District 07
Mobility Performance Report

2023 First Quarter

DEPARTMENT OF TRANSPORTATION
OFFICE OF SYSTEM PERFORMANCE
DIVISION OF OPERATIONS

April 28, 2023

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2023 First Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 7, consisting of Los Angeles and Ventura counties, is part of the second-largest urban region in the United States. Los Angeles County is the most populous county in the United States with more than 10.2 million residents as of 2020. Ventura County has a population of 0.84 million.

The Quarterly Mobility Performance Report (MPR) compares information with over a year ago and over previous quarter in the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD) and Bottleneck Locations
- Lost Lane Miles Hours (equivalent lost productivity)
- Detection Health

This information is based on daily data collected, 24 hours a day, by automated vehicle detector stations deployed along the State Highway System. The Mobility Performance Report presents congestion information at two speed thresholds: delay from vehicles traveling below 60 miles per hour (mph), and delay from vehicles traveling below 35 mph. The delay at the 35 mph speed threshold represents severe congestion while delay at 60 mph speed threshold represents both light and heavy congestions. These two speed thresholds are set by Caltrans based on engineering judgement.

FINDINGS

- In this first quarter (January to March of 2023), VMT across all district 7 freeways was 8.73 billion miles, a decrease of 3.4 percent from previous quarter.
- On the contrary, delays increased in this quarter:
  - There was 25 million Vehicle Hours of Delay (VHD) at the 60-mph speed threshold, an increase of 4.6 percent over previous quarter and a decrease of 8.8 percent from a year ago.
  - Only 2.6 percent of the 25 million VHD were generated in Ventura County, and 97.4 percent were generated in Los Angeles County.
  - Similarly, a total of 9.7 million VHD occurred at the 35-mph speed threshold, an increase of 6.8 percent over the previous quarter and a decrease of 10.2 percent from a year ago.
  - About 47 percent (4.5 million VHD- at the 35-mph speed threshold) in Los Angeles County were generated from 3 freeways only, I-405 (21%), I-5 (15%), and US-10 (11%).
- These delays were equivalent to 307 Lost Lane Miles Hours (LLM)* from the freeway network during the PM Peak Period, compared to 308 LLM from previous quarter.
- The average weekday daily delay in this quarter was approximately 142,000 VHD at 35-mph speed threshold, and 350,000 VHD at 60-mph speed thresholds (10.1 percent and 8 Percent increase respectively over the previous quarter.)
- Fridays were the most congested days of the week, followed by Thursdays. Morning peak hour was at 8:00 AM. Afternoon peak hour was at 5:00 PM. The peak periods extended from 7:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM.
- Weekend's peak hour (Saturday and Sunday) was at 3:00 PM, and peak period extended between 1:00 PM and 5:00 PM.

* **Lost Lane Miles Hours (Lost Productivity):** This is the number of lane-mile-hours that are lost due to the freeway operating under congested conditions. When the freeway is in congestion - speed is below 35 mph - PeMS find the ratio between the measured flow and the capacity for this location. This drop in capacity is due to the fact that the freeway is operating in congested conditions instead of in free flow)

- By the end of the first quarter, loop detectors in good service condition account for only 32.6 percent of the total loops, while 67.4 percent of total loop detectors are nonoperational. Almost 10.6 percent of the total loops were out due to construction projects.

County	# Det	% Good	% Bad	% Construction
Los Angeles	10625	31.8	68.2	9.9
Ventura	616	46.3	53.7	23.7
Totals	**11,241**	**32.6**	**67.4**	**10.6**

- Top Ten Bottlenecks for the 2023 First Quarter:

