.S. Environmental Protection Agency (EPA). EPA delegated its authority in California to the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB). Section 401 of the Act requires a water quality certification from the SWRCB or RWQCB when a project: 1) requires a federal license or permit (a Section 404 permit is the most common federal permit for Department projects), and 2) will result in a discharge to waters of the United States.

Section 402 of the Act establishes the national pollutant discharge elimination system (NPDES) permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. To ensure compliance with Clean Water

Act Section 402, SWRCB has issued Caltrans an NPDES Statewide Storm Water Permit to regulate storm water discharges from Caltrans facilities (Order No. 99-06-DWQ, CAS000003).

In addition, SWRCB has issued a statewide construction general permit for construction activities (Order No. 98-08-DWQ, CAS000002) that applies to all storm water discharges from land where clearing, grading, and excavation result in disturbances of at least 0.4 hectares (1 acre) or more. The general permit requirement also applies to smaller projects if the associated construction activity is part of a larger common plan of development with soil disturbances totaling 0.4 hectares (1 acre) or more, or if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. All projects that are subject to the construction general permit require a storm water pollution prevention plan (SWPPP). Caltrans construction projects that are less than 0.4 hectares need to incorporate water pollution prevention plans (WPPPs).

2.5.2 Affected Environment

The Sunol grade (Interstate 680), is within the San Francisco Bay Regional Water Control Board jurisdiction (Region 2). The project site is within the South Bay Basin Watershed. Interstate 680 crosses and discharges to the following creeks and flood channels within the project area: Calera Creek, Alameda Creek, Mission Creek and tributaries, Vallecitos Creek, Torogas Creek, Alameda County Flood Control District (ACFCD) Line K (Zone 6) Channel, Canada Del Aliso Creek, Tularcitos Creek, Scott Creek, Agua Fria Creek, Arroyo Del Agua Caliente Creek, Arroyo De Laguna Creek. These water bodies are all in the South Bay Basin.

Mission Creek, Alameda Creek, and Arroyo De La Laguna Creek are water bodies on EPA's 303(d) List of Water Quality Limited Segments. Mission Creek is listed for Ammonia, Chlordane, Chlorpyrifos, Chromium, Copper, Dieldrin, Hydrogen Sulfide, Lead, Mercury, Mirex, PAHs, PCBs, Silver and Zinc. Alameda Creek and Arroyo De La Laguna are listed for Diazinon.

The project area is under the jurisdiction of either the Alameda County Flood Control and Water Conservation District (ACFC&WCD) or the Santa Clara Valley Water District (SCVWD) with respect to flood control. Flood insurance rate maps for the City of Milpitas indicate a narrow isolated segment of the base floodplain (100-year flood) along northbound Interstate 680 from Jacklin Road to south of Canterbury Place.

The Interstate 680 corridor cuts through a variety of topographical conditions, ranging from primarily flat areas in the south to steep slopes on the Sunol grade. Cut slopes ratios as steep as 1 to 1 (one unit of vertical drop per unit of horizontal distance) are not uncommon. The majority of the construction disturbance consists of minor (1 to 4) slopes designed to meet the existing grade. Much steeper (2 to 1) slopes are found in the more topographically challenging areas.

2.5.3 Impacts

Caltrans has performed many studies to monitor and characterize highway storm water runoff throughout the State. Commonly found pollutants are total suspended solids (TSS), nutrients, pesticides, metals, pathogens, litter, biochemical oxygen demand (BOD), and total dissolved solids (TDS). Some sources of these pollutants are natural erosion, phosphorus from tree leaves, combustion products from fossil fuels, the wearing of break pads, and droppings of wild and domestic animals within state right-of-way. Such pollution is directly proportional to traffic volumes and the level of service.

Studies have shown that “stop-and-go” traffic has the potential to produce more pollutants than "free flowing" traffic. Since the proposed improvements will reduce congestion and improve traffic operation, the potential for discharge of pollutants onto the roadway will be reduced. On the other hand grading and installation of new paving will change drainage patterns and increase the quantity of surface water runoff within the Interstate 680 right of way, both during construction and permanently. The net impact of these changes on water quality will be very small and an elevation in pollutant loading is unlikely with the proposed facility improvements.

Ground water may be encountered in structure excavations. Early discussion shall be initiated regarding the handling and disposal of this water during the design phase. Ground water will also be tested for potential contamination as a part of the hazardous waste site investigation. Proper handling and disposal of the ground water will be based on the levels of contaminants reported in the site investigation report.

2.5.4 Avoidance, Minimization and/or Mitigation Measures

Section 401 of the Clean Water Act

Since there is a need for a U.S. Army Corps of Engineers (ACOE) Section 404 permit, a Section 401 Water Quality Certification from Region 2, RWQCB is also required. Compliance with permit requirements will adequately mitigate any adverse impacts to the waters of the U.S.

Section 402 of the Clean Water Act

According to Caltrans NPDES permit and the construction general permit, best management practices (BMPs) will be incorporated into this project to reduce the discharge of pollutants during construction as well as permanently to the maximum extent practicable (MEP). These BMPs fall into three categories, temporary construction site BMPs, design pollution prevention BMPs, and permanent treatment BMPs.

Construction site BMPs are applied during construction to reduce the pollutants in the storm water discharges. One critical construction activity, dewatering, may be necessary for this project because of the high ground water level in certain areas. Early discussion shall be initiated regarding the handling and disposal of this water during the design phase. If the water is found to be uncontaminated and acceptable by the RWQCB it will be discharged back into existing waterways. Appropriate temporary construction site BMPs will be used to reduce any potential discharge of pollutants to the extent feasible as described in section A.9 of the statewide general construction permit. A project-specific waste discharge permit (WDP) may be required from the RWQCB, if substantial dewatering is to be done.

Design pollution prevention BMPs are permanent measures to improve storm water quality by reducing erosion, stabilizing disturbed soil areas, and maximizing vegetated surfaces. Erosion control measures will be provided on all disturbed areas. In steeper sloped areas, retaining walls will be constructed to reduce the amount of cut or fill required in the widening. The majority of the project's impacts involve minor cuts or fills 1-15m in length with slopes ranging from 1 to 4 up to 2 to 1. The redesign of these sections will generally include vegetated swales with permanent erosion control measures such as hydro-seeded revegetation, soil stabilization and erosion control netting. In several areas, erosion control measures for steep (2 to 1) cut or fill slopes will include the addition of fiber rolls to prevent significant sheet flow across the slopes. Areas behind and above the retaining walls, characterized by short steep cut slopes 2 to 5 m in length, will be treated in similar fashion to the other cut and fill slopes. Several areas of the project pose potential impacts to the existing water bodies and wetlands along the corridor. These areas include fill slopes, drainage areas, and construction activities in and around several of the creeks and adjacent to existing wetlands. Due to the sensitivity of these water bodies, these areas will receive the most effective application of permanent erosion control measures to retain waterborne particles on site and prevent permanent impacts to the creeks and wetlands.

Inlet and outlet protection and velocity dissipation devices placed at the upstream and downstream end of culverts and channels are also design pollution prevention BMPs that reduce runoff velocity and control erosion and scour. The need for these devices will be further investigated during the design phase.

Since this project is considered a major reconstruction project, it is not exempt from incorporating treatment BMPs. Treatment BMPs are permanent devices and facilities treating storm water runoff. Some examples are biofiltration swales, infiltration basins, and detention basins. Due to potential high ground water within the project area, infiltration basins do not seem feasible. Biofiltration swales and detention basins are being investigated as possible alternatives. Both treatment BMPs treat the same types of constituents: TSS, particulate metals, and litter. Since this is the case, biofiltration swales are the most cost-effective alternative.

2.6 Air Quality

Caltrans prepared an air quality impact report for this project (Caltrans 2003). This section summarizes information contained in that report.

