District 06
Mobility Performance Report

2024 Third Quarter

DEPARTMENT OF TRANSPORTATION

October 24, 2024

: D06 – Traffic Operations

2024 Third Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 6 is geographically diverse, and the second largest of the 12 Districts statewide, stretching from the southernmost part of Yosemite National Park in the north to the Mojave Desert. Also referred to as the Central Valley, District 6 encompasses Madera, Fresno, Tulare, Kings, and Kern counties. District 6 maintains and operates 476 miles of freeway and 1,554 miles of rural and urban highway. This District has the largest number of road miles in the State Highway System with 2,030 miles. Interstate 5 and State Route 99 span District 6, connecting the Central Valley to Northern and Southern California. These two routes and many others support substantial truck traffic for the agricultural base of the region.

The Mobility Performance Report (MPR) quarterly analysis compares current data with information from the same quarter of the previous year, and from the previous quarter using the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

This information is based on continuous data collected by automated vehicle detector stations deployed on urban-area freeways with recurrent congestion. The MPR presents congestion delay information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph),

and delay from vehicles traveling below 60 miles per hour (mph). The delay at the 35 miles per hour (mph) threshold represents severe congestion while delay at 60 mph represents all congestion. The criteria for speed thresholds are set by Caltrans and are based on engineering experience and District input.

FINDINGS

In the third quarter of 2024, total delay equaled approximately 315,600 vehicle hours of delay (VHD) at the 35mph speed threshold, a decrease of an approximately 13.6 percent compared to last quarter (quarter two of 2024). The average (non-holiday) weekday of vehicle hours of delay experienced in this quarter was approximately 3751 VHD (compares to 4750 VHD in last quarter) at 35mph speed threshold, a decrease of approximately 21 percent. Total delay in VHD at 60mph speed threshold was calculated at approximately 1.61 million VHD, an increase of approximately 4.4 percent compared to the previous quarter (1.55 million VHD, rounded off to 1.6 million VHD) of 2024. The average (non-holiday) weekday of vehicle hours of delay was reported as 21070 (rounded off to 21,000) VHD at 60mph speed threshold, which also slightly increases approximately 0.6 percent compare to previous quarter (20,940 VHD for 2024 Quarter 2). PEMS reports that SR 41 and SR 99 in Fresno and Kern Counties continue to show the largest congestion among five counties in the District. Vehicle Miles Traveled (VMT) was reported at an approximately 2.34 billion vehicle miles which slightly increases about 1.8 percent compared to the last quarter (2.29 billion); comparing to quarter 3 of last year (Q3 in 2023), VMT in this quarter slightly increases approximately 0.3 percent.

Overall, for this quarter, total vehicle-hour of delay at 35mph decreases approximately 13.6 percent compared to the last quarter, but the total vehicle-hour of delay at 60mph increases approximately 4.4 percent, compared to the second quarter of 2024.

For this quarter, the total number of functional detectors in the district still remains as 1861 detectors. The Performance Measure System (PEMS) reported approximately 3 percent increase in good detectors compared to the last quarter and decrease of approximately 11 percent in bad detectors compared to last quarter. The average number of good as well as bad detectors are illustrated in the graph at the end of this report.