Rank	County	Location	Shift	Fwy	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (hours)
1	Los Angeles	Garfield Ave.	PM	I5-S	127.33	10.76	33.98622	-118.13601	65	5.3	280,192	291
2	Los Angeles	Howard Hughes Pkwy	PM	I405-S	48.67	24.9	33.97654	-118.38727	61	5.0	256,423	240
3	Los Angeles	Solano Ave	PM	I110-N	25.01	25.08	34.07509	-118.23206	65	3.7	207,079	307
4	Los Angeles	Florence Ave.	PM	I605-S	11.22	R9.164	33.93521	-118.09989	65	6.2	201,837	257
5	Los Angeles	Stagg St.	PM	I405-N	66.97	43.2	34.21328	-118.47313	60	7.6	194,070	199
6	Los Angeles	National Blvd.	AM	I405-N	52.93	29.16	34.02673	-118.42981	62	5.8	177,499	195
7	Los Angeles	San Gabriel Blvd.	PM	I10-E	24.27	25.77	34.07183	-118.09196	59	4.7	163,301	243
8	Los Angeles	Adams Blvd.	AM	I110-N	20.53	20.6	34.02609	-118.27516	65	4.2	161,776	234
9	Los Angeles	Broadway	PM	US101-S	2.43	1.08	34.05686	-118.24243	62	4.7	152,438	229
10	Los Angeles	Garfield Ave.	PM	SR60-E	5.59	R5.42	34.03303	-118.13361	65	3.1	149,890	304

Project Status:

The following projects are currently being constructed or are scheduled for construction in District 7. These projects are expected to relieve traffic congestion in Los Angeles and Ventura counties.

LA 5: WIDEN AND REALIGN FREEWAY (SEGMENT 2); EA 2159U

Widen Interstate 5 by adding one High Occupancy Vehicle (HOV) lane and one or two mixed-flow lanes in each direction, reconstruction of Valley View Avenue interchange, and adjacent frontage roads in Los Angeles County, in La Mirada and Santa Fe Springs, from Artesia Blvd to North Fork Coyote Creek.

LA 5: WIDEN AND REALIGN FREEWAY, CONSTRUCT HOV LANES (SEGMENT 5); EA 21595

Widen Interstate 5 by adding one HOV lane, one or two mixed-flow lanes in each direction and upgrade the inside and outside shoulders to standard width; remove and replace Florence Avenue Overcrossing, northbound on-ramp bridge from Florence Avenue, and Orr and Day Overhead railroad bridge in Los Angeles County from north of Orr and Day Overhead to I-605/I-5 Interchange.

LA 5: WIDEN & REALIGN FREEWAY FOR HOV LANES; REALIGN METROLINK RAILROAD TRACKS; EA 1218W

Add one HOV lane in each direction in Burbank from West Magnolia Boulevard Overcrossing to 0.3 mile north of Buena Vista Street/Winona Avenue Undercrossing in Los Angeles County.

LA 10: WIDEN FREEWAY, CONSTRUCT HOV LANES; EA 1193U (Segment 3)

Construct one HOV lane in each direction along I-10 in LA County from Citrus Avenue in West Covina to SR-57 in Pomona.

TRANSPORTATION MANAGEMENT SYSTEM PROJECTS TO UPGRADE THE EXISTING COMMUNICATION SYSTEMS.

