District 10 Mobility Performance Report

2018 First Quarter

DEPARTMENT OF TRANSPORTATION

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District 10 Mobility Performance Report

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EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly or annual analysis.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

This information is based on data collected every day of the quarter, twenty–four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The MPR presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the first quarter, total delay equaled 208 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold, and 781 thousand VHD at the 60 mph threshold. Compared to the same quarter

the year before, there was a 151.2 percent increase in 35 mph quarterly delay and 37.7 percent increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 2,900 VHD at 35 mph, and 11,036 VHD at 60 mph. The increased delay numbers mainly attributed to 35 percent increase in number of good detectors compared to the first quarter of 2017.

The following District 10 projects are currently being constructed or are scheduled for construction effective February 2018. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 08/01/2021
End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 01/19/2019
End Project – 10/01/2021

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911
Convert 4 lane expressway to 6 lane freeway
Approve Construction Contract Date – 05/15/2018
End Project – 10/01/2020

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

I-205 SMART CORRIDOR PHASE 2; EA 10-1C330
Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road
Currently in PA&ED
End Project – 11/01/2021

STANISLAUS COUNTY

STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300

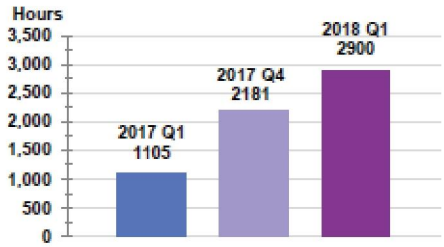
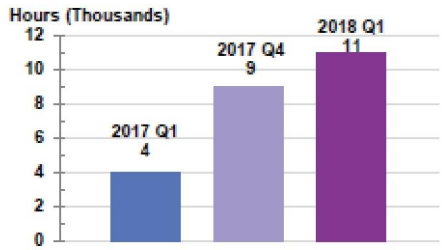
Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Currently in PA&ED
End Project – Estimated to be mid 2020

The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes, in the cities, and in the counties that experience the most congestion in District 10. It is expected that the projects will help increase the Vehicle Miles Traveled while reducing congestion and delay as the population and demand in District 10 grows over the next 10 years.

The next section of this report summarizes the District 10 2018 first quarter Quarterly Mobility Statistics.

2018 Q1 Quarterly Mobility Statistics – District 10

Data may change in coming months due to on-going data reconciliation process

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		13.2%	0.4%
Total Vehicle Hours of Delay (VHD) at 35 mph		151.2%	37.7%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		162.5%	33%
Total Vehicle Hours of Delay (VHD) at 60 mph		163.1%	31.1%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		164.6%	29.7%

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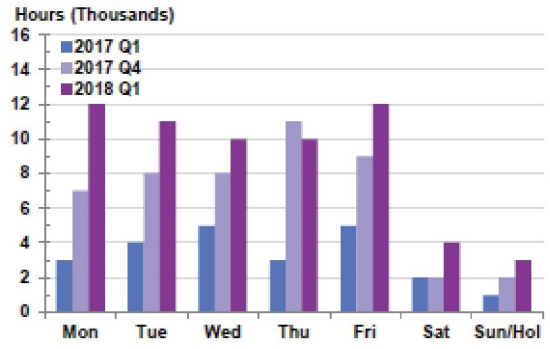
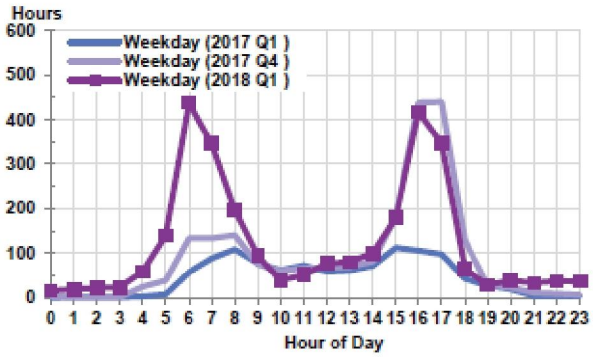
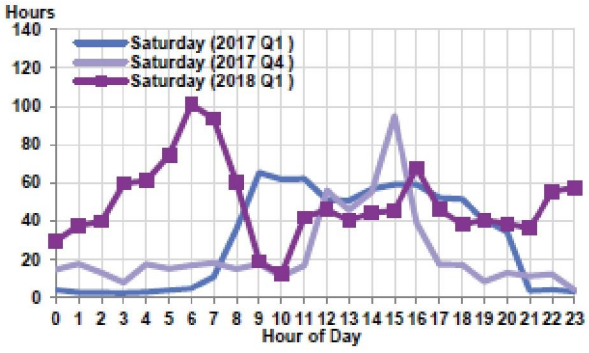
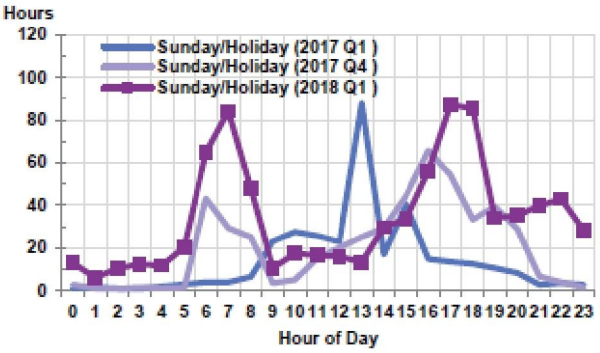
Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago –	Largest Magnitude Decrease over last quarter Thursday -2.9%
		Largest Magnitude Increase over one year ago Monday 271.6%	Largest Magnitude Increase over last quarter Monday 83.5%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 10 AM -36%	Largest Magnitude Weekday Decrease over last quarter 5 PM -21.2%
		Largest Magnitude Weekday Increase over one year ago 6 AM 656.2%	Largest Magnitude Weekday Increase over last quarter 6 AM 226.7%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 10 AM -80%	Largest Magnitude Saturday Decrease over last quarter 3 PM -52%
		Largest Magnitude Saturday Increase over one year ago 6 AM 1989.7%	Largest Magnitude Saturday Increase over last quarter 6 AM 497.9%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 1 PM -85%	Largest Magnitude Sun./Holiday Decrease over last quarter 1 PM -47.2%
		Largest Magnitude Sun./Holiday Increase over one year ago 7 AM 2070.8%	Largest Magnitude Sun./Holiday Increase over last quarter 7 AM 186.6%