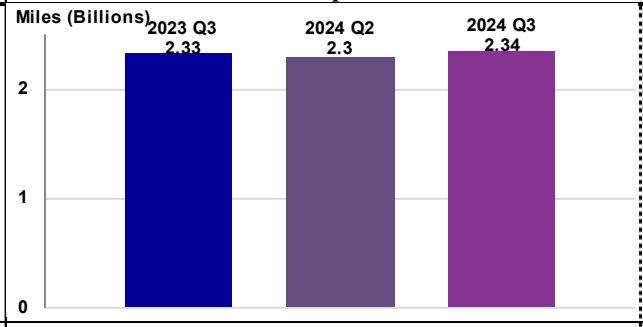
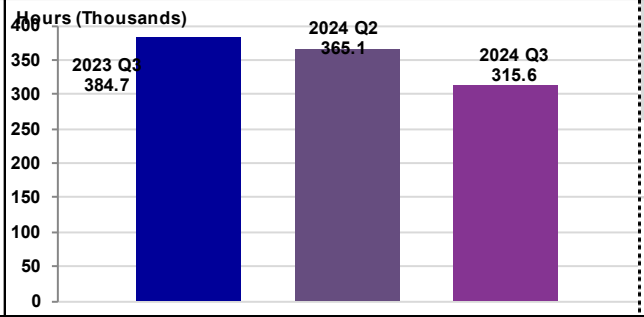
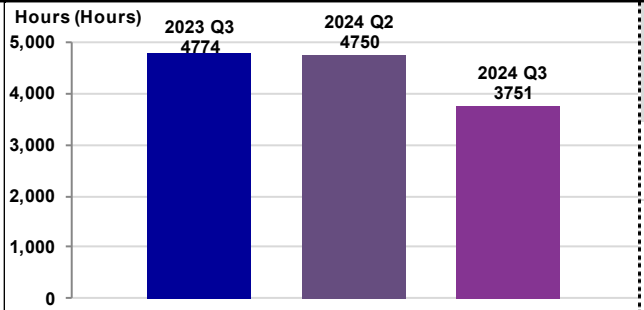
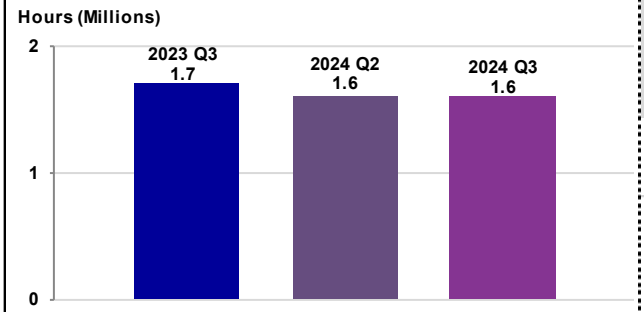
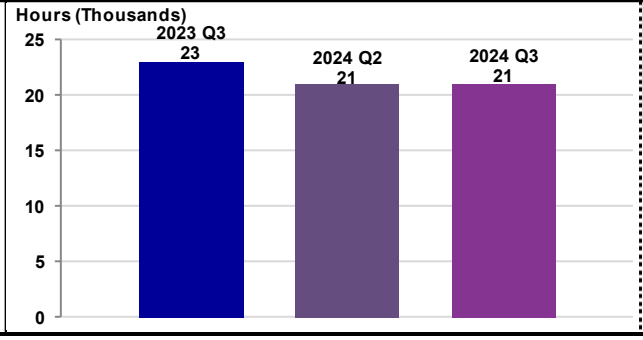
Top Ten Bottlenecks for Quarter 3 – 2024