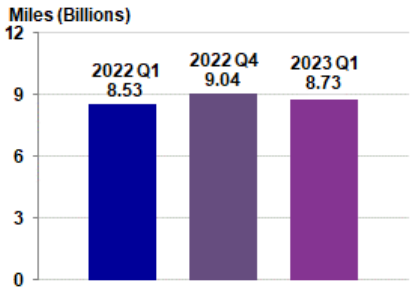
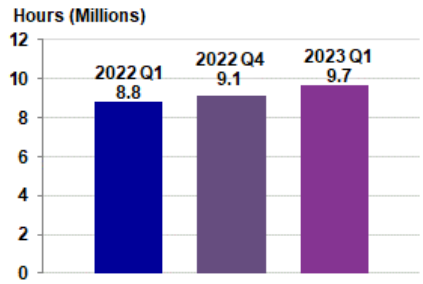
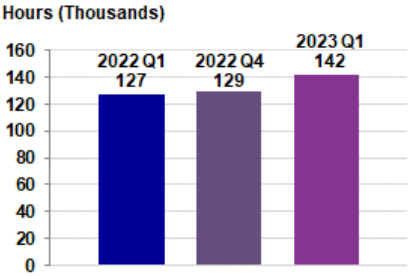
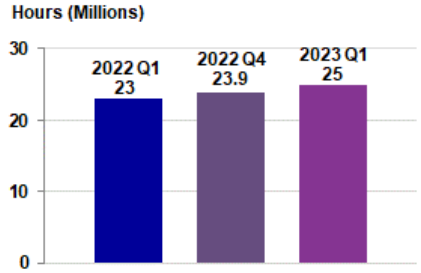
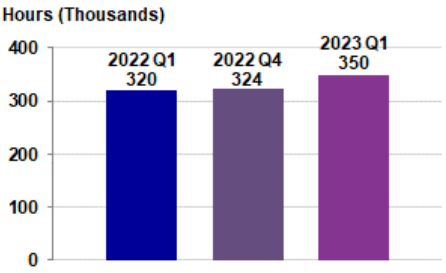
- LA 10: Repair Ramp Metering and Vehicle Detection System on various routes. EA 34050.
- LA 405: Upgrade existing Traffic Management Communication System from Ventura Blvd. Undercrossing to I-5/I-405 Separation. EA 25710.
- LA 60: Upgrade transportation management system. EA 32710

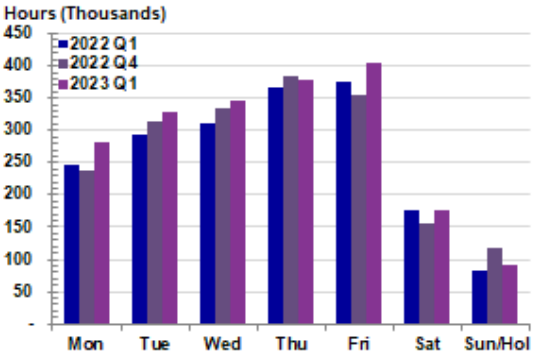
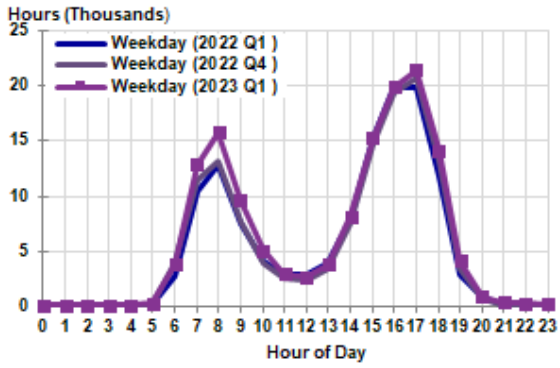
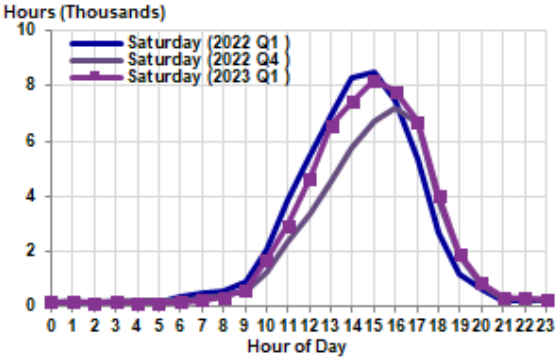
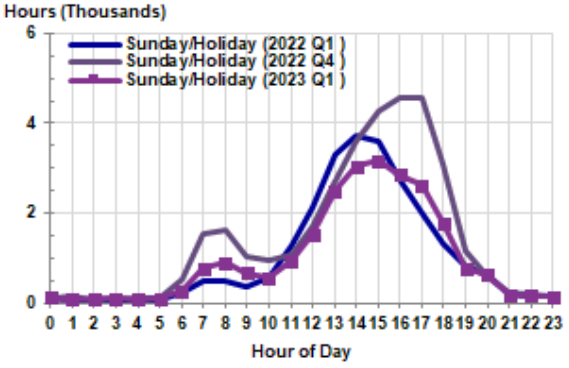
ROADSIDE SAFETY IMPROVEMENT PROJECTS

