

# District 12 Mobility Performance Report

2023 4<sup>th</sup> Quarter

**DEPARTMENT OF TRANSPORTATION**

January 31, 2024

District 12 Traffic Operations Northwest

**EXECUTIVE SUMMARY****Overview**

Caltrans District 12 (Orange County) is located in southern California and is adjacent to District 7 (Los Angeles), District 8 (San Bernardino), and District 11 (San Diego). As of April 1, 2020, the total population in Orange County was 3,010,232. Orange County encompasses 794 square miles, and includes 34 cities, and 17 State highway routes. The county has 1,059 lane miles of general purpose lanes and 226 lane miles of High-Occupancy Vehicle (HOV) lanes, which is one of California's largest HOV lane networks. Orange County is the third most populous county in California, the sixth-most populous in the United States, and more populous than twenty-one U.S. states. Its county seat is Santa Ana. It is the second most densely populated county in the state.

The Mobility Performance quarterly analysis compares information from the most recent quarter and the previous 4 quarters, involving the following performance measures:

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

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 Mobility Performance Report uses congestion at two speed thresholds: delay from vehicles traveling below 35 MPH and delay from vehicles traveling

below 60 MPH. The 35 MPH limit represents severe congestion while the 60 MPH limit represents light and heavy congestion. These thresholds/limits are set by Caltrans and are based upon engineering experience and District input.

## FINDINGS

In the 4<sup>th</sup> quarter of 2023, total delay equaled to 1.7 million vehicle hours of delay (VHD) at the 35 MPH speed threshold and 5.4 million VHD at 60 MPH threshold. Compared to the previous quarter, there was a 32.4 percent increase in 35 MPH VHD and 25.3 percent increase in 60 MPH VHD.

The average weekday VHD experienced in this quarter was approximately 23 thousand VHD at 35 MPH and 73 thousand VHD at 60 MPH. Compared to the previous quarter, there was 37.4 percent increase in 35 MPH VHD and 29.8 percent increase in 60 mph VHD.

### Top 10 Bottlenecks for the 4<sup>th</sup> Quarter of 2023

Co	Shift	Fwy	Dir	Name	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
Ora	PM	SR57	N	TONNER	11.27	22	33.94	-117.88	63	1.47	56,422	16,570
Ora	PM	I405	N	BROOKHUR2	13.74	13.97	33.71	-117.96	62	1.71	44,062	12,995
Ora	AM	I5	S	MAIN 1	105.19	33	33.77	-117.87	58	1.33	40,883	10,310
Ora	PM	SR55	N	TAFT	15.78	15.8	33.82	-117.83	56	3.10	36,964	12,160
Ora	PM	SR91	E	MIDPOINT	31.14	R12.762	33.86	-117.77	52	3.65	28,462	8,095
Ora	PM	SR55	N	Edinger OR MVDS	9.19	R9.19	33.72	-117.84	51	1.86	27,291	7,550
Ora	PM	I5	N	RED HILL	101.49	29.24	33.73	-117.82	63	2.21	24,057	14,025
Ora	PM	I5	N	CULVER 1	98.82	R26.56	33.71	-117.78	57	2.00	22,468	11,670
Ora	PM	SR55	N	N-O E WARNER MVDS	8.56	R8.563	33.72	-117.84	50	2.08	19,851	4,580
Ora	AM	I5	S	LA PALMA	113.17	40.98	33.85	-117.96	50	1.28	19,396	4,790

## 2023 Q4 Quarterly Mobility Statistics

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>2022</td><td>3.27</td></tr> <tr><td>2023</td><td>3.4</td></tr> <tr><td>2023</td><td>3.33</td></tr> </table>	Year	Q4	2022	3.27	2023	3.4	2023	3.33	Over one year ago	Over last quarter
		Year	Q4								
		2022	3.27								
2023	3.4										
2023	3.33										
1.9%	-1.9%										
↑	↓										
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2022</td><td>1.5</td></tr> <tr><td>2023</td><td>1.3</td></tr> <tr><td>2023</td><td>1.7</td></tr> </table>	Year	Q4	2022	1.5	2023	1.3	2023	1.7	Over one year ago	Over last quarter
		Year	Q4								
		2022	1.5								
2023	1.3										
2023	1.7										
16.6%	32.4%										
↑	↑										
Average Non-Holiday Weekday 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>2022</td><td>21</td></tr> <tr><td>2023</td><td>17</td></tr> <tr><td>2023</td><td>23</td></tr> </table>	Year	Q4	2022	21	2023	17	2023	23	Over one year ago	Over last quarter
		Year	Q4								
		2022	21								
2023	17										
2023	23										
12.3%	37.4%										
↑	↑										
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>2022</td><td>5</td></tr> <tr><td>2023</td><td>4.3</td></tr> <tr><td>2023</td><td>5.4</td></tr> </table>	Year	Q4	2022	5	2023	4.3	2023	5.4	Over one year ago	Over last quarter
		Year	Q4								
		2022	5								
2023	4.3										
2023	5.4										
8.2%	25.3%										
↑	↑										
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>2022</td><td>69</td></tr> <tr><td>2023</td><td>56</td></tr> <tr><td>2023</td><td>73</td></tr> </table>	Year	Q4	2022	69	2023	56	2023	73	Over one year ago	Over last quarter
		Year	Q4								
		2022	69								
2023	56										
2023	73										
6.3%	29.8%										
↑	↑										