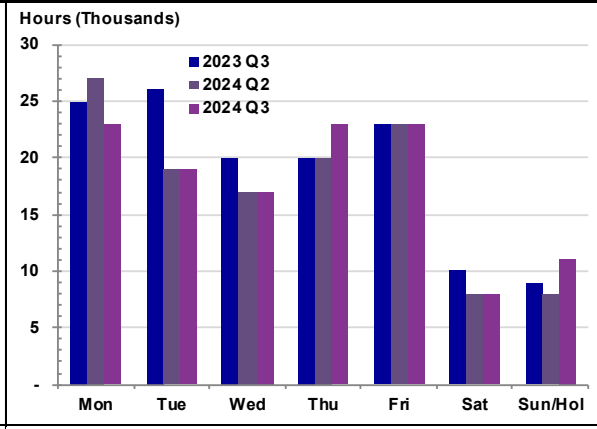
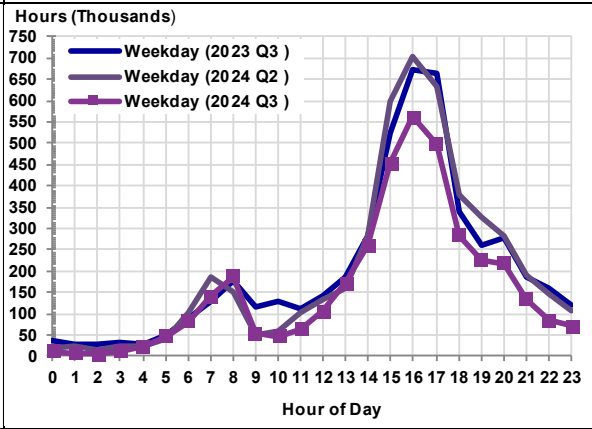
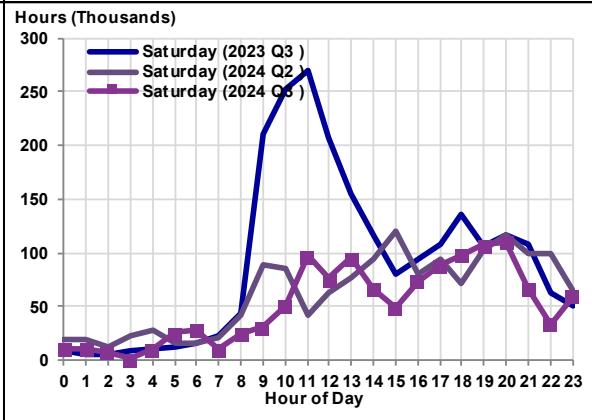
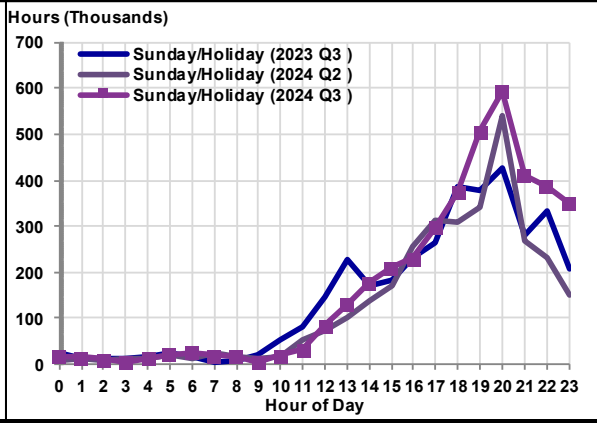
County	Fwy	Locations	Type	Shift	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (Veh-hrs)	Avg Duration (mins)
Fresno	41 N	McKinley Ave.	ML	PM	127.09	R25.3405	36.77	-119.78	52	0.86	6239.50	4295
Fresno	99 N	N. O Nielsen Ave	ML	PM	134.65	22.31	36.75	-119.82	52	0.69	6227.50	5545
Fresno	41 S	Shaw Ave.	ML	PM	130.15	R28.395	36.81	-119.79	51	1.3	11558.90	4820
Fresno	99 S	Olive Ave.	ML	PM	135.53	23.21	36.76	-119.83	44	1.08	5189.50	3875
Fresno	41 N	Clinton Ave.	ML	PM	127.63	R25.8805	36.77	-119.78	39	1.51	3993.40	1695
Fresno	99 N	Stanislaus Street	ML	PM	133.35	21.0105	36.73	-119.80	35	0.66	849.40	1560
Fresno	99 S	N. O Clinton Ave	ML	AM	137.46	25.146	36.80	-119.85	34	1.39	4082.00	1845
Fresno	99 S	Olive Ave	ML	AM	135.53	23.21	36.76	-119.83	30	0.95	1871.80	1455
Fresno	99 S	Clinton Ave.	ML	AM	136.75	24.432	36.77	-119.84	27	0.48	1609.60	1330
Fresno	99 S	Jensen Ave	ML	PM	130.79	18.474	36.71	-119.77	26	0.80	2409.20	1355