2.6.1 Regulatory setting:

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its California counterpart is the California Clean Air Act of 1988. These laws set emission standards for various pollutants. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃) and particulate matter that is 10 microns in diameter or smaller (PM₁₀).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for the pollutants listed above. At the regional level, Regional Transportation Plans (RTPs) are developed that include all of the transportation projects planned for a region over a period of years, usually 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the

implementation of those projects would result in a violation of the Clean Air Act. If no violations would occur, then the regional planning organization, such as MTC for the Bay Area and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to be in conformity at the regional level.

Conformity at the project-level is also required. Again the pollutants of concern are: carbon monoxide (CO), nitrous dioxide (NO₂), ozone (O₃) and particulate matter that is 10 microns in diameter or smaller (PM₁₀). If a region is meeting the standard for a given pollutant, then the region is said to be in “attainment” for that pollutant. If the region is not meeting the standard, then it is designated a “non-attainment” area for that pollutant. Areas that were previously designated as non-attainment areas but have recently met the standard are called “maintenance” areas.

2.6.2 Affected Environment:

The Bay Area is currently classified as a “moderate non-attainment” area for 1-hour ozone, with a redesignation to “attainment/maintenance” scheduled to occur in the coming months. The Bay Area is currently designated as “marginal non-attainment” area under the 8-hour national ozone standard and has until June 15, 2005 to demonstrate conformity with that standard. It is also a non-attainment area under the state ozone standards. For PM₁₀, the Bay Area is designated as “unclassified” for the 24-hour standard and “attainment” for the annual arithmetic mean under the national standards and as “non-attainment” under the state standards. For PM_{2.5}, the area is unclassified under federal standards; there are no state PM_{2.5} standards.

2.6.3 Impacts

The 2001 Regional Transportation Plan (RTP) for the San Francisco Bay Area was found to conform to the air quality improvement plan by the Metropolitan Transportation Commission (MTC). The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) adopted the air quality conformity finding on March 18, 2002. The project is also included in MTC’s financially constrained 2001 Regional Transportation Improvement Program (RTIP). The MTC 2001 RTIP was found to conform by FHWA and FTA on March 18, 2002. The design concept and scope of the proposed project is consistent with the project description in the

2001 RTP, the 2001 RTIP and the assumptions in MTC's regional emissions analysis.

This air quality analysis utilizes the "Transportation Project-Level Carbon Monoxide Protocol", dated December 1997, prepared by the Institute of Transportation Studies, University of California at Davis. This protocol was approved by MTC in Resolution No. 3075 on June 24, 1998. Use of this protocol was recommended by the Bay Area Interagency Conformity Task Force, which is the interagency consultation group established pursuant to EPA's conformity regulation and the Bay Area's conformity SIP.

Since the Bay Area was designated a maintenance area for CO on June 1, 1998, the protocol indicates that an analysis by comparison is appropriate for this project. This involves a comparison of the proposed facility with existing facilities within the air district.

Since this project would result in a facility that will be smaller and less congested than comparable existing facilities within the same Air District, (which has been declared a maintenance area), this project will also meet microscale air quality requirements and will therefore have no significant impact on air quality or cause exceedences of state or federal CO standards.

Qualitatively, we expect that this project will not have adverse effects on microscale particulate levels since actual non-truck vehicle emissions of particulates are believed to be small, and the number of heavy duty diesel trucks using the facility will not be increased by the project. While the Bay Area does list yearly exceedences of the State PM₁₀ standards, the closest monitoring stations show minimal problems; at the Fremont monitoring station, where there was only one exceedence of the State PM₁₀ standard in the year 2002. There were none at the Oakland station. We would expect the levels in the project area to be substantially lower than at these monitoring stations. One reason is that the project is not located in an agricultural area or an area of frequent snowfall, where particulate levels might be expected to be higher near the roadway.

In addition to the above, construction activities such as grading and operation of construction equipment on unpaved surfaces will create dust, which if not properly controlled, could be harmful to sensitive receptors, including plants animals and humans.

2.6.4 Avoidance, Minimization and/or Mitigation Measures

Because the project conforms to the Bay Area's air quality improvement plan, development of specific measures to control emissions associated with the completed project is not required. Standard Caltrans construction management practices are adequate to assure that associated air quality impacts will be minimal. These include requiring emission controls on construction equipment and spraying water on exposed surfaces to minimize dust.

2.7 Biology, including Wetlands

Caltrans conducted the following studies to identify biological resources that would be affected by this project and to devise appropriate protective measures: Biological Evaluation (Caltrans 2003A), Natural Environmental Study (Caltrans 2004B) and Wetlands Delineation Survey and Map. This section summarizes information contained in these documents.

2.7.1 Regulatory Setting

The following federal and state laws apply:

- Federal Endangered Species Act (FESA)
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Clean Water Act
- Federal Executive Order for the Protection of Wetlands (E.O. 11990)
- California Endangered Species Act (CESA)
- California Fish and Game Code

To determine applicability and achieve compliance with the above laws, Caltrans consulted with the following federal and state agencies: U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB).

2.7.2 Affected Environment

The 22-mile stretch of the proposed project is directly abutted by a mixture of unimproved and landscaped land typical of side of road habitat. The biological study area is composed of natural grassland, woodland, or residential neighborhoods. Streams and intermittent drainage areas are scattered throughout the landscape. Eleven vegetation habitats exist along the right of way, of which the following three are classified as habitats of concern: fresh emergent wetland, oak woodland, and

riparian. The first two occur at various drainage areas along the roadway. Riparian habitat is found at two locations: Alameda Creek and Calera Creek.

Caltrans used an endangered and threatened species list received from USFWS on March 12, 2003 (Reference File No. 1-1-01-SP-1052), and the 2003 version of the California Natural Diversity Data Base to identify sensitive species likely to occur within the biological study area. Of 35 sensitive plant or animal species identified, those with the potential to occur within the study area or that are of special interest to resource agencies are listed in Figure 12 below. Of the 24 species identified, two animal species are classified as either threatened or endangered by either the USFWS or CDFG: the Alameda whipsnake, and the California red legged frog. The California tiger salamander has been proposed as threatened in the federal classification system; but has not yet been formally classified as such. In addition two species of birds are threatened or endangered: the little willow flycatcher and the bank swallow. The remaining 19 are classified as species of concern. No special status plant species are expected to occur within the project area.

2.7.3 Impacts

The existing right-of way traverses natural drainage channels and is suitable habitat for indigenous plants and animals, including sensitive species. Construction activities will cause temporary disruption of the natural environment due to grading, excavation and movement of construction equipment. New paving and other physical changes will permanently alter some roadside habitats. The proposed project may have the potential to impact sensitive species including the California tiger salamander and red legged frog. Modifications to existing structures during the nesting season could result in the removal of nesting or roosting sites used by migratory birds and bats.

Approximately 13.69 acres of wildlife habitat will be directly impacted by the project. An additional 10.95 acres will be temporarily disrupted during construction. Figure 13 quantifies land area impacted by habitat type. Acreage impacts are summarized for six of the eleven habitats identified in the biological study. Acreage impacts for the remaining four habitats – urban, scrub, ruderal, cropland and landscape – were considered either minimal, not biologically important, or are discussed in Visual/Aesthetics section of this document (Section 2.3).

