

District 10 Mobility Performance Report

2022 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

February 6, 2023
: Jaime Q. Quesada

District 10 Mobility Performance Report

2022 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 554 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 1.9 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was a 14.3 percent total delay decrease in 35 mph quarterly delay and 9.3 percent

total delay decrease in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 8,216 VHD at 35 mph and 27,551 VHD at 60 mph. Compared to the same quarter the year before, there was a 7.9% percent decrease in 35 mph average weekday quarterly delay and 4.9 percent decrease in 60 mph average weekday quarterly delay. The overall reduction in delay numbers at 35 mph and 60 mph can be attributed to the fact that construction operations on I5 and SR 99 have for the most part been completed and that the I5 HOV Lane and SR 99 Ramp Meters are reducing friction through the central region of District 10. It is expected that the first quarter of 2023 will continue the same trend of small overall change in delay numbers because traffic flows have balanced out in post COVID-19 District 10.

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	1.69	0.761	37.74	-121.54	56	2.36	76,983	10,185
SJ	PM	SR99-S	238.76	2.971	37.76	-121.15	56	2.64	41,697	8,875
SJ	PM	SR99-S	236.56	0.776	37.74	-121.12	59	2.38	39,695	10,490
STA	PM	SR99-S	227.83	R16.799	37.65	-121.02	52	1.53	20,075	7,530
SJ	PM	SR120-E	0.42	R0.914	37.79	-121.30	61	1.29	9,943	8,630
SJ	PM	I205-E	9.44	R8.51	37.76	-121.41	59	1.14	8,284	5,555
SJ	PM	I205-E	12.87	R11.94	37.77	-121.34	42	1.80	7,750	3,175
SJ	PM	I205-E	10.22	R9.29	37.76	-121.39	35	1.94	6,760	2,175
SJ	PM	I5-N	468.70	R23.21	37.91	-121.29	38	1.84	6,376	2,430
STA	PM	SR99-N	226.51	R15.454	37.63	-121.00	61	0.40	6,284	9,245

SUMMARY TABLE FOR THE 2022 Q4 REPORT

The following District 10 projects are currently being constructed or are scheduled for construction effective February 2023. 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 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911

Convert 4 lane expressway to 6 lane freeway

Approve Construction Contract Date – Inactive

End Project – Inactive

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 2023

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 2023

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 2027

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 2027

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 2027

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 2022 Q4 Quarterly Mobility Statistics.

2022 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>2021</td><td>1.92</td></tr> <tr><td>2022</td><td>1.91</td></tr> </table>	Year	Q4	2021	1.92	2022	1.91	Over one year ago	Over last quarter
		Year	Q4						
		2021	1.92						
2022	1.91								
-0.3%	-5.3%								
↓	↓								
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>2021</td><td>645.9</td></tr> <tr><td>2022</td><td>553.7</td></tr> </table>	Year	Q4	2021	645.9	2022	553.7	Over one year ago	Over last quarter
		Year	Q4						
		2021	645.9						
2022	553.7								
-14.3%	-1.3%								
↓	↓								
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>2021</td><td>8,919</td></tr> <tr><td>2022</td><td>8,216</td></tr> </table>	Year	Q4	2021	8,919	2022	8,216	Over one year ago	Over last quarter
		Year	Q4						
		2021	8,919						
2022	8,216								
-7.9%	3%								
↓	↑								
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>2021</td><td>2.10</td></tr> <tr><td>2022</td><td>1.90</td></tr> </table>	Year	Q4	2021	2.10	2022	1.90	Over one year ago	Over last quarter
		Year	Q4						
		2021	2.10						
2022	1.90								
-9.3%	-7.3%								
↓	↓								
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>2021</td><td>29</td></tr> <tr><td>2022</td><td>28</td></tr> </table>	Year	Q4	2021	29	2022	28	Over one year ago	Over last quarter
		Year	Q4						
		2021	29						
2022	28								
-4.9%	-2.3%								
↓	↓								

