District 12 Mobility Performance Report

2017 2nd Quarter

DISTRICT 12 MOBILITY PERFORMANCE REPORT

2017 2nd 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 2016 the total population in Orange County was 3,172,532. 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 60 MPH limit represents light and heavy congestion. These thresholds/limits are set by Caltrans and are based upon engineering experience and District input.
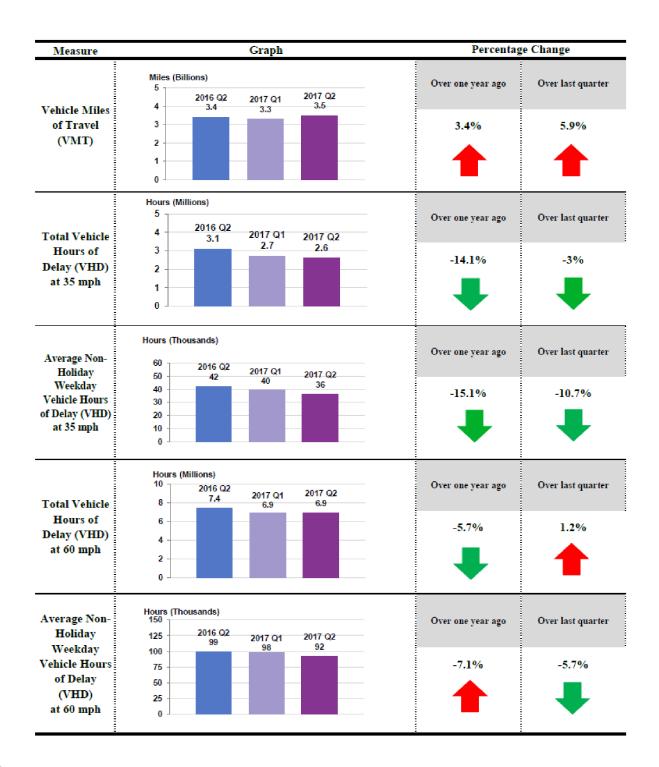
FINDINGS

In the second quarter, at 35 mph threshold, the total delay equaled to 2.6 million vehicle hours of delay (VHD) and at 60 mph threshold, the total delay was 6.9 million VHD. The average weekday VHD in this quarter was 36 thousand hours of delay at 35 MPH and 92 thousand hours of delay at 60 MPH.
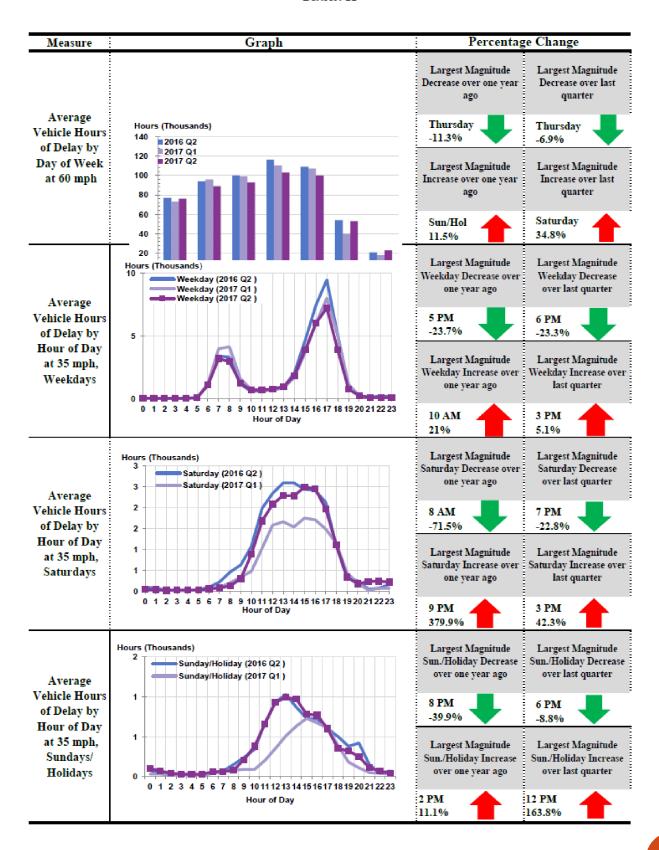
Top 10 Bottlenecks for 2nd Quarter

Fwy.	Location	Shift	Abs PM	CA PM	# Days Active	Avg. Extent (Miles)	Total Delay (veh. – hrs.)	Total Duration (mins)
SR55-N	EDINGER 2	PM	9.41	R9.41	63	3.579365	75205.6	11330
I405-N	BEACH 2	PM	16.53	16.76	61	3.84918	71986.2	8705
I405-N	BROOKHUR2	PM	13.74	13.97	52	3.788462	62464.6	6940
I405-S	WARNER	AM	14.49	14.72	64	3.748438	45273.5	10205
SR55-N	LINCOLN 2	PM	17.102	17.12	64	3.2875	29558	11960
I405-N	BEACH 1	PM	16.29	16.52	31	3.635484	29171	2385
I405-S	HARVARD	PM	5.98	6.21	63	1.368254	27583.4	10250
SR91-E	TUSTIN	PM	26.733	8.36	59	2.530508	25088.9	11310
I405-N	EUCLID	PM	12.62	12.85	48	2.733333	24364	2330
I405-N	BROOKHUR2	PM	13.74	13.97	64	4.115625	23397.4	9955

