

District 10 Mobility Performance Report

2021 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

February 1, 2022
: Jaime Q. Quesada

District 10 Mobility Performance Report

2021 Fourth 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 fourth quarter, total delay equaled 646 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 2.1 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was a 72.7 percent total delay increase in 35 mph quarterly delay and 40.4

percent total delay increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 8,919 VHD at 35 mph and 28,983 VHD at 60 mph. Compared to the same quarter the year before, there was a 71.1 percent increase in 35 mph average weekday quarterly delay and 38.5 percent increase in 60 mph average weekday quarterly delay. The increased delay numbers at 35 mph and 60 mph can mainly be attributed to the fact that the COVID-19 lockdown restrictions have been progressively rolled back during the second quarter, third quarter, and fourth quarter of 2021. It is expected that the first quarter of 2022 will show an additional increased delay across the board if COVID-19 lockdown restriction continue to be rolled back.

Top Ten Bottlenecks for Quarter 4

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	R1.691	R0.761	37.74	-121.54	55	3.20	102,430	11,890
STA	PM	SR132-E	9.42	1.556	37.64	-121.25	58	5.09	37,692	9,340
STA	PM	SR99-S	R227.834	R16.799	37.65	-121.02	57	2.64	29,206	7,495
SJ	PM	SR4-E	R66.428	R18.9	37.96	-121.25	51	3.21	28,104	5,705
SJ	PM	SR99-S	238.76	2.971	37.76	-121.15	57	1.45	20,972	9,420
SJ	PM	SR99-S	240.43	4.64	37.77	-121.18	58	1.02	20,535	10,750
SJ	PM	SR99-S	236.56	0.776	37.74	-121.12	56	1.19	17,612	10,215
STA	PM	SR99-N	R231.519	R20.459	37.69	-121.06	40	1.92	13,134	3,815
SJ	PM	SR99-S	237.87	2.081	37.75	-121.14	54	0.60	12,862	11,115
SJ	PM	I205-E	10.22	R9.29	37.76	-121.39	41	2.37	11,835	2,925

SUMMARY TABLE FOR THE 2021 Q4 REPORT

The following District 10 projects are currently being constructed or are scheduled for construction effective January 2022. 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 – 01/01/2023

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 2022

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 2021 Q4 Quarterly Mobility Statistics.

2021 Q4 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"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2020</td><td>1.7</td></tr> <tr><td>2021</td><td>1.9</td></tr> </table>	Year	Q4	2020	1.7	2021	1.9	Over one year ago	Over last quarter
		Year	Q4						
		2020	1.7						
2021	1.9								
14.6%	0.1%								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2020</td><td>374</td></tr> <tr><td>2021</td><td>646</td></tr> </table>	Year	Q4	2020	374	2021	646	Over one year ago	Over last quarter
		Year	Q4						
		2020	374						
2021	646								
72.7%	15.4%								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2020</td><td>5,214</td></tr> <tr><td>2021</td><td>8,919</td></tr> </table>	Year	Q4	2020	5,214	2021	8,919	Over one year ago	Over last quarter
		Year	Q4						
		2020	5,214						
2021	8,919								
71.1%	16.9%								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2020</td><td>1.5</td></tr> <tr><td>2021</td><td>2.1</td></tr> </table>	Year	Q4	2020	1.5	2021	2.1	Over one year ago	Over last quarter
		Year	Q4						
		2020	1.5						
2021	2.1								
40.4%	6%								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2020</td><td>21</td></tr> <tr><td>2021</td><td>29</td></tr> </table>	Year	Q4	2020	21	2021	29	Over one year ago	Over last quarter
		Year	Q4						
		2020	21						
2021	29								
38.5%	9.4%								

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2021 Q4 Quarterly Mobility Statistics District 10