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
		Wednesday 9.2% ↑	Thursday 34.7% ↑
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
		11 PM -34.4% ↓	-
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		8 AM 21.7% ↑	5 PM 28.5% ↑
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
		2 AM -67.5% ↓	11 AM -37.4% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		4 PM 54.6% ↑	5 PM 51.8% ↑
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
		11 PM -45.4% ↓	10 PM -26.7% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		5 PM 48.1% ↑	5 PM 141.5% ↑

Measure	Graph	Percentage Change	
<b>Total Vehicle Hours of Delay (VHD) by County at 35 mph</b>	<p>Hours (Millions)</p> <p>■ 2022 Q4 ■ 2023 Q3 ■ 2023 Q4</p> <p>Orange</p>	Largest Magnitude Decrease over one year ago -	Largest Magnitude Decrease over last quarter -
		Largest Magnitude Increase over one year ago Orange 16.6%	Largest Magnitude Increase over last quarter Orange 32.4%
<b>Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph</b>	<p>Miles</p> <p>■ 2022 Q4 ■ 2023 Q3 ■ 2023 Q4</p> <p>AM Peak (6 AM to 10 AM)    Off-Peak Day (10 AM to 3 PM)    PM Peak (3 PM to 7 PM)    Off-Peak Night (7 PM to 6 AM)</p>	Largest Magnitude Decrease over one year ago -	Largest Magnitude Decrease over last quarter -
		Largest Magnitude Increase over one year ago Off-Peak Day 118.6%	Largest Magnitude Increase over last quarter PM Peak 37.3%
<b>Average Number of Good and Bad Detectors</b>	<p>Number of Detectors</p> <p>■ Average of Good ■ Average of Bad</p> <p>2022 Q4    2023 Q3    2023 Q4</p>	Change in Good over one year ago -9%	Change in Good over last quarter 19%
		Change in Bad over one year ago 47%	Change in Bad over last quarter -28%

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2023 Q4-2022 Q4		Difference 2023 Q4-2023 Q3		Rank		
		2022 Q4	2023 Q3	2023 Q4	Absolute	Percentage	Absolute	Percentage	2022 Q4	2023 Q3	2023 Q4
I5	Orange	400,152	311,771	424,171	24,019	6.0%	112,401	36.1%	1	2	1
I405	Orange	259,005	352,817	395,101	136,096	52.5%	42,284	12.0%	3	1	2
SR91	Orange	323,632	189,339	335,903	12,270	3.8%	146,563	77.4%	2	4	3
SR55	Orange	183,047	226,201	218,522	35,475	19.4%	-7,678	-3.4%	5	3	4
SR57	Orange	204,941	147,799	193,305	-11,636	-5.7%	45,506	30.8%	4	5	5
SR22	Orange	56,903	22,738	78,028	21,125	37.1%	55,290	243.2%	6	6	6
I605	Orange	5,605	16,983	27,056	21,452	382.7%	10,073	59.3%	9	7	7
SR241	Orange	21,649	16,088	22,686	1,038	4.8%	6,599	41.0%	7	8	8
SR73	Orange	13,752	8,232	18,697	4,945	36.0%	10,464	127.1%	8	9	9
SR133	Orange	1,473	2,842	1,343	-130	-8.8%	-1,499	-52.7%	10	10	10
SR261	Orange	115	241	158	43	37.6%	-83	-34.5%	11	11	11
SR74	Orange	5	5	5	0	0.0%	0	0.0%	12	12	12
SR142	Orange	3	3	3	0	0.0%	0	0.0%	13	13	13
SR1	Orange	0	0	0	0		0				
<b>TOTALS</b>		<b>1,470,281</b>	<b>1,295,059</b>	<b>1,714,979</b>	<b>244,698</b>	<b>16.6%</b>	<b>419,920</b>	<b>32.4%</b>			