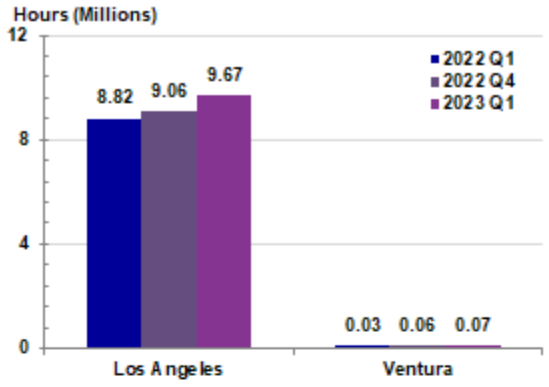
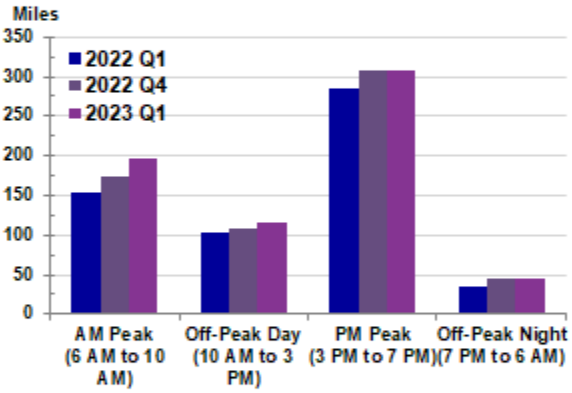
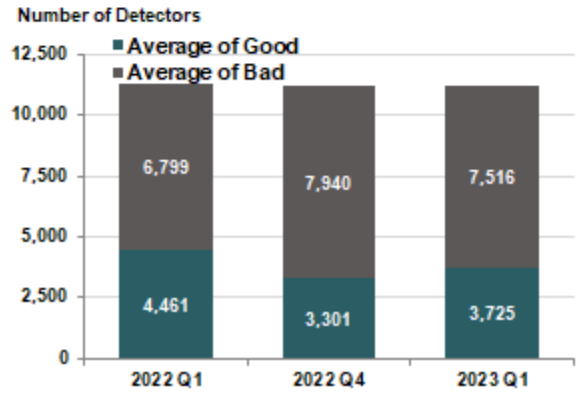
- LA 005: In Los Angeles County from rout 5/118 separation to Balboa Blvd. EA 31990.
- LA 005: In the city of Los Angeles, upgrade traffic signals and curb ramps. EA 35180
- LA 105: Install safety lighting At I-105/I-110 Interchange, EA 29740

This list of ongoing or planned projects is only a partial list, please contact CALTRANS District 7 for more details.

Quarterly Mobility Statistics

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		2.4%	-3.4%
Total Vehicle Hours of Delay (VHD) at 35 mph		10.2%	6.8%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		11.8%	10.1%
Total Vehicle Hours of Delay (VHD) at 60 mph		8.8%	4.6%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		9.6%	8%

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Saturday -0.4%	Largest Magnitude Decrease over last quarter Sun/Hol -21.2%
		Largest Magnitude Increase over one year ago Tuesday 12.4%	Largest Magnitude Increase over last quarter Friday 13.7%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 1 PM -5.5%	Largest Magnitude Weekday Decrease over last quarter 6 AM -1.6%
		Largest Magnitude Weekday Increase over one year ago 8 AM 23.8%	Largest Magnitude Weekday Increase over last quarter 8 AM 20.7%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 11 AM -23.4%	Largest Magnitude Saturday Decrease over last quarter 5 AM -55.1%
		Largest Magnitude Saturday Increase over one year ago 5 PM 24.5%	Largest Magnitude Saturday Increase over last quarter 1 PM 44.7%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 1 PM -24.3%	Largest Magnitude Sun./Holiday Decrease over last quarter 5 PM -42.6%
		Largest Magnitude Sun./Holiday Increase over one year ago 5 PM 32.1%	Largest Magnitude Sun./Holiday Increase over last quarter 8 PM 10.1%

