District 12 Mobility Performance Report

2019 Third Quarter

DISTRICT 12 MOBILITY PERFORMANCE REPORT

2019 3rd Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 12 (Orange County) is located in southern California and is neighbors with District 7 (Los Angeles), District 8 (San Bernardino), and District 11 (San Diego). As of July 2017, the total population in Orange County was 3,190,400. The jurisdictional boundaries of Orange County encompass a metropolitan area of 794 square miles, including 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:

- o   Vehicle Miles of Travel (VMT)
- o   Vehicle Hours of Delay (VHD)
- o   Lost Lane Miles (LLM)
- o   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 MPR 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 60mph 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 third quarter, total delay equaled 2.2 million VHD at the 35mph speed threshold, and 6.7 million VHD at the 60mph threshold. Compared to the same quarter the year before, there was a 10.9 percent increase in 35 mph total quarterly delay and 11.5 percent increase in 60mph total quarterly delay.

The average weekday VHD in the third quarter was 29 thousand hours VHD at 35mph, which was 7.6 percent greater than the VHD of the second quarter of 27 thousand hours of delay. While the average weekday VHD at 60mph, during the third quarter, was at 90 thousand VHD. Which was an increase of 10.2 percent from 76 thousand VHD during the second quarter of 2019.

Top 10 Bottlenecks for the 3rd Quarter of 2019

Fwy	Location	Shift	Abs PM	CA PM	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
I405-N	LOCATION 5013 NB	PM	12.892	13.122	64	3.201563	82874.6	8720
I405-N	BROOKHUR1	PM	13.51	13.74	59	3.391525	60410.4	7940
I5-N	B ST	AM	102.251	30	62	4.740323	42580.7	15240
SR55-S	MAIN	PM	6.35	6.35	29	2.8	32181.6	2825
I5-N	1ST	PM	103.051	30.8	64	0.696875	25995.7	16920
I5-S	RED ROBIN	PM	91.525	19.33	64	1.0375	21881.3	10795
I405-N	TMS 5013 NB	PM	12.892	13.122	64	1.5125	20531.1	17385
SR55-N	PAULARINO 2	PM	5.8	R5.8	50	2.7	20339.3	9935
SR55-N	TAFT	PM	15.782	15.8	59	3.532203	19418.2	10945
I5-S	S OF 22	AM	105.988	33.8	62	1.122581	18893.8	11845

Measure	Graph	Percentage Change	

		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)	Miles (Billions) 2018 Q3 3.5 2019 Q2 3.4 2019 Q3 3.3	-4.7% ⬇	-1.5% ⬇
Total Vehicle Hours of Delay (VHD) at 35 mph	Hours (Millions) 2018 Q3 1.8 2019 Q2 2 2019 Q3 2.2	20.7% ⬆	10.9% ⬆
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	Hours (Thousands) 2018 Q3 25 2019 Q2 27 2019 Q3 29	18.7% ⬆	7.6% ⬆
Total Vehicle Hours of Delay (VHD) at 60 mph	Hours (Millions) 2018 Q3 5.6 2019 Q2 6 2019 Q3 6.7	18.8% ⬆	11.5% ⬆
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	Hours (Thousands) 2018 Q3 76 2019 Q2 81 2019 Q3 90	17.9% ⬆	10.2% ⬆