2.7.4 Avoidance, Minimization and/or Mitigation Measures

This section describes actions Caltrans will take to avoid, minimize and/or mitigate adverse impact to the biological environment. Information is arranged according to the nature of the anticipated impact: either long term or construction related.

| Figure 12: Sunol Corridor Sensitive Species | | | Status | |
|--|--------------------------------------|---|--------|---------|
| | | | State | Federal |
| Scientific Name | Common Name | | | |
| Turtles | | | | |
| <i>Clemmys marmorata marmorata</i> , | Northwestern pond turtle | | | SC |
| <i>Clemmys marmorata pallida</i> , | Southwestern pond turtle | | | SC |
| Other amphibians and reptiles | | | | |
| <i>Ambystoma californiese</i> , | California tiger salamander | | | PT |
| <i>Masticophis lateralis euryxanthus</i> , | Alameda whipsnake | T | T | |
| <i>Rana aurora draytonii</i> , | California red legged frog | | | T |
| <i>Rana boylei</i> , | Foothill yellow legged frog | | | SC |
| <i>Spea hammondi</i> , | Western spadefoot toad | | | SC |
| Migratory birds | | | | |
| <i>Agelaius tricolor</i> , | Tri-colored blackbird | | | SC |
| <i>Buteo regalis</i> , | Ferruginous hawk | | | SC |
| <i>Calypte costae</i> , | Costa's hummingbird | | | SC |
| <i>Carduelis lawrencei</i> | Lawrence's goldfinch | | | SC |
| <i>Chaetura vauxi</i> | Vaux's swift | | | SC |
| <i>Empidonax traillii brewsteri</i> | Little willow flycatcher | E | | |
| <i>Elanus leucurus</i> | White-tailed kite (black shouldered) | | | SC |
| <i>Goethlypis trichas sinuosa</i> | Saltmarsh (common yellow throat) | | | SC |
| <i>Lanius ludovicianus</i> | Loggerhead shrike | | | SC |
| <i>Toxostoma redivivum</i> | California thrasher | | | SC |
| Swallows and swifts | | | | |
| <i>Riparia riparia</i> | Bank swallow | T | | |
| Bats | | | | |
| <i>Eumops perotis californicus</i> | Great western mastiff-bat | | | SC |
| <i>Myotis cilioabrum</i> | Small footed myotis bat | | | SC |
| <i>Myotis evotis</i> | Long-eared myotis bat | | | SC |
| <i>Myotis thysanodes</i> | Fringed myotis bat | | | SC |
| <i>Myotis volans</i> | Long-legged myotis bat | | | SC |
| <i>Myotis yumanesis</i> | Yuma myotis bat | | | SC |
| KEY: E = endangered, T= threatened, PT= Proposed as threatened, SC = Species of Concern | | | | |

| Figure 13: Land Area Impacted | | |
|-------------------------------|-----------------------------|-----------------------------|
| Vegetation Type | Permanent Impacts (Acreage) | Temporary Impacts (Acreage) |
| | | |

| | | |
|-----------------------------|--------------|--------------|
| Oak Woodland | 1.04 | 0.10 |
| Mixed Woodland | 0.74 | 0.00 |
| Riparian | 0.05 | 0.53 |
| Wetland | 0.02 | 0.02 |
| Waters of the United States | 0.12 | 0.34 |
| Grassland | 11.72 | 9.96 |
| Total | 13.69 | 10.95 |

Avoidance, Minimization and/or Mitigation Measures for Long-term Impacts

The following measures will be implemented to mitigate long-term impacts on habitats of concern. The net effect of these measures will be to restore existing habitat to pre existing conditions. The long-term impact on sensitive species is therefore negligible.

- **Wetlands:** Approximately 0.036 acres of fresh emergent wetland will be created within the state right-of-way. The location is just south of the Sheridan Overcrossing on the southbound side of the roadway. This exceeds the 2 to 1 mitigation ratio typically required by the ACOE.
- **Oak woodlands:** To replace those removed by construction, oak trees will be replanted at a mitigation site located within the Interstate 680 right of way between Sabercat Road and Washington Boulevard. The replanting of 64 oak trees at a replacement ratio of 5 to 1 (320 trees total) will compensate for oaks removed from oak and mixed woodland areas in conjunction with this project. An additional 300 oak trees from a companion southbound project will also be replanted at the same mitigation site. These oak impacts and replanting are separate from landscaping improvements discussed in Section 2.3.4
- **Riparian habitat along Alameda Creek and Calera Creek:** Some willows along Alameda Creek within the impact area would be cut or removed. Clippings and rootwads will be retained for on site mitigation use at a minimum ratio of 1 to 1 after construction. Temporary impacts to riparian habitat at Calera Creek are limited to pruning of trees along one side. They do not involve tree removal, and are considered to be self-mitigating. The total acreage of riparian mitigation will be determined during the development of the mitigation and monitoring plan described below.
- **Mitigation Monitoring:** Mitigation and monitoring plans will be prepared for identified habitats of concern within the project’s area of impact. Each will contain a site implementation plan, success criteria, monitoring regime, and contingency measures. The purpose of these plans is to restore land impacted by construction to

pre-existing conditions as much as possible and improve its value as wildlife habitat.

Avoidance, Minimization and/or Mitigation Measures for Construction Period Impacts

The following is a summary of Avoidance, Minimization and/or Mitigation Measures that will be implemented during construction. These are more fully described in the Natural Environment Study (Caltrans 2004B). All preventive measures will be devised and monitored by a qualified biologist.

- **Limit area used for construction:** Wetlands and other sensitive natural areas not needed for construction will be designated environmentally sensitive areas (ESAs) and marked with ESA fencing. Construction personnel, equipment, or debris will not be allowed within ESAs.
- **Restore habitat to pre-existing conditions after construction:** Sensitive habitat acreage temporarily disturbed by construction will be graded and replanted to restore its original appearance and function as feasible. Trees and scrubs removed will be replanted along the roadway, where feasible or within mitigation sites at a ratio of 5 to 1 for large oak trees and 1 to 1 for others.
- **Time construction to avoid periods of animal activity:** Construction will be timed to avoid the nesting season for migratory birds and swifts and the migration period of the California tiger salamander and California redlegged frog. If construction cannot be completed during periods of animal inactivity, special measures will be implemented to prevent harm to sensitive species. These include pre-construction inspections, installation of exclusion devices and prohibiting construction near active nests.
- **Install exclusion devices to block passage of wildlife into construction areas:** Barrier fencing may be used at various points to exclude listed species from construction sites where warranted. Portions of structures that could be used as nesting or roosting sites will be fitted with protective netting to prevent access by birds or bats during construction.
- **Provide for continuous movement of water and wildlife through the Alameda Creek flood plane during construction:** The stream will be rerouted, rather than dammed, for installation of scour protection of bridge abutments. Construction in the Alameda Creek-bed will be confined to one side of the creek in each of two construction years. This will allow the creek-bed to continue to function as a wildlife travel corridor.

2.8 Paleontology

2.8.1 Regulatory Setting

Paleontology is the study of life in past geologic time based on fossils. Although there is no federal law that specifically protects natural or paleontological resources, there are a number of laws that have been interpreted to do so. The primary one is the Antiquities Act of 1906, which protects historic or prehistoric ruins or monuments and objects of antiquity. This Act has been amended to specifically allow funding for paleontological mitigation. Under California law, paleontological resources are protected by CEQA, the California Administrative Code, Title 14, Section 4306 et seq., and Public Resources Code Section 5097.5.

2.8.2 Affected Environment

The project is located in an area of known paleontological sensitivity. Therefore Caltrans hired a consultant to investigate this resource and assess associated project impacts (Hanson 2004). Key characteristics of the existing environment are:

- The existing right of way passes through an area of known paleontological sites collectively identified in the 1950's as the Irvington sites. These sites have yielded specimens of several species of fossil mammals.
- The Irvington sites mark a period of time called the Irvington North American Land Mammal Age (NALMA), which extends from about 1.9 million years before present (m.y.b.p.) to about 0.5-0.3 m.y.b.p.
- Large fauna fossil specimens found in this area are used as a standard of reference throughout North America to determine the age of sedimentary rock.

2.8.3 Impacts

The paleontological study found that "Proposed structural elements of the project necessitating excavation into undisturbed bedrock or sedimentary deposits will result in significant impacts to paleontologic resources unless mitigated by an effective monitoring and salvage effort." (Hanson, 2004 Page #24) The study also concluded that there would be no indirect or cumulative impacts on paleontological resources.