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 –
		Largest Magnitude Increase over one year ago Los Angeles 9.6%	Largest Magnitude Increase over last quarter Los Angeles 6.7%
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 -0.1%
		Largest Magnitude Increase over one year ago AM Peak 28.1%	Largest Magnitude Increase over last quarter AM Peak 12.5%
Average Number of Good and Bad Detectors		Change in Good over one year ago -16%	Change in Good over last quarter 13%
		Change in Bad over one year ago 11%	Change in Bad over last quarter -5%

Congestion by Route

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2023 Q1-2022 Q1		Difference 2023 Q1-2022 Q4		Rank		
		2022 Q1	2022 Q4	2023 Q1	Absolute	Percentage	Absolute	Percentage	2022 Q1	2022 Q4	2023 Q1
I–405	Los Angeles	1,921,300	1,992,660	2,054,975	133,675	7.0%	62,315	3.1%	1	1	1
I–5	Los Angeles	1,248,636	1,362,366	1,456,595	207,958	16.7%	94,228	6.9%	2	2	2
I–10	Los Angeles	1,121,749	915,810	1,050,673	-71,076	-6.3%	134,863	14.7%	3	4	3
US–101	Los Angeles	935,554	1,008,699	1,002,505	66,950	7.2%	-6,195	-0.6%	4	3	4
I–210	Los Angeles	889,507	676,826	757,090	-132,417	-14.9%	80,264	11.9%	5	5	5
I–110	Los Angeles	461,520	552,174	590,283	128,764	27.9%	38,109	6.9%	7	7	7
I–605	Los Angeles	493,900	527,760	505,863	11,964	2.4%	-21,897	-4.1%	6	8	8
I–710	Los Angeles	419,334	423,656	452,346	33,012	7.9%	28,691	6.8%	9	9	9
SR–91	Los Angeles	455,733	316,479	354,763	-100,970	-22.2%	38,285	12.1%	8	10	10
SR–14	Los Angeles	4,958	189,781	264,197	259,239	5228.8%	74,416	39.2%	19	11	11
SR–134	Los Angeles	105,044	101,007	198,213	93,169	88.7%	97,206	96.2%	12	13	12
I–105	Los Angeles	197,817	167,911	156,118	-41,699	-21.1%	-11,793	-7.0%	11	12	13
SR–118	Los Angeles	89,908	73,631	85,441	-4,466	-5.0%	11,810	16.0%	13	14	14
SR–170	Los Angeles	0	70,173	72,474	72,474		2,301	3.3%		15	15
SR–57	Los Angeles	74,569	38,494	47,045	-27,524	-36.9%	8,551	22.2%	14	17	16
US–101	Ventura	8,926	38,758	39,100	30,174	338.1%	342	0.9%	18	16	17
SR–23	Ventura	0	4,884	16,145	16,145		11,261	230.6%		20	18
SR–2	Los Angeles	11,443	19,152	15,614	4,171	36.5%	-3,538	-18.5%	16	18	19
SR–118	Ventura	12,947	13,900	13,644	697	5.4%	-256	-1.8%	15	19	20
SR–33	Ventura	3,195	3,309	3,309	113	3.5%	0	0.0%	20	21	21
SR–47	Los Angeles	1,669	1,625	1,626	-43	-2.6%	1	0.0%	21	23	22
SR–71	Los Angeles	9,362	3,204	1,223	-8,139	-86.9%	-1,981	-61.8%	17	22	23
SR–126	Los Angeles	3	5	972	969	32310.0%	968	20156.3%	22	25	24
SR–90	Los Angeles	0	24	189	189	62833.3%	165	696.6%	23	24	25
TOTALS		**8,847,437**	**9,124,366**	**9,745,584**	**898,147**	**10.2%**	**621,218**	**6.8%**			

SR-126 One separate incident on Feb 9, 2023 on the WB direction at 7:00AM at Commerce Center Drive.
SR-90 One separate incident on March 3, 2023 on the EB Direction at 7:00 PM W/O RTE 405