Measure	Graph	Percentage Change	

Measure	Graph	Percentage Change
Average Vehicle Hours of Delay by Day of Week at 60 mph	Hours (Thousands) 2018 Q3 2019 Q2 2019 Q3	**Largest Magnitude Decrease over one year ago**: – **Largest Magnitude Decrease over last quarter**: – **Largest Magnitude Increase over one year ago**: Thursday 26.3% **Largest Magnitude Increase over last quarter**: Thursday 20.6%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays	Hours (Thousands) Weekday (2018 Q3) Weekday (2019 Q2) Weekday (2019 Q3)	**Largest Magnitude Weekday Decrease over one year ago**: 9 PM -23.4% **Largest Magnitude Weekday Decrease over last quarter**: 3 PM -3.1% **Largest Magnitude Weekday Increase over one year ago**: 8 AM 43.4% **Largest Magnitude Weekday Increase over last quarter**: 8 AM 17.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays	Hours (Thousands) Saturday (2018 Q3) Saturday (2019 Q2)	**Largest Magnitude Saturday Decrease over one year ago**: 10 AM -2.9% **Largest Magnitude Saturday Decrease over last quarter**: 2 PM -5.5% **Largest Magnitude Saturday Increase over one year ago**: 5 PM 25.7% **Largest Magnitude Saturday Increase over last quarter**: 11 AM 57.5%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays	Hours (Thousands) Sunday/Holiday (2018 Q3) Sunday/Holiday (2019 Q2) Sunday/Holiday (2019 Q3)	**Largest Magnitude Sun./Holiday Decrease over one year ago**: 10 PM -56.9% **Largest Magnitude Sun./Holiday Decrease over last quarter**: 6 AM -37.3% **Largest Magnitude Sun./Holiday Increase over one year ago**: 6 PM 174.8% **Largest Magnitude Sun./Holiday Increase over last quarter**: 4 PM 76.7%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph	Hours (Millions) ■ 2018 Q3 ■ 2019 Q2 ■ 2019 Q3 1.82 1.98 2.19 Orange	**Largest Magnitude Decrease over one year ago** – **Largest Magnitude Increase over one year ago** Orange 20.7% ⬆	**Largest Magnitude Decrease over last quarter** – **Largest Magnitude Increase over last quarter** Orange 10.9% ⬆
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	Miles 100 ■ 2018 Q3 ■ 2019 Q2 ■ 2019 Q3 75 50 25 0 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)	**Largest Magnitude Decrease over one year ago** – **Largest Magnitude Increase over one year ago** AM Peak 39.1% ⬆	**Largest Magnitude Decrease over last quarter** – **Largest Magnitude Increase over last quarter** PM Peak 13.8% ⬆
Average Number of Good and Bad Detectors	Number of Detectors 7,500 ■ Average of Good ■ Average of Bad 5,000 1,589 1,038 783 2,500 4,179 4,484 4,447 0 2018 Q3 2019 Q2 2019 Q3	**Change in Good over one year ago** 6% ⬆ **Change in Bad over one year ago** -51% ⬇	**Change in Good over last quarter** -1% ⬇ **Change in Bad over last quarter** -25% ⬇

Quarterly Mobility Statistics
District 12

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
I5	Orange	497,969	552,548	557,987	60,018	12.1%	5,439	1.0%	2	2	1
I405	Orange	596,244	552,910	536,417	-59,827	-10.0%	-16,494	-3.0%	1	1	2
SR91	Orange	253,372	293,981	334,208	80,835	31.9%	40,227	13.7%	3	3	3
SR55	Orange	157,785	206,833	304,896	147,111	93.2%	98,063	47.4%	4	4	4
SR57	Orange	49,302	137,414	190,739	141,437	286.9%	53,325	38.8%	7	5	5
SR22	Orange	107,555	90,582	105,698	-1,858	-1.7%	15,116	16.7%	5	6	6
SR73	Orange	77,723	77,867	95,162	17,439	22.4%	17,295	22.2%	6	7	7
SR241	Orange	36,706	33,931	33,745	-2,962	-8.1%	-186	-0.5%	8	8	8
I605	Orange	17,349	18,875	20,423	3,074	17.7%	1,548	8.2%	10	9	9
SR133	Orange	17,598	7,105	5,012	-12,586	-71.5%	-2,094	-29.5%	9	10	10
SR142	Orange	3,186	2,240	4,535	1,349	42.3%	2,294	102.4%	11	12	11
SR74	Orange	1,498	3,717	4,182	2,684	179.1%	465	12.5%	12	11	12
SR261	Orange	290	194	118	-172	-59.3%	-76	-39.3%	13	13	13
SR1	Orange	0	24	0	0		-24	-100.0%		14	
SR39	Orange	0	0	0	0		0				