2.8.4 Avoidance, Minimization and/or Mitigation Measures

Consistent with Caltrans policy to preserve and enhance the environment, the following paleontology mitigation measures will be implemented during project design and construction phases:

- **Preparation of a detailed mitigation plan prior to construction:** The plan will be prepared by a qualified vertebrate paleontologist. The objectives are to identify

specific areas and activities to be scrutinized during construction and describe actions to be taken to document and preserve any specimens found.

- **Monitoring excavation during construction:** A qualified vertebrate paleontologist will observe excavation in sensitive areas and take samples from surfaces exposed. Construction personnel will receive training in resource identification and preservation techniques.
- **Preparation of a paleontologic mitigation report:** Information about such things as techniques used, areas investigated, and specimens found will be compiled into a paleontologic mitigation report, which will be delivered to a designated repository institution together with any specimens considered worthy of preservation.

The mitigation plan is further discussed in Section 6 of the paleontological study (Hanson 2004).

2.9 Noise:

Caltrans prepared a traffic noise impact report to identify issues and recommend solutions associated with this project (Caltrans 2004C). The report concluded that there would not be a substantial noise impact on surrounding properties. However, for noise abatement purposes, construction of one sound barrier immediately northeast of Andrade Road is feasible and preliminarily reasonable.

2.9.1 Regulatory setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

For highway transportation projects with FHWA involvement, the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential traffic noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Figure 14 lists the noise abatement criteria.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be

reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Not all traffic noise impacts are substantial. In order to aid in the assessing of the significance of noise impacts, Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, October 1998*, defines a substantial noise increase. A substantial noise increase occurs when the future noise level with the project results in an increase of 12 dBA or more over the existing noise level.

| Figure 14: Noise Abatement Criteria | | |
|--|--|--|
| Category | NAC, Hourly A-Weighted Noise Level, dBA L_{eq}(h) | Description of Activities |
| A | 57 Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose |
| B | 67 Exterior | Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals. |
| C | 72 Exterior | Developed lands, properties, or activities not included in Categories A or B above |
| D | -- | Undeveloped lands. |
| E | 52 Interior | Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums |

2.9.2 Affected Environment

The affected environment consists of properties in close proximity to the freeway. To determine existing noise levels, adjacent land along the right-of-way was divided into noise study areas. Caltrans conducted field measurements at various exterior locations, such as back yards or frontages of residences facing the freeway. Existing noise levels were determined through a combination of field readings and computer simulations of worst case travel volumes and speeds

2.9.3 Impacts,

Given existing noise levels and travel volumes, future noise levels are forecast to increase by 2 dBA across the board if the build alternative is constructed without additional sound walls. This is less than the threshold noted above for a substantial

noise increase (12 dBA). Therefore this project will not cause a significant long-term noise impact and mitigation measures are not required.

However, projected future noise levels constitute traffic noise impacts, requiring consideration of noise abatement measures. The rationale for recommending or not recommending sound barriers as abatement measures in particular locations is more fully described in the traffic noise impact report (Caltrans 2004C).

2.9.4 Avoidance, Minimization and/or Mitigation Measures

Based on the studies completed to date, Caltrans and FHWA intend to incorporate noise abatement in the form of a barrier located at the northbound Andrade Road onramp with an average height of 4.3 m (14 ft) and a length of 280 m (920 ft). Calculations based on preliminary design data indicate that the barrier will reduce noise levels by 5 to 12 dBA for 4 residences at a cost of \$174,400. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision will be made upon completion of the project design and the public involvement processes.

2.10 Cumulative Impacts

2.10.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130 describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative

impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

2.10.2 Related Projects/studies

This project relates directly to two policy areas identified in the Regional Transportation Plan (RTP): the Sunol corridor and the regional transit expansion policy (Metropolitan Transportation Commission (MTC) Resolution No. 3434, December 19, 2001.). For purposes of this analysis, the Sunol Corridor also includes that portion of Route 84 connecting Interstate 580 in the City of Livermore with Interstate 680 near Sunol. The transit policy envisions spending \$10.5 billion over the next twenty years to expand service and increase coordination between existing rail/public transit systems, including Bay Area Rapid Transit (BART), Altamont Commuter Express (ACE), Santa Clara Valley Transit (SVT), and Alameda County (AC) Transit. Of this total \$719 million has been set aside for a new service called Bus Rapid Transit (BRT). BRT uses busses rather than trains to move people between major population and employment centers. For this reason it is considered to be the most cost effective means to increase transit rider-ship. Further information about BRT and the regional transit expansion policy may be obtained from the MTC web-site. (<http://www.mtc.dst.ca.us/projects>)

To evaluate cumulative impacts, Caltrans considered state highway improvements planned for the Sunol corridor, others planned for that portion of Route 84 connecting Interstate 680 with Interstate 580 through Pigeon Pass, and planned transit improvements in the vicinity. Figure 15 is a list of related projects. Land use planning and growth characteristics were also considered. These are further discussed in Section 2.2.2 of this document.

Figure 15: Related Transportation Improvements

| CO | RTE | PM AHD | PM BHD | Project Description | 2001 RTP ID # | Estimated Total Cost |
|--------------|-----|--------|--------|---|---------------|----------------------|
| I-680 | | | | | | |
| SCL | 680 | M0.0 | M0.0 | I-280/I-680 connector to SB US-101: Braided ramp with Tully Rd. exit | 21707 | \$25.0 |
| ALA SCL | 680 | TBD | TBD | I-680/I-880 cross connector (study only) | 21458 | \$2.3 |
| ALA SCL | 680 | TBD | TBD | I-680 to I-880 cross connector (Mission Boulevard or other alignments, to be determined) | 21089 | TBD |
| ALA | 680 | R11.85 | R21.87 | HOV Lanes on I-680; Alcosta Blvd. to SR-84 in Alameda County | none | TBD |
| ALA | 680 | R11.6 | R12.02 | Direct HOV to HOV connectors between Route 84 and I-680 | 21043 | TBD |
| ALA | 680 | R15.26 | R15.26 | I-680/Sunol Boulevard ramp improvements, includes signal improvements and widening under existing structure | 21470 | \$0.9 |