2017 Q2 Quarterly Mobility Statistics
District 12

Measure	Graph	Percentage Change	
		Over one year ago	**Over last quarter**
Vehicle Miles of Travel (VMT)	Miles (Billions) — 2016 Q2: 3.4, 2017 Q1: 3.3, 2017 Q2: 3.5	**3.4%** ▲ (red)	**5.9%** ▲ (red)
Total Vehicle Hours of Delay (VHD) at 35 mph	Hours (Millions) — 2016 Q2: 3.1, 2017 Q1: 2.7, 2017 Q2: 2.6	**-14.1%** ▼ (green)	**-3%** ▼ (green)
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	Hours (Thousands) — 2016 Q2: 42, 2017 Q1: 40, 2017 Q2: 36	**-15.1%** ▼ (green)	**-10.7%** ▼ (green)
Total Vehicle Hours of Delay (VHD) at 60 mph	Hours (Millions) — 2016 Q2: 7.4, 2017 Q1: 6.9, 2017 Q2: 6.9	**-5.7%** ▼ (green)	**1.2%** ▲ (red)
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	Hours (Thousands) — 2016 Q2: 99, 2017 Q1: 98, 2017 Q2: 92	**-7.1%** ▲ (red)	**-5.7%** ▼ (green)

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Measure	Graph	Percentage Change		
Average Vehicle Hours of Delay by Day of Week at 60 mph	Hours (Thousands) graph showing 2016 Q2, 2017 Q1, 2017 Q2	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter	
		Thursday -11.3% ⬇	**Thursday** -6.9% ⬇	
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter	
		Sun/Hol 11.5% ⬆	**Saturday** 34.8% ⬆	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays	Hours (Thousands) graph: Weekday (2016 Q2), Weekday (2017 Q1), Weekday (2017 Q2)	Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter	
		5 PM -23.7% ⬇	**6 PM** -23.3% ⬇	
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter	
		10 AM 21% ⬆	**3 PM** 5.1% ⬆	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays	Hours (Thousands) graph: Saturday (2016 Q2), Saturday (2017 Q1)	Largest Magnitude Saturday Decrease over one year ago	Largest Magnitude Saturday Decrease over last quarter	
		8 AM -71.5% ⬇	**7 PM** -22.8% ⬇	
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter	
		9 PM 379.9% ⬆	**3 PM** 42.3% ⬆	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays	Hours (Thousands) graph: Sunday/Holiday (2016 Q2), Sunday/Holiday (2017 Q1)	Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter	
		8 PM -39.9% ⬇	**6 PM** -8.8% ⬇	
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter	
		2 PM 11.1% ⬆	**12 PM** 163.8% ⬆	

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph	Hours (Millions) bar chart, 2016 Q2, 2017 Q1, 2017 Q2 — Orange	**Largest Magnitude Decrease over one year ago** Orange -14.1% ⬇ **Largest Magnitude Increase over one year ago** _	**Largest Magnitude Decrease over last quarter** Orange -3% ⬇ **Largest Magnitude Increase over last quarter** _
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	Miles bar chart, 2016 Q2, 2017 Q1, 2017 Q2 — 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** PM Peak -21% ⬇ **Largest Magnitude Increase over one year ago**	**Largest Magnitude Decrease over last quarter** AM Peak -24.8% ⬇ **Largest Magnitude Increase over last quarter**
Average Number of Good and Bad Detectors	Number of Detectors stacked bar chart, Average of Good, Average of Bad — 2016 Q2 (1,061 / 4,459), 2017 Q1 (1,331 / 4,248), 2017 Q2 (1,275 / 4,348)	**Change in Good over one year ago** -2% ⬇ **Change in Bad over one year ago** 20% ⬆	**Change in Good over last quarter** 2% ⬆ **Change in Bad over last quarter** -4% ⬇

2017 Q2 Quarterly Mobility Statistics
District 12

		Vehicle Hours of Delay at 35 mph			Difference 2017 Q2-2016 Q2		Difference 2017 Q2-2017 Q1		Rank		
Route	County	2016 Q2	2017 Q1	2017 Q2	Absolute	Percentage	Absolute	Percentage	2016 Q2	2017 Q1	2017 Q2
I405	Orange	768,650	674,078	706,079	-62,572	-8.1%	32,000	4.7%	2	1	1
SR91	Orange	419,664	373,886	495,655	75,990	18.1%	121,769	32.6%	4	4	2
I5	Orange	832,635	563,409	471,591	-361,044	-43.4%	-91,818	-16.3%	1	2	3
SR55	Orange	441,780	510,173	461,403	19,623	4.4%	-48,770	-9.6%	3	3	4
SR57	Orange	317,520	303,469	226,682	-90,838	-28.6%	-76,787	-25.3%	5	5	5
SR22	Orange	104,683	142,866	131,925	27,242	26.0%	-10,941	-7.7%	7	6	6
SR73	Orange	133,603	112,539	105,409	-28,194	-21.1%	-7,130	-6.3%	6	7	7
SR241	Orange	31,671	31,774	21,880	-9,791	-30.9%	-9,894	-31.1%	8	8	8
I605	Orange	12,891	13,954	19,763	6,872	53.3%	5,809	41.6%	9	9	9
SR133	Orange	7,782	2,216	5,468	-2,315	-29.7%	3,252	146.7%	11	10	10
SR261	Orange	10,390	992	885	-9,505	-91.5%	-106	-10.7%	10	11	11
SR74	Orange	27	0	41	14	50.7%	41		13		12
SR39	Orange	109	0	3	-106	-97.2%	3		12		13
SR142	Orange	0	0	0	0		0				