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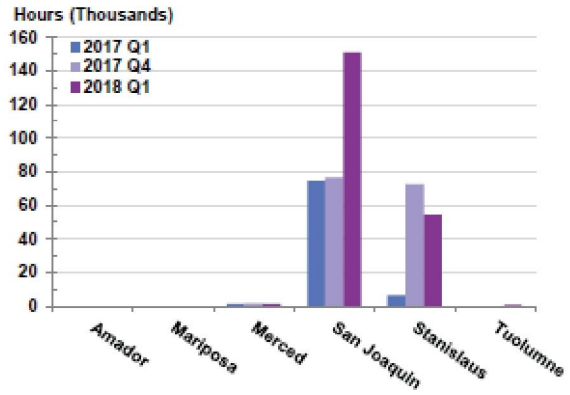
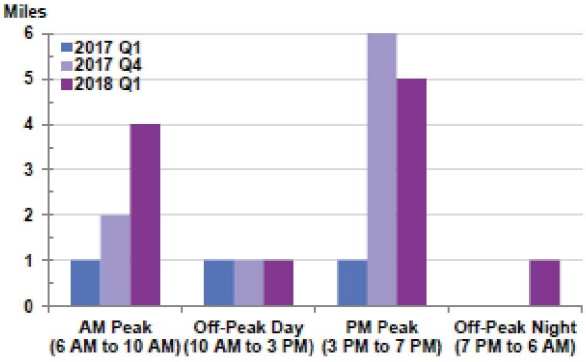
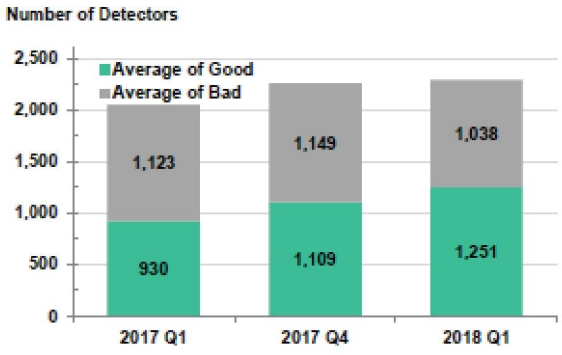
Measure	Graph	Percentage Change	
		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Mariposa -100%	Stanislaus -25.1%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		San Joaquin 102.2%	San Joaquin 96.8%
		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		–	PM Peak -15.8%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		AM Peak 713.9%	AM Peak 149.3%
		Change in Good over one year ago	Change in Good over last quarter
Average Number of Good and Bad Detectors		35%	13%
		Change in Bad over one year ago	Change in Bad over last quarter
		-8%	-10%

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Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2018 Q1-2017 Q1		Difference 2018 Q1-2017 Q4		Rank		
Route	County	2017 Q1	2017 Q4	2018 Q1	Absolute	Percentage	Absolute	Percentage	2017 Q1	2017 Q4	2018 Q1
I205	San Joaquin	119552.2	154421.4	203735.6	84183.4	70%	49,314	32%	1	1	1
I580	San Joaquin	42246.8	14743.4	54481.8	12235	29%	39,738	270%	3	5	2
SR99	Stanislaus	2946.3	44824.9	30933.7	27987.4	950%	(13,891)	-31%	5	2	3
SR99	San Joaquin	68896	42712.4	23707.3	-45188.7	-66%	(19,005)	-44%	2	3	4
SR132	Stanislaus	0	24394.2	20244.3	20244.3		(4,150)	-17%		4	5
I5	San Joaquin	960.4	7653.6	8853.5	7893.1	822%	1,200	16%	7	6	6
SR4	San Joaquin	320	389.7	5905	5585	1745%	5,515	1415%	9	9	7
SR219	Stanislaus	3521.8	3258.4	3100	-421.8	-12%	(158)	-5%	4	7	8
SR99	Merced	1551.6	1618.7	1277.3	-274.3	-18%	(341)	-21%	6	8	9
SR165	Merced	0	0	306.3	306.3		306				10
SR120	San Joaquin	202.6	355	227	24.4	12%	(128)	-36%	10	10	11
SR132	San Joaquin	476.1	8.6	214.1	-262	-55%	206	2390%	8	11	12
I5	Stanislaus	11.2	0	26.7	15.5	138%	27		12		13
SR152	Merced	9.5	0	15.9	6.4	67%	16		13		14
SR88	Amador	0	0	3.4	3.4		3				15
I5	Merced	0	0	0	0		-				
SR104	Amador	0	0	0	0		-				
SR108	Tuolumne	0	0	0	0		-				
SR12	San Joaquin	0	0.2	0	0		(0)	-100%		12	
SR120	Tuolumne	0	0	0	0		-				
SR49	Mariposa	25	0	0	-25	-100%	-		11		
TOTALS		**240,720**	**294,381**	**353,032**	**112,312**	**46.7%**	**58,651**	**19.9%**			