Figure 15: Related Transportation Improvements

| CO | RTE | PM AHD | PM BHD | Project Description | 2001 RTP ID # | Estimated Total Cost |
|--------------|-----|--------|--------|---|---------------|----------------------|
| ALA | 680 | R16.75 | R16.75 | I-680/Bernal Avenue interchange improvements | 21472 | \$17.5 |
| ALA | 680 | R18.39 | R18.39 | I-680/ West Las Positas crossing improvements | 21469 | \$29.4 |
| ALA | 680 | R19.3 | R19.3 | I-680/Stoneridge Drive interchange improvements | 21471 | \$7.5 |
| ALA | 580 | R19.5 | R20.02 | 580/680 I/C: construct SB 680 connector to EB 580 | none | \$116.4 |
| ALA | 238 | TBD | TBD | East 14th St./Mission Blvd (SR-238) Improvements (Phases 2 & 3) | 21115 | \$25.0 |
| SCL | OFF | OFF | OFF | Downtown East Valley: LRT Phase 1 and 2 + Bus Rapid Transit on Monterey Hwy from downtown SJ to Guadalupe LRT | 21791 | \$518.0 |
| SCL | OFF | OFF | OFF | Downtown East Valley: Eastridge to Guadalupe LRT | 21793 | \$292.0 |
| SCL | OFF | OFF | OFF | Tasman Corridor East light rail extension from N First St to Hostetter Rd | 96019 | \$271.3 |
| SCL | OFF | OFF | OFF | Capitol Corridor light rail extension along Capitol Ave from just south of Hostetter Rd to Wilbur Ave north of Capitol Exprwy | 98118 | \$136.3 |
| ALA | 680 | OFF | OFF | Regional Express Bus Program: I-680 to Pleasant Hill BART Station | 21437 | \$0.4 |
| ALA | 680 | OFF | OFF | Regional Express Bus Program: Tri-Valley to Sun Microsystems | 21438 | \$1.2 |
| ALA | OFF | OFF | OFF | ACE station/track improvements in Alameda County, includes parking improvements at Vasco and downtown Livermore stations | 98139 | \$44.1 |
| SCL ALA | 680 | All | All | Traffic management system improvements (various) | none | \$36.2 |
| SR-84 | | | | | | |
| ALA | 84 | R17.99 | R17.99 | Direct HOV-to-HOV connectors between SR-84 HOV lanes and I-680 HOV lanes | 21043 | TBD |
| ALA | 84 | 23.5 | 28.0 | SR-84 (Isabel Ave) from Vallecitos Rd to I-580 (4-lane roadway) and other improvements through Pigeon Pass | 94034 | \$54.9 |
| ALA | 84 | 23.5 | 28.0 | Widen SR-84 from 4-6 lanes between Livermore and Sunol (portion not included in Committed Funding or Track 1) | 21088 | \$120.0 |
| ALA | 84 | R17.99 | R29.71 | SR-84 (Vallecitos Rd and Isabel Ave) from I-580 to I-680 safety and capacity improvements | 21127 | \$106.7 |
| ALA | 84 | 21.0 | 23.1 | Improve SR-84 alignment on Vallecitos Rd. | none | \$26.7 |
| ALA | 580 | 14.0 | 14.0 | Isabel Ave/SR-84/I-580 interchange improvements: build bridge to provide 6 lanes over I-580, remove Portola Ave. I/C | 21476 | \$49.5 |
| ALA | 580 | 14.0 | 14.0 | Isabel Ave/SR-84/I-580 interchange improvements | 21105 | \$67.2 |
| ALA | OFF | OFF | OFF | Regional Express Bus Program: Fremont BART Station to Stanford University | 21433 | \$2.2 |
| ALA | OFF | OFF | OFF | Regional Express Bus Program: Tri-Valley to Sun Microsystems | 21438 | \$1.2 |
| ALA | OFF | OFF | OFF | Express bus services in Dumbarton Corridor | 21149 | \$4.0 |
| ALA | OFF | OFF | OFF | Dumbarton Rail Bridge Rehabilitation (Alameda County share) | 21194 | \$17.1 |
| N/A | OFF | OFF | OFF | Dumbarton commuter rail services (*25-year operating cost estimate) | 21880 | \$137.5* |
| ALA | OFF | OFF | OFF | Union City Intermodal Station access improvements (Phase 1), includes extending 11th St and constructing at-grade parking and pedestrian grade separation | 94012 | \$33.9 |
| ALA | OFF | OFF | OFF | Union City Intermodal Station (Phase 2), includes 19 bus bays and a kiss and ride loop road | 21123 | \$5.9 |
| ALA | OFF | OFF | OFF | Union City intermodal (Phase 3): BART parking structure to support transit village. | 21196 | \$20.0 |
| ALA | OFF | OFF | OFF | ACE: Tri-Valley to Silicon Valley service via the Dumbarton Bridge to Millbrae | 21060 | TBD |

Source: Caltrans Transportation Concept Reports, July 9, 2002

2.10.3 Cumulative Impacts

Cumulative impacts are from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment examines the collective impacts imposed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Considered by itself this project will not cause or contribute to significant cumulative environmental impacts. There will be either no impact at all or no adverse impact on the following resource areas: agricultural resources, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation and traffic, utilities and service systems. Thus there can be no adverse cumulative impact. Adverse environmental impacts in the following resource areas will either be avoided entirely or minimized through preventive measures incorporated into the project: aesthetics, biological resources, cultural resources (paleontology) and noise.

Considering this project in relation to land use plans for adjacent jurisdictions and projects listed in Figure 15, the cumulative impact of constructing all of them, with the possible exception of the Interstate 680/880 cross connector, will not be significant for the following reasons:

- They serve existing urban centers that are planned for future development.
- They primarily use existing right-of-way, support established travel patterns and do not create any new highway routes.
- Their nature and scope is such that it will be possible to avoid reduce or mitigate environmental impacts on a project by project basis with no adverse spillover effects.

A discussion of land use planning and growth trends that support this finding appears in Section 2.2 of this document. With respect to the Interstate 680/880 cross connector, if and when this project goes forward it will almost certainly be accompanied by an EIR/EIS, which will investigate and resolve relevant environmental issues, cumulative or otherwise.

Chapter 3 Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project will be accomplished through a variety of formal and informal methods, including: project development team meetings, and interagency coordination meetings. This chapter summarizes these efforts. The objective is to fully identify, address and resolve project-related issues through early and continuing coordination.

3.1 Locations for Viewing the Environmental Document

This environmental document is available for public viewing at the following locations. An electronic version is available at the following web address:

<http://www.dot.ca.gov/dist4/envdocs.htm>

City of Dublin

100 Civic Plaza
Dublin, CA 94568
925-833-6600

City of Fremont, City Clerk's Office

3300 Capitol Avenue
Fremont, CA 94538
510-284-4063

City of Milpitas

455 East Calaveras Blvd.
Milpitas, CA 95035
408-586-3290

City of Pleasanton

123 Main Street
Pleasanton, CA 94566-0802
925- 931-5002

City of San Ramon

123 Main Street
San Ramon, CA 94583
925-973-2650

Caltrans District 4

111 Grand Avenue
Oakland, CA 94623
510-286-4444

Alameda Co. Congestion Management Agency

1333 Broadway Suite 220
Oakland, CA 94612
510-836-2560

Contra Costa Transportation Authority

3478 Buskirk Ave, Suite 100
Pleasant Hill, CA 94523
925-407-0121

Santa Clara Valley Transportation Authority

3331 N. First Street, Building B
San Jose, CA
408- 321-2300

Fremont Library

2400 Stevenson Boulevard
Fremont, CA 94538-2325
510-745-1444

Milpitas Library

40 N. Milpitas Boulevard
Milpitas, CA 95035
408-262-1171

Pleasanton Library

400 Old Bernal Avenue
Pleasanton, CA 94566
925-931-3400

3.2 Organizations and Individuals Contacted

A list of organizations and individuals receiving a copy of the draft document will be included in the final document.

3.3 Cultural Resources Coordination

The Department surveyed known archeological sites, and completed a historic architecture survey of structures within the project's area of potential impact (APE). This led to identification of historic properties potentially eligible for protection and ultimately to a finding that this project would have no impact on them. This process was completed in direct consultation with FHWA and the State Office of Historic Preservation (SHPO). On March 19, 2003 SHPO concurred with FHWA's and Caltrans' finding that one property, Telles Ranch, is eligible for inclusion in the National Register of Historic Places and that there are no other eligible properties within the project's APE. A copy of this letter appears on the following page. With respect to Telles Ranch, FHWA and Caltrans have determined that this project will not impact historic values and SHPO concurs. Copies of SHPO's May 16 and June 17, 2004 letters related to the no impact finding appear on the following pages.

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



19 March, 2003

Reply To: FHWA020805D

Mara Melandry, Chief
Office of Cultural Resource Studies
Department of Transportation
District 04 -Environmental Planning
111 Grand Avenue, MS 6D
P.O. Box 23660
Oakland, CA 94623-0660

Re: File No. 04 04-ALA-680-0.0/R19.3, 04-SCL-680-7.5/9.9 [Section 106 Consultation
on the I-680 Sunol Grade Northbound HOV Lane Project, Alameda and Santa
Clara Counties

Dear Ms. Melandry:

On 24 February, 2003, you responded to my 20 December, 2002 correspondence regarding the subject undertaking by providing me with a letter and supporting documentation intended to address my questions about the undertaking's APE, about the historic property identification surveys, and about the National Register eligibility of 915 Mission Road, Fremont and of 7587 Athenour Way, Sunol. Thank you for addressing these questions on behalf of the FHWA.