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Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		<p>Largest Magnitude Decrease over one year ago</p> <p>Sun/Hol -9.5% ↓</p> <p>Largest Magnitude Increase over one year ago</p> <p>Thursday 66% ↑</p>	<p>Largest Magnitude Decrease over last quarter</p> <p>Monday -15.2% ↓</p> <p>Largest Magnitude Increase over last quarter</p> <p>Thursday 38.5% ↑</p>
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		<p>Largest Magnitude Weekday Decrease over one year ago</p> <p>4 AM -12.8% ↓</p> <p>Largest Magnitude Weekday Increase over one year ago</p> <p>7 AM 239.6% ↑</p>	<p>Largest Magnitude Weekday Decrease over last quarter</p> <p>10 PM -65% ↓</p> <p>Largest Magnitude Weekday Increase over last quarter</p> <p>5 PM 35.4% ↑</p>
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		<p>Largest Magnitude Saturday Decrease over one year ago</p> <p>5 AM -34.4% ↓</p> <p>Largest Magnitude Saturday Increase over one year ago</p> <p>4 PM 583.2% ↑</p>	<p>Largest Magnitude Saturday Decrease over last quarter</p> <p>1 PM -16% ↓</p> <p>Largest Magnitude Saturday Increase over last quarter</p> <p>4 PM 91.2% ↑</p>
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		<p>Largest Magnitude Sun./Holiday Decrease over one year ago</p> <p>4 PM -38.8% ↓</p> <p>Largest Magnitude Sun./Holiday Increase over one year ago</p> <p>2 PM 77.6% ↑</p>	<p>Largest Magnitude Sun./Holiday Decrease over last quarter</p> <p>1 PM -22.4% ↓</p> <p>Largest Magnitude Sun./Holiday Increase over last quarter</p> <p>5 PM 45.3% ↑</p>

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2021 Q4 Quarterly Mobility Statistics District 10

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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
		Tuolumne -35.6%	Amador -60.2%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		San Joaquin 62.5%	San Joaquin 10.5%
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
		—	Off-Peak Day -10.3%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 40.2%	PM Peak 12.2%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-10%	-3%
		Change in Bad over one year ago	Change in Bad over last quarter
		34%	7%

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**2021 Q4 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 2021 Q4-2020 Q4		Difference 2021 Q4-2021 Q3		Rank		
		2020 Q4	2021 Q3	2021 Q4	Absolute	Percentage	Absolute	Percentage	2020 Q4	2021 Q3	2021 Q4
I205	San Joaquin	106411.8	314289.4	328591.2	222179.4	209%	14,302	5%	1	1	1
SR99	Stanislaus	38511.7	92085.1	121584.1	83072.4	216%	29,499	32%	4	2	2
SR99	San Joaquin	71680.9	81381.1	99891	28210.1	39%	18,510	23%	2	3	3
I5	San Joaquin	55397.2	70856.4	68029.2	12632	23%	(2,827)	-4%	3	4	4
SR120	San Joaquin	20190.8	34571.6	57636.3	37445.5	185%	23,065	67%	7	5	5
SR4	San Joaquin	12733.5	28339.3	32574.7	19841.2	156%	4,235	15%	8	6	6
SR132	Stanislaus	29152.4	19401.1	31109.9	1957.5	7%	11,709	60%	6	8	7
I580	San Joaquin	31245.1	11180.2	27297.1	-3948	-13%	16,117	144%	5	9	8
SR99	Merced	12066.7	21312.2	19893	7826.3	65%	(1,419)	-7%	9	7	9
SR132	San Joaquin	6117	4926.9	5821.8	-295.2	-5%	895	18%	10	11	10
SR152	Merced	252.9	13.1	5695.6	5442.7	2152%	5,683	43378%	18	21	11
SR12	San Joaquin	4304	4133.6	3947.3	-356.7	-8%	(186)	-5%	11	12	12
SR219	Stanislaus	1491.7	1374.8	2311.2	819.5	55%	936	68%	15	14	13
I5	Stanislaus	3531.5	6070.1	2228.9	-1302.6	-37%	(3,841)	-63%	12	10	14
SR108	Tuolumne	2812.1	647.2	1601.9	-1210.2	-43%	955	148%	13	15	15
SR165	Merced	425.4	1856.1	951.4	526	124%	(905)	-49%	17	13	16
I5	Merced	2026.9	210.6	545.1	-1481.8	-73%	335	159%	14	19	17
SR16	Amador	834.2	295.6	199.7	-634.5	-76%	(96)	-32%	16	17	18
SR120	Tuolumne	1.9	342.3	166.4	164.5	8658%	(176)	-51%	24	16	19
SR49	Mariposa	63.8	51.4	90.2	26.4	41%	39	75%	20	20	20
SR49	Tuolumne	67.2	12.6	87.6	20.4	30%	75	595%	19	22	21
SR88	Amador	15.8	0	16	0.2	1%	16		22		22
SR104	Amador	3.7	246.3	0	-3.7	-100%	(246)	-100%	23	18	
SR124	Amador	25.3	0.1	0	-25.3	-100%	(0)	-100%	21	23	
TOTALS		399,364	693,597	810,270	410,906	102.9%	116,673	16.8%			

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