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

2022 Q4 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		<p>Largest Magnitude Decrease over one year ago</p> <p>Thursday -10.6% </p> <p>Largest Magnitude Increase over one year ago</p> <p>Friday 1.2% </p>	<p>Largest Magnitude Decrease over last quarter</p> <p>Monday -21.4% </p> <p>Largest Magnitude Increase over last quarter</p> <p>Thursday 20.2% </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>5 PM -24.9% </p> <p>Largest Magnitude Weekday Increase over one year ago</p> <p>5 AM 33% </p>	<p>Largest Magnitude Weekday Decrease over last quarter</p> <p>3 PM -14.1% </p> <p>Largest Magnitude Weekday Increase over last quarter</p> <p>1 PM 39.9% </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>4 PM -48% </p> <p>Largest Magnitude Saturday Increase over one year ago</p> <p>10 PM 27.7% </p>	<p>Largest Magnitude Saturday Decrease over last quarter</p> <p>1 PM -38.6% </p> <p>Largest Magnitude Saturday Increase over last quarter</p> <p>6 PM 372.9% </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>12 PM -75.2% </p> <p>Largest Magnitude Sun./Holiday Increase over one year ago</p> <p>8 PM 58.7% </p>	<p>Largest Magnitude Sun./Holiday Decrease over last quarter</p> <p>12 PM -64.9% </p> <p>Largest Magnitude Sun./Holiday Increase over last quarter</p> <p>6 PM 24.4% </p>

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2022 Q4 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 -16.8%	San Joaquin -4.8%
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 -16.2%	PM Peak -10.1%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		8%	10%
		Change in Bad over one year ago	Change in Bad over last quarter
		0%	-6%

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**2022 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 2022 Q4-2021 Q4		Difference 2022 Q4-2022 Q3		Rank		
		2021 Q4	2022 Q3	2022 Q4	Absolute	Percentage	Absolute	Percentage	2021 Q4	2022 Q3	2022 Q4
I205	San Joaquin	328,591	176,581	328,591	0	0.0%	152,010	86.1%	1	1	1
SR99	Stanislaus	121,584	99,395	121,584	0	0.0%	22,189	22.3%	2	3	2
SR99	San Joaquin	99,891	103,793	99,891	0	0.0%	-3,902	-3.8%	3	2	3
I5	San Joaquin	68,029	47,971	68,029	0	0.0%	20,058	41.8%	4	4	4
SR120	San Joaquin	57,636	34,185	57,636	0	0.0%	23,452	68.6%	5	5	5
SR4	San Joaquin	32,575	17,719	32,575	0	0.0%	14,855	83.8%	6	7	6
SR132	Stanislaus	31,110	30,182	31,110	0	0.0%	928	3.1%	7	6	7
I580	San Joaquin	27,297	11,227	27,297	0	0.0%	16,070	143.1%	8	9	8
SR99	Merced	19,893	8,029	19,893	0	0.0%	11,864	147.8%	9	10	9
SR132	San Joaquin	5,822	4,510	5,822	0	0.0%	1,312	29.1%	10	12	10
SR152	Merced	5,696	1,803	5,696	0	0.0%	3,893	215.9%	11	15	11
SR12	San Joaquin	3,947	5,468	3,947	0	0.0%	-1,521	-27.8%	12	11	12
SR219	Stanislaus	2,311	1,876	2,311	0	0.0%	435	23.2%	13	14	13
I5	Stanislaus	2,229	11,999	2,229	0	0.0%	-9,771	-81.4%	14	8	14
SR108	Tuolumne	1,602	783	1,602	0	0.0%	819	104.7%	15	17	15
SR165	Merced	951	3,773	951	0	0.0%	-2,821	-74.8%	16	13	16
I5	Merced	545	1,013	545	0	0.0%	-468	-46.2%	17	16	17
SR16	Amador	200	116	200	0	0.0%	84	72.6%	18	19	18
SR120	Tuolumne	166	367	166	0	0.0%	-200	-54.6%	19	18	19
SR49	Mariposa	90	44	90	0	0.0%	46	103.6%	20	20	20
SR49	Tuolumne	88	1	88	0	0.0%	87	12414.3%	21	25	21
SR88	Amador	16	0	16	0	0.0%	16	5233.3%	22	26	22
SR104	Amador	0	2	0	0		-2	-100.0%		22	
SR124	Amador	0	1	0	0		-1	-100.0%		24	
SR140	Merced	0	1	0	0		-1	-100.0%		23	
SR88	San Joaquin	0	5	0	0		-5	-100.0%		21	
TOTALS		810,270	560,843	810,270	0	0.0%	249,427	44.5%			

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