I have considered the information provided in your correspondence and attachments and have also re-examined pertinent sections of the HPSR sent to me by FHWA in May of 2002. Based upon this review, I would like to provide the FHWA and Caltrans with the following comments:

APE

The APE delineated for this undertaking is satisfactory. I now understand that all prospective effects of the undertaking on historic properties fall within the boundaries of the current APE maps you furnished.

Identifying Historic Properties

1. The information you provided in response to my request clearly indicates that the FHWA effort to identify historic properties within this undertaking's APE was reasonable and otherwise in accordance with the provisions of 36 CFR §800.4(a) (2-3) and §800.4(b)(1).
2. I concur in the FHWA determination that pursuant to 36 CFR §800.4(c):
 - a. The Telles Ranch property at 42200 Vargas Road, Fremont, is eligible for inclusion in the National Register.
 - b. 915 Mission Road, Fremont, and 7587 Athenour Way, Sunol, are not eligible for inclusion in the National Register.
 - c. There are no other listed or eligible National Register properties within this undertaking's APE.

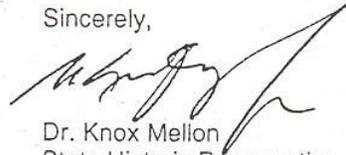
Having thus concluded this phase of our consultation in a satisfactory manner, I look forward to receiving the FHWA finding of effect for this undertaking and to concluding this consultation in its entirety.

Ms. Mara Melandry
19 March, 2003
Page Two

FHWA020805D
Sunol I-680 N. HOV Lanes

If you have any questions, please contact Hans Kreutzberg, Supervisor, Cultural Resources Program, at your convenience.

Sincerely,



Dr. Knox Mellon
State Historic Preservation Officer

cc: FHWA

May 6, 2004

Reply To:

FHWA020805D
Gene K. Fong, Division Administrator
Federal Highway Administration
California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Re: Finding of Effect for the I-680 Sunol Grade Northbound HOV Lane Project in Alameda County, CA [HDA-CA, FILE NO. 04-ALA-680, PM 0.0/19.3, 04-SCL-680, PM 7.5/9.9, DOCUMENT NO. P468795]

Dear Mr. Fong:

You have provided me with the results of your efforts to determine whether the undertaking described above may affect historic properties. You have done this, and are consulting with me, in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

The Federal Highway Administration (FHWA) previously determined and Dr. Knox Mellon, former State Historic Preservation Officer, concurred, that The Telles Ranch is eligible for the National Register of Historic Places. The FHWA has now concluded that no historic properties will be affected by Alternatives 1 & 2 for the above proposed project.

I reserve comment on the FHWA's finding of effect pending my receipt of FHWA's response to the following questions

1. Does the land west of Vargas Road constitute part of the setting of the Telles Ranch?
2. What will the proposed sound wall look like? What type of landscaping, if any, will be planted?

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 or e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

A rectangular box containing a large red 'X' mark, likely a placeholder for a signature or stamp.

Stephen D. Mikesell
Acting State Historic Preservation Officer

June 17, 2004

Reply To:

FHWA020805D
Gene K. Fong, Division Administrator
Federal Highway Administration
California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Re: Finding of Effect for the I-680 Sunol Grade Northbound HOV Lane Project in Alameda County, CA [04-ALA-680, PM 0.0/19.3, 04-SCL-680, PM 7.5/9.9, DOCUMENT No. P468795]

Dear Mr. Fong:

I have received Caltrans' reply of May 21, 2004, submitted on behalf of FHWA, that attempts to address my questions about the finding of effect for the above-cited undertaking.

The Federal Highway Administration (FHWA) previously determined and Dr. Knox Mellon, former State Historic Preservation Officer, concurred, that the Telles Ranch is eligible for the National Register of Historic Places. The FHWA has now concluded that no historic properties will be affected by undertaking Alternatives 1 & 2.

Setting and the integrity of that setting are important aspects of the Telles Ranch's ability to convey its significance. It is apparent that the integrity of the area west of Vargas Road has been impaired by the changes documented in your correspondence and attachments. This area is therefore not a part of the Ranch's historic setting. Accordingly, I concur with the FHWA's finding of "no historic properties affected" for this undertaking.

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 or e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

A rectangular box containing a red 'X' mark, likely a placeholder for a signature or stamp.

Stephen D. Mikesell
Acting State Historic Preservation Officer

cc: Mara Melandry, Chief, Office of Cultural Resource Studies
District 04

Chapter 4 **List of Contributors**

This environmental document was prepared by the Caltrans District 4 (Oakland), Office of Environmental Planning and Engineering. The following is a list of individuals who directly participated in preparation of this environmental document. The organization listed is a unit of Caltrans unless otherwise indicated.

Office of Project Management

Emily Landin-Lowe, Project Manager

Office of Design, Alameda II:

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David Chan, Transportation Engineer

Division of Operations:

Maria Pazooki, Transportation Engineer, Operations

Environmental Engineering:

Chris Wilson, Senior Transportation Engineer, Hazardous Materials

Glen Kinoshita, Senior Transportation Engineer

Chris Corwin, Transportation Engineer, Air Quality and Noise

Water Quality Program

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Kee Tsang, Transportation Engineer

Chris Padick, Associate Landscape Architect

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Margaret Gabil, Senior Environmental Planner, Biology

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Thomas Packard, Associate Landscape Architect, Aesthetics

Division of Design West:

Craig Tomimatsu, Senior Transportation Engineer, Hydraulics

Federal Highway Administration:

Steve Healow, Senior Project Development Engineer

Paleontological Resources Consultant:

C. Bruce Hansen, Paleontological Resource Specialist

Chapter 5 References

5.1 List of Technical Studies and Bibliography

| Text Reference | Document Citation |
|-----------------------|---|
| Caltrans 2001 | Environmental Engineering Office. Hazardous Waste Investigation Report, Oakland, CA., February 2001. |
| Caltrans 2001A | Environmental Engineering Office. Water Quality Impact Assessment, Oakland, CA., August 2001. |
| Caltrans 2001B | Geotechnical Design Office (West B). Preliminary Geotechnical Report, Sunol Grade Northbound HOV Lane and Proposed Improvements. Oakland, CA. July 2001 |
| Caltrans 2001C | Hydraulics Office, Engineering Services. Floodplain Assessment, Oakland, CA., August 2001. |
| Caltrans 2002 | Office of Highway Operations. Operational Analysis Report, Oakland, CA., November 2002 |
| Caltrans 2002A | Office of Environmental Planning (Cultural Resources). Historic Property Survey Report (3 volumes), Oakland CA, May 2002 |
| Caltrans 2003 | Environmental Engineering Office. Air Quality Impact Report, Oakland, CA., November 2003 |
| Caltrans 2003A | Natural Sciences and Permits Office. Biological Evaluation, Oakland, CA., March 2003. |
| Caltrans 2004A | Landscape Architecture Office. Visual Impact Assessment Technical Report, Sunol Grade NB HOV Project, Oakland, CA., February 2004 |
| Caltrans 2004B | Office of Natural Sciences. Natural Environment Study, Oakland, CA., January 2004 |
| Caltrans 2004C | Environmental Engineering Office. Traffic Noise Impact Report, Oakland, CA., April 2004 |
| Fremont 1990 | City of Fremont, Fremont General Plan Environmental Impact Report, Fremont, CA September 1990 |
| Hanson 2004 | Hanson, Bruce C. Paleontological Identification and Evaluation for Caltrans I-680 Northbound (Sunol Grade) Improvement Project, Oakland, CA., April 2004 |
| Milpitas 1994 | City of Milpitas, General Plan, Milpitas, CA. June 1998 |
| MTC 2000 | Metropolitan Transportation Commission. Transportation Blueprint for the 21st Century, Rapid Bus Proposal, Posted on the internet August 28, 2000. < http://www.mtc.ca.gov/projects/blueprint/bp_rapidbus.htm .> |
| MTC 2001 | Metropolitan Transportation Commission. Final Environmental Impact Report for the 2001 Regional Transportation plan for the San Francisco Bay Area. (State Clearinghouse No. 200103214) Oakland, CA. December 2001) |
| Pleasanton 1996 | City of Pleasanton, The Pleasanton General Plan, Pleasanton CA, August 1996 |
| Rosenthal 2002 | Rosenthal, Jeff and Richard T. Fitzgerald. Extended Phase I and Phase II Archeological Investigations, Davis, CA, January 2002 |
| VMS 2001 | Value Management Strategies Inc. Value Analysis Report, Route 680 Northbound HOV Improvements, Escondido, CA., August 2001. |