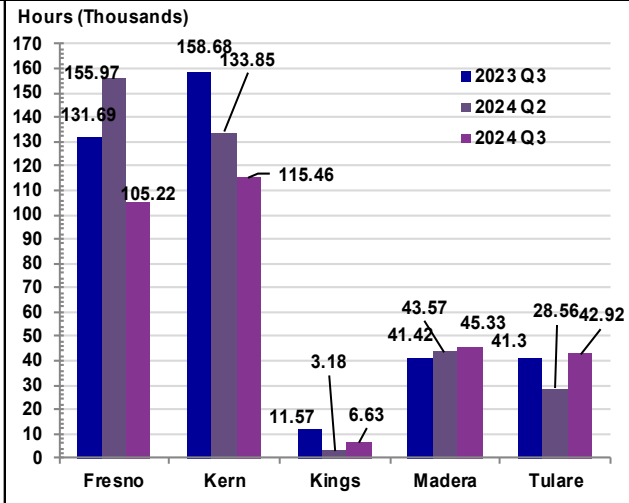
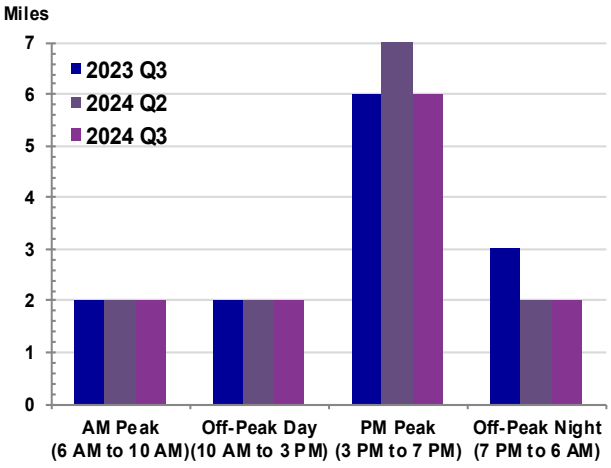
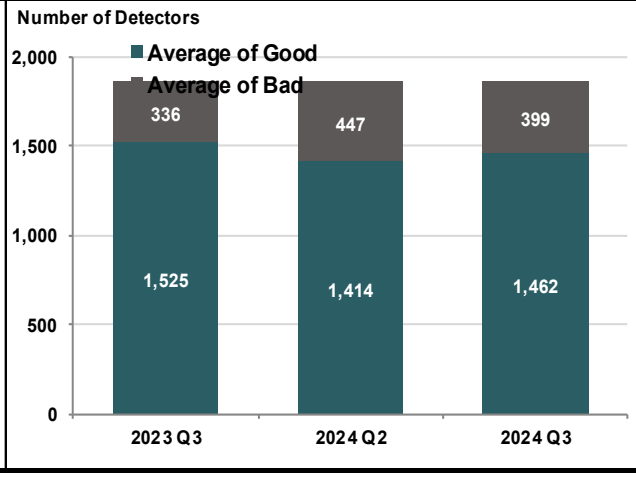
For this third quarter of 2023, PEMS reports the District's top ten bottleneck locations as shown in the above table. The majority of district's top bottleneck locations are mainly on SR 41, and SR 99 in the City of Fresno in Fresno County. The listed bottleneck locations on the table are the recurrent congestion locations during peak hours and they have been occasionally observed

in the past quarters. PEMS also reported bottlenecks on SR 99 near Avenue 9 interchange Madera County. However, the District suspected that bottleneck at this location was caused by high-speed rail related construction projects (on Avenue 9 east of the interchange) in the area. It is thus eliminated from the top ten bottleneck locations in this report. The above bottleneck locations are selected as the top ten bottleneck locations in the District for this quarter. Active bottlenecks are defined (or computed by PeMS) as delay (VHD) be at least 20 percent of all weekdays during the quarter, persisted for at least 15 minutes on average, and caused more than 100 vehicle hours of delay (VHD) per weekday.

Quarterly Mobility Statistics

Measure	Graph	Percentage Change	
Vehicle Miles of Travel (VMT)		Over one year ago	Over last quarter
		0.3%	1.8%
Total Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		-18%	-13.6%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		-21.4%	-21%
Total Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		-5.5%	4.4%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		-7.1%	0.6%

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Tuesday -26.6%	Largest Magnitude Decrease over last quarter Monday -12.9%
		Largest Magnitude Increase over one year ago Thursday 15.2%	Largest Magnitude Increase over last quarter Thursday 14.9%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 5 PM -24.8%	Largest Magnitude Weekday Decrease over last quarter 3 PM -24%
		Largest Magnitude Weekday Increase over one year ago 7 AM 7.6%	Largest Magnitude Weekday Increase over last quarter 8 AM 23.2%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 10 AM -79.8%	Largest Magnitude Saturday Decrease over last quarter 3 PM -59.1%
		Largest Magnitude Saturday Increase over one year ago 5 AM 98.7%	Largest Magnitude Saturday Increase over last quarