

District 10 Mobility Performance Report

2020 Third Quarter

DEPARTMENT OF TRANSPORTATION

November 12, 2020
: Jaime Q. Quesada

District 10 Mobility Performance Report

2020 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 report.

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 337 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 1.5 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was a 52.8 percent total delay decrease in 35 mph quarterly delay and 31.4

percent total delay decrease in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 4,742 VHD at 35 mph and 20,419 VHD at 60 mph. Compared to the same quarter the year before, there was a 51.4 percent decrease in 35 mph average weekday quarterly delay and 29.9 percent decrease in 60 mph average weekday quarterly delay. The decreased delay numbers at 35 mph and 65 mph can mainly be attributed to the fact that the COVID-19 lockdown began mid-March through the third quarter of 2020.

Top Ten Bottlenecks for Quarter 3

County	Shift	Fwy	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
SJ	AM	I205-W	1.69	0.761	37.74	-121.54	61	2.12	55,396	9,265
SJ	AM	I205-W	3.31	2.38	37.74	-121.51	33	4.90	36,876	3,260
STA	PM	SR132-E	9.42	1.556	37.64	-121.25	59	5.83	33,638	8,615
SJ	PM	I205-E	9.44	R8.51	37.76	-121.41	58	1.70	19,918	9,715
SJ	PM	SR99-S	238.76	2.971	37.76	-121.15	54	1.45	14,009	6,570
SJ	PM	I5-N	461.20	R15.706	37.80	-121.30	52	1.78	13,970	5,935
SJ	PM	I205-E	7.47	R6.543	37.76	-121.44	45	1.97	11,224	3,970
SJ	PM	SR4-E	66.43	R18.9	37.96	-121.25	34	2.97	10,446	2,400
SJ	PM	I205-E	6.80	R5.871	37.76	-121.45	61	0.97	8,660	5,825
SJ	PM	SR99-S	240.83	5.042	37.78	-121.18	49	0.79	7,690	5,520

SUMMARY TABLE FOR THE 2020 Q3 REPORT

The following District 10 projects are currently being constructed or are scheduled for construction effective November 2020. 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 – 11/01/2022

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 2021

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PS&E
End Project – Estimated to be 2023

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 PS&E
End Project – Estimated to be 2022

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 PS&E
End Project – Estimated to be 2025

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 PS&E
End Project – Estimated to be 2025

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 PS&E
End Project – Estimated to be 2025

STANISLAUS COUNTY

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

Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Project Complete

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 2020 Q3 Quarterly Mobility Statistics.

2020 Q3 Quarterly Mobility Statistics District 10

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

Measure	Graph	Percentage Change									
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1" style="margin: auto;"> <tr><th>Year/Quarter</th><th>Value</th></tr> <tr><td>2019 Q3</td><td>1.9</td></tr> <tr><td>2020 Q2</td><td>1.5</td></tr> <tr><td>2020 Q3</td><td>1.7</td></tr> </table>	Year/Quarter	Value	2019 Q3	1.9	2020 Q2	1.5	2020 Q3	1.7	Over one year ago	Over last quarter
		Year/Quarter	Value								
		2019 Q3	1.9								
2020 Q2	1.5										
2020 Q3	1.7										
-7.7%	17.4%										
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1" style="margin: auto;"> <tr><th>Year/Quarter</th><th>Value</th></tr> <tr><td>2019 Q3</td><td>715</td></tr> <tr><td>2020 Q2</td><td>266</td></tr> <tr><td>2020 Q3</td><td>337</td></tr> </table>	Year/Quarter	Value	2019 Q3	715	2020 Q2	266	2020 Q3	337	Over one year ago	Over last quarter
		Year/Quarter	Value								
		2019 Q3	715								
2020 Q2	266										
2020 Q3	337										
-52.8%	26.8%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1" style="margin: auto;"> <tr><th>Year/Quarter</th><th>Value</th></tr> <tr><td>2019 Q3</td><td>9,755</td></tr> <tr><td>2020 Q2</td><td>3,795</td></tr> <tr><td>2020 Q3</td><td>4,742</td></tr> </table>	Year/Quarter	Value	2019 Q3	9,755	2020 Q2	3,795	2020 Q3	4,742	Over one year ago	Over last quarter
		Year/Quarter	Value								
		2019 Q3	9,755								
2020 Q2	3,795										
2020 Q3	4,742										
-51.4%	25%										
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1" style="margin: auto;"> <tr><th>Year/Quarter</th><th>Value</th></tr> <tr><td>2019 Q3</td><td>2.2</td></tr> <tr><td>2020 Q2</td><td>1.1</td></tr> <tr><td>2020 Q3</td><td>1.5</td></tr> </table>	Year/Quarter	Value	2019 Q3	2.2	2020 Q2	1.1	2020 Q3	1.5	Over one year ago	Over last quarter
		Year/Quarter	Value								
		2019 Q3	2.2								
2020 Q2	1.1										
2020 Q3	1.5										
-31.4%	32%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1" style="margin: auto;"> <tr><th>Year/Quarter</th><th>Value</th></tr> <tr><td>2019 Q3</td><td>29</td></tr> <tr><td>2020 Q2</td><td>16</td></tr> <tr><td>2020 Q3</td><td>20</td></tr> </table>	Year/Quarter	Value	2019 Q3	29	2020 Q2	16	2020 Q3	20	Over one year ago	Over last quarter
		Year/Quarter	Value								
		2019 Q3	29								
2020 Q2	16										
2020 Q3	20										
-29.9%	27.4%										

2020 Q3 Quarterly Mobility Statistics District 10

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

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 -32.3%	
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
			Friday 39%
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
		5 PM -54.3%	12 PM -32.1%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
			4 PM 52.9%
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
		11 AM -86.1%	5 AM -69.6%
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		9 PM 12.2%	12 PM 121.1%
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
		12 PM -76.7%	7 PM -32.3%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		12 AM 14.4%	2 PM 241.8%

11/12/2020

2020 Q3 Quarterly Mobility Statistics District 10

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

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
		San Joaquin -55%	Stanislaus -15.7%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		-	San Joaquin 59.8%
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
		PM Peak -38.4%	-
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		-	PM Peak 87.2%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		0%	-4%
		Change in Bad over one year ago	Change in Bad over last quarter
		22%	13%

2020 Q3 Quarterly Mobility Statistics District 10

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

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2020 Q3-2019 Q3		Difference 2020 Q3-2020 Q2		Rank		
		2019 Q3	2020 Q2	2020 Q3	Absolute	Percentage	Absolute	Percentage	2019 Q3	2020 Q2	2020 Q3
I205	San Joaquin	392170.8	80751	152318.4	-239852.4	-61%	71,567	89%	1	1	1
SR99	San Joaquin	112479.7	33279.5	56464.9	-56014.8	-50%	23,185	70%	2	3	2
I5	San Joaquin	95507.4	22286	41210.5	-54296.9	-57%	18,925	85%	3	6	3
SR99	Stanislaus	86856.5	64980.1	36801.7	-50054.8	-58%	(28,178)	-43%	4	2	4
SR132	Stanislaus	40072.3	8926.5	22366.2	-17706.1	-44%	13,440	151%	6	9	5
SR120	San Joaquin	26519.4	10864.8	15104.4	-11415	-43%	4,240	39%	8	7	6
SR4	San Joaquin	43216.7	5127.2	14460.5	-28756.2	-67%	9,333	182%	5	10	7
SR99	Merced	15935.7	24865.5	11978.3	-3957.4	-25%	(12,887)	-52%	9	4	8
I5	Stanislaus	9922	9486.3	10487.8	565.8	6%	1,002	11%	10	8	9
I580	San Joaquin	27321.9	23374.3	5577.7	-21744.2	-80%	(17,797)	-76%	7	5	10
SR132	San Joaquin	7442.7	3102.3	4616.3	-2826.4	-38%	1,514	49%	11	12	11
SR12	San Joaquin	5506	4051.8	3826.2	-1679.8	-31%	(226)	-6%	12	11	12
I5	Merced	2197.7	534	2878.9	681.2	31%	2,345	439%	14	15	13
SR108	Tuolumne	5216.8	1246.6	2007.7	-3209.1	-62%	761	61%	13	13	14
SR219	Stanislaus	1804.7	1190.9	1668.2	-136.5	-8%	477	40%	16	14	15
SR165	Merced	2067.9	55	1577.3	-490.6	-24%	1,522	2768%	15	18	16
SR152	Merced	93.1	12.1	487.2	394.1	423%	475	3926%	20	20	17
SR16	Amador	297.7	261.6	279.2	-18.5	-6%	18	7%	18	16	18
SR49	Mariposa	238.8	33.1	44.3	-194.5	-81%	11	34%	19	19	19
SR120	Tuolumne	1729.4	9.6	19.5	-1709.9	-99%	10	103%	17	23	20
SR104	Amador	4.1	11.3	4.2	0.1	2%	(7)	-63%	23	21	21
SR49	Tuolumne	20.4	11	2.6	-17.8	-87%	(8)	-76%	22	22	22
SR124	Amador	81.5	1.7	1.2	-80.3	-99%	(1)	-29%	21	24	23
SR88	Amador	0	130.8	1.1	1.1		(130)	-99%		17	24
SR120	Stanislaus	0	0	0	0		-				
TOTALS		876,703	294,593	384,184	-492,519	-56.2%	89,591	30.4%			

11/12/2020