5.2 List of Abbreviated Terms

| Term | Definition | Term | Definition |
|-------------------|---|-------------------|---|
| AB | State Assembly Bill | HOT (lane) | High Occupancy and/or Toll lane |
| AC transit | Alameda County Transit | HOV | high-occupancy vehicle |
| ACCMA | Alameda County Congestion Management Agency | km | kilometer(s) |
| ACE | Altamont Commuter Express | kp | kilometer post or post kilometer |
| ACOE | U.S. Army Corps of Engineers | LOS | level of service |
| ALA | Alameda County | m | meter(s) |
| APE | Area of potential effect on archaeological or architectural resources | mi | mile(s) |
| BART | Bay Area Rapid Transit | MTC | Metropolitan Transportation Commission |
| BRT | Bus Rapid Transit | ND | negative declaration |
| Caltrans | See Department | NEPA | National Environmental Policy Act |
| CCTA | Contra Costa Transportation Authority | PM | post mile |
| CDFG | California Department of Fish and Game | PS&E | Project, Specifications and (cost) Estimates phase of project development |
| CEQA | California Environmental Quality Act | RTIP | Regional Transportation Improvement Program |
| CMA | Congestion Management Agency | RTP | Regional Transportation Plan |
| dba | Decibels | RWQCB | Regional Water Quality Control Board |
| Department | California Department of Transportation (Caltrans) | SB | State Senate Bill |
| EIR | environmental impact report | SCL | Santa Clara County |
| FHWA | Federal Highway Administration | SCVTA | Santa Clara Valley Transportation Authority |
| FSTIP | Federal Statewide Transportation Improvement Program | SHOPP | State Highway Operation and Protection Program |
| ft | foot/feet | SSCLJPA | Sunol Smart Carpool Lane Joint Powers Authority |
| FY | Fiscal Year | STIP | State Transportation Improvement Program |
| | | USFWS | U.S. Fish and Wildlife Service |

Appendix A: Environmental Significance Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. Where the checklist determination is something other than “no impact”, the associated environmental topic is further discussed in Chapter 2 of the environmental document. A summary of the reasons for each “no impact” determination appears in Figure 11, which is located in Chapter 2.

The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts.

Environmental Significance Checklist

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporation (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|--|--|---|--|--------------------------|
| I. AESTHETICS: Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project: | | | | |

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporation (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|--|---|---|---|--------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district might be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| IV. BIOLOGICAL RESOURCES: Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |

Environmental Significance Checklist

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporati on (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|--|--|---|--|--------------------------|
| Department of Fish and Game or U.S. Fish and Wildlife Service? | | | | |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| V. CULTURAL RESOURCES: Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| VI. GEOLOGY & SOILS: Would the project: | | | | |
| a) Expose people or structures to potential | | | | |

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporati on (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|--|--|---|--|----------------------|
| substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| VII. HAZARDS AND HAZARDOUS MATERIALS B Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

Environmental Significance Checklist

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporation (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|--|---|---|---|-----------|
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| VIII. HYDROLOGY AND WATER QUALITY: | | | | |
| Would the project: | | | | |
| Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporati on (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|--|--|---|--|----------------------|
| volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? | | | | |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| IX. LAND USE AND PLANNING: Would the project: | | | | |
| Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

Environmental Significance Checklist

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporati on (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|---|--|---|--|--------------------------|
| for the purpose of avoiding or mitigating an environmental effect? | | | | |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| X. MINERAL RESOURCES: Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| XI. NOISE: Would the project result in: | | | | |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| XII. POPULATION AND HOUSING: Would the project: | | | | |

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporati on (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|---|--|---|--|----------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

XIII. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|----------|
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

XIV. RECREATION:

| | | | | |
|--|--------------------------|--------------------------|--------------------------|----------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

XV. TRANSPORTATION/TRAFFIC: Would the project:

Environmental Significance Checklist

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporation (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|---|---|---|---|-----------|
| a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| XVI. UTILITIES AND SERVICE SYSTEMS: | | | | |
| Would the project: | | | | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| b) Result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| d) Have sufficient water supplies available to serve the project from existing or new entitlements and resources? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the | <input type="checkbox"/> | <input type="checkbox"/> | X | X |

| | Potentially Significant Impact (CEQA definition only) | Less Than Significant with Mitigation Incorporation (CEQA only) | Less Than Significant Impact (CEQA definition only) | No Impact |
|---|--|--|--|--------------------------|
| project's projected demand in addition to the provider's existing commitments? | | | | |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |
| XVII. MANDATORY FINDINGS OF SIGNIFICANCE: | | | | |
| Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X |

Appendix B: Resources Evaluated Relative to the Requirements of Section 4 (f)

Regulatory Setting

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if: 1) there is no prudent and feasible alternative to using that land; and 2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs which use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

Finding

Caltrans surveyed potential Section 4(f) properties within a distance of approximately 0.8-km (0.5-mi) of Interstate 680 in the project area. For purposes of this discussion, the term “potential Section 4 (f) property” refers to one that would be considered for protection under Section 4(f) if it were put to transportation use. Based on this survey and an analysis of possible project impacts, Caltrans determined that this project would not directly or indirectly put potential Section 4(f) properties to transportation use. A list of potential Section 4(f) properties and an explanation of why they will not be put to transportation use appears below. This finding will be communicated to the public entities controlling the listed properties during the public review and comment period for the draft environmental document.

Properties surveyed

The following is a list of potential Section 4(f) properties within a distance of approximately 0.8-km (0.5-mi) of the project area together with an explanation of why they will not be put to transportation use:

Tells Ranch (near the Vargas Road interchange): This property has been determined eligible for listing on the National Register of Historic Places. Caltrans found that the project would have no effect on this property in accordance with the requirements of Section 106 of the National Historic Preservation Act. The State Office of Historic preservation concurs with this finding. The Section 106 analysis and finding is considered adequate for Section 4 (f) purposes.

Bicycle Paths: Existing bicycle paths intersect the Interstate 680 right-of-way at three locations: Mission Boulevard (northern crossing), Washington Boulevard, and Grimmer Boulevard. These routes will be kept open during construction. There will be no change in surface street circulation patterns after construction. Therefore the project will not impair their recreational use.

Public Parks and Schools:

A list of public parks and schools located within the survey area appears on the following page. This project will not impair their out-door recreational value for the following reasons:

- There will be no land acquisition.
- Surface street circulation patterns will not change.
- Visual and noise impacts will be less than significant.
- The project will not cause or contribute to any other adverse impacts on nearby properties.

| Facility | Location |
|------------------------------------|--|
| Arroyo Agua Caliente Park | Grimmer Blvd @ Paseo Padre Pkwy |
| Beresford Park | Paseo Refugo @ Santa Rita |
| Booster Park | Gable Drive @ Hoyt St |
| Calle Oriente Park | Calle Oriente @ Park Victoria Dr |
| Cardoza Park | N. Park Victoria Dr. @ Calavaras Blvd. |
| Del Prado Park | Hansen Drive @ Calle De La Mesa |
| Foothill High School | West Las Positas @ Foothill Rd |
| Grimmer Park | Deleware St east of Fremont |
| Higuera Adobe Park | Higuera Rd @ Galindo Dr. |
| Jame Leitch Elementary School | East Warren Ave. @ Fernald St. |
| Joseph Weller Elementary School | Vegas Ave. @ Boulder St. |
| Linda Vista Elementary School | Benbo Drive @ Bruce Drive |
| Lone Tree Creek Park | Starlite Way @ Turquoise |
| Lydiksen Elementary School | Highland Oaks Drive @ Driftwood Way |
| Marshall Pomeroy Elementary School | Escueua Pkwy @ Washington Dr. |
| Meadowlark Park | Regency Dr. near I-680 |
| Milpitas High School | Escueua Pkwy @ Washington Dr. |
| Mission Valley Elementary School | Chadbourne Dr. @ Lockwood |
| Muirwood Community Park | Muirwood Drive @ Muirwood Court |
| Oakhill Park | Muirwood Drive @ W. Las Positas |
| Plomosa Park | Scott Creek Road & Plomosa |
| Sandlewood Park | Escuela Parkway @ Curtner Dr. |
| Sunnyhills Park | Escuela Parkway @ Washington Dr. |
| Thomas Russel Middle School | Escueua Pkwy @ Washington Dr. |
| Val Vista Park | Payne Drive @ Denker |
| Valley Trails Park | Valley Trails Drive @ Lassen Street |
| Walter Reuther Park | Jaklin Rd. @ Hillview Dr. |
| Warm Springs Park | Fernald St. @ Hackamore St. |

Appendix C: Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
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July 26, 2000

TITLE VI POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, sex and national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Jeff Morales".

JEFF MORALES
Director

Title VI Evaluation

Overview

Federal and state law and regulations require consideration of the impacts of various government programs on low income and minority populations. These are summarized below. The Environmental Impact Report (EIR) prepared by the Metropolitan Transportation Commission (MTC) for the Regional Transportation Plan (RTP) identified concentrations of low income and minority populations called communities of concern and determined and determined the Plan's impact on them to be generally positive. Caltrans analyzed the impact of this project on adjacent communities of concern and has made the following determination:

“No minority or low-income populations have been identified that would be adversely effected by the proposed project as specifically required by E.O. 12898 regarding environmental justice.”

Laws and regulations:

California Government Code Section 65049.12 (c) defines environmental justice as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws and

policies.” The Governor’s Office of Planning and Research coordinates state environmental justice efforts.

Federal Executive Order (EO) 12898, entitled “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations”, was signed by President Clinton on February 11, 1994. The EO requires each federal agency to take appropriate steps to identify and avoid any disproportionately high and adverse human health or environmental effects of Federal programs, policies, and activities on minority and low-income populations.

Title VI of the Civil Rights Act of 1964 (Title VI) bars discrimination based on race, color, religion, national origin, sex, age, or handicap in conjunction with any Federal-aid activity.

Environmental justice expands the concept of inclusion embodied in Title VI by adding low-income populations to the list of those requiring special consideration. There are three areas of concern: non-discrimination in hiring and contracting, participation in project decision-making, and increased attention to environmental and human health conditions in minority and low-income communities.

Analytical framework:

This analysis uses the analytical framework developed by MTC during preparation of the 2001 RTP. To evaluate the impact of the RTP on low income or minority families, MTC identified geographic areas, called communities of concern, which contain relatively high concentrations of these groups. Data was compiled and analyzed by travel analysis zone. A community of concern is defined as one or more contiguous travel analysis zones with a minority population of 70% or more and/or where at least 30% of households have incomes at or below 200% of the poverty level based on the 1990 census. Of a total of 1099 travel analysis zones, 333 were considered to have a meaningfully greater concentration of low income or minority families. These zones are located in 42 clusters called communities of concern, which range in size from one to 36 zones. (MTC 2002, page 3-5) ²

² MTC used 1990 census data to determine poverty level concentrations because income data from the 2000 census was not available at the time of the analysis. Also, at 200% of poverty level, MTC’s income threshold is twice that contained in U.S. DOT EJ guidelines, which use 100% of the poverty level published by the U.S. of Health and Human Services (DHHS). (FHWA 1998) The higher MTC threshold was used to reflect the relatively high cost of living in the Bay Area. Current and past poverty guidelines amounts for a family of 4 are as follows: year 2002 = \$18,100, 2000 = \$17,050, and 1990 = \$12,700. The MTC definition produces more low-income communities of concern than the U.S. DOT definition. For example a family of four with an income of \$25,400 in 1990 would be classified as low income.

Relating this analysis to the local project impact area, the travel analysis zones adjacent to Interstate 680 within the City of Milpitas and at the base of the Sunol grade in the City of Fremont qualify as communities of concern based on the minority population criteria

Caltrans evaluated this project with respect to the three areas of concern noted above: hiring and contracting, project decision-making, and community impact. The conclusion is that this project will not have an adverse impact on minority or low-income populations. With respect to the first area of concern, hiring and contracting, this conclusion is based on the fact that standard Caltrans hiring and contracting practices will be used. These provide adequate opportunities for participation by low income and minority groups. The basis for the no impact finding in the other two areas is further discussed below.

Community involvement in project decision-making:

The environmental justice community was directly involved in the planning process leading to selection of this project for inclusion in the 2001 RTP. In preparing the RTP, MTC convened an Environmental Justice Advisory Group (EJAG) to review the plan and advise on relevant issues. Community outreach conducted by MTC during preparation of the RTP plus community meetings held by Caltrans during the design phase of this project provide adequate opportunities for low income and minority groups to participate in the decision making process.

Project impacts on communities of concern:

In conjunction with EJAG, MTC conducted an equity analysis of the RTP to measure its impact on low income and minority communities³. The analysis compared transit and auto accessibility by community in 1998 and 2025, assuming full RTP implementation. The analysis found that low income and minority communities receive the same or better treatment as other communities. The reasons for this finding, which also apply to this project, are as follows (MTC 2001, page 1-5):

- Low income and minority communities are primarily located in our region's older urban core, which is already better served by the existing highway and transit system than newer outlying areas.
- Because the RTP places a priority on maintaining the existing system rather than expanding it, areas that are already served will receive a proportionately greater benefit.

³ The 2001 Regional Transportation Plan; Equity Analysis and Environmental Justice Report, Metropolitan Transportation Commission, September 2001.

- The RTP invests a significantly higher proportion of resources in transit than its share of the market. Transit users, therefore, will enjoy a proportionately greater benefit.

Another important aspect of community impact assessment, which is not addressed in the MTC analysis, is the impact(s) of physical project changes on the surrounding environment. This issue is addressed in the environmental review process for individual projects, which includes analysis of possible project impacts in a variety of social equity related areas, such as community facilities and services, visual resources, noise, cultural resources, land use, and others. Based on this analysis Caltrans determined that this project will not adversely impact nearby low income and minority communities for the following reasons:

- Although temporary easements will be used to gain access to adjacent properties during construction, the completed project will be almost entirely contained within the existing right-of-way. The single exception is a small permanent encroachment on land controlled by the San Francisco Water District.
- There will be no temporary or permanent displacement of existing homes or businesses.
- Existing community facilities and services will not be altered
- Environmental safeguards incorporated into the project will reduce external project impacts, such as noise, to insignificant levels.
- The project will directly benefit carpool and transit travelers within the Sunol Gateway corridor, which includes MTC identified communities of concern in the Cities of Milpitas and Fremont.