

District 10 Mobility Performance Report

2019 Third Quarter

DEPARTMENT OF TRANSPORTATION

November 4, 2019
: Jaime Q. Quesada

District 10 Mobility Performance Report

2019 Third Quarter

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 third quarter, total delay equaled 715 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 2.2 million VHD at the 60 mph threshold. Compared to the same quarter the

year before, there was an 80.2 percent increase in 35 mph quarterly delay and 52.3 percent increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 9,755 VHD at 35 mph and 29,107 VHD at 60 mph. The increased delay numbers can mainly be attributed to a 12 percent increase in the number of good detectors and -33% percent decrease in the number of bad detectors compared to the third quarter of 2018, one year ago.

The following District 10 projects are currently being constructed or are scheduled for construction effective November 2019. 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 – 11/01/2020

I-205 – MOUNTAIN HOUSE PARKWAY INTERCHANGE PROJECT; EA 10-1E210

Improve the I-205 – Mountain House Parkway Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PA&ED

End Project – Estimated mid 2022

I-580 – PATTERSON PASS ROAD INTERCHANGE PROJECT; EA 10-1E220

Improve the I-205 – Patterson Pass Road Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PA&ED

End Project – Estimated mid 2022

I-205 – LAMMERS ROAD / 11TH STREET INTERCHANGE PROJECT; EA 10-0H910

Construct the I-205 – Lammers Road / 11th Street Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PA&ED

End Project – Estimated mid 2022

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 2019 Q3 Quarterly Mobility Statistics.

2019 Q3 Quarterly Mobility Statistics – District 10

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

For further information regarding the content of this report, contact:
Jaime Q. Quesada at jquesada@dot.ca.gov

11/4/2019

Measure	Graph	Percentage Change							
		Over one year ago	Over last quarter						
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Q3</th></tr> <tr><td>2018</td><td>1.5</td></tr> <tr><td>2019</td><td>1.9</td></tr> </table>	Year	Q3	2018	1.5	2019	1.9	22.7%	2%
Year	Q3								
2018	1.5								
2019	1.9								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q3</th></tr> <tr><td>2018</td><td>396.8</td></tr> <tr><td>2019</td><td>714.9</td></tr> </table>	Year	Q3	2018	396.8	2019	714.9	80.2%	15.3%
Year	Q3								
2018	396.8								
2019	714.9								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1"> <tr><th>Year</th><th>Q3</th></tr> <tr><td>2018</td><td>5573</td></tr> <tr><td>2019</td><td>9755</td></tr> </table>	Year	Q3	2018	5573	2019	9755	75%	12.8%
Year	Q3								
2018	5573								
2019	9755								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q3</th></tr> <tr><td>2018</td><td>1.4</td></tr> <tr><td>2019</td><td>2.2</td></tr> </table>	Year	Q3	2018	1.4	2019	2.2	52.3%	15.1%
Year	Q3								
2018	1.4								
2019	2.2								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q3</th></tr> <tr><td>2018</td><td>20</td></tr> <tr><td>2019</td><td>29</td></tr> </table>	Year	Q3	2018	20	2019	29	47.9%	13.1%
Year	Q3								
2018	20								
2019	29								

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11/4/2019

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
		-	-
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Thursday 73.6% ↑	Friday 15.1% ↑
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter
		7 PM -4% ↓	2 PM -7.5% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		4 PM 88.8% ↑	5 PM 32.6% ↑
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago	Largest Magnitude Saturday Decrease over last quarter
		9 PM -34.6% ↓	11 PM -90.7% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		11 AM 149.1% ↑	11 AM 162.3% ↑
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter
		8 PM -40.7% ↓	12 AM -87.9% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		12 PM 313.6% ↑	12 PM 132.4% ↑

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11/4/2019

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Mariposa -55.6% ↓	Stanislaus -6.6% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		San Joaquin 114.8% ↑	San Joaquin 20.8% ↑
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		—	—
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 125.4% ↑	PM Peak 34.1% ↑
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		12% ↑	2% ↑
		Change in Bad over one year ago	Change in Bad over last quarter
		-33% ↑	-19% ↑

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11/4/2019

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2019 Q3-2018 Q3		Difference 2019 Q3-2019 Q2		Rank		
		2018 Q3	2019 Q2	2019 Q3	Absolute	Percentage	Absolute	Percentage	2018 Q3	2019 Q2	2019 Q3
ID05	San Joaquin	299,410	373,298	392,171	92,761	31.0%	18,873	5.1%	1	1	1
SR99	San Joaquin	48,745	85,545	112,480	63,735	130.8%	26,934	31.5%	3	3	2
I5	San Joaquin	46,888	79,130	95,507	48,620	103.7%	16,378	20.7%	4	4	3
SR99	Stanislaus	84,460	109,964	86,857	2,396	2.8%	-23,108	-21.0%	2	2	4
SR4	San Joaquin	34,518	30,328	43,217	8,699	25.2%	12,889	42.5%	5	6	5
SR132	Stanislaus	23,946	31,265	40,072	16,126	67.3%	8,807	28.2%	6	5	6
I580	San Joaquin	18,542	24,360	27,322	8,780	47.4%	2,962	12.2%	7	8	7
SR120	San Joaquin	709	27,696	26,519	25,810	3639.3%	-1,177	-4.2%	15	7	8
SR99	Merced	5,725	10,226	15,936	10,211	178.4%	5,710	55.8%	10	9	9
I5	Stanislaus	12,083	4,410	9,922	-2,161	-17.9%	5,512	125.0%	8	12	10
SR132	San Joaquin	744	7,132	7,443	6,699	900.8%	311	4.4%	14	10	11
SR12	San Joaquin	0	5,418	5,506	5,506		88	1.6%		11	12
SR108	Tuolumne	976	1,194	5,217	4,241	434.8%	4,023	337.1%	13	15	13
I5	Merced	37	1,077	2,198	2,161	5872.0%	1,120	104.0%	18	16	14
SR165	Merced	1,632	153	2,068	436	26.7%	1,915	1248.0%	12	23	15
SR219	Stanislaus	5,256	2,766	1,805	-3,451	-65.7%	-961	-34.7%	11	14	16
SR120	Tuolumne	0	232	1,729	1,729		1,497	644.5%		22	17
SR16	Amador	0	286	298	298		12	4.2%		19	18
SR49	Mariposa	538	374	239	-299	-55.6%	-136	-36.2%	16	17	19
SR152	Merced	6,557	3,390	93	-6,463	-98.6%	-3,297	-97.3%	9	13	20
SR124	Amador	0	277	82	82		-196	-70.6%		20	21
SR49	Tuolumne	0	272	20	20		-252	-92.5%		21	22
SR104	Amador	0	2	4	4		3	173.3%		24	23
SR120	Stanislaus	0	0	0	0		0				
SR88	Amador	262	339	0	-262	-100.0%	-339	-100.0%	17	18	
TOTALS		591,026	799,134	876,703	285,677	48.3%	77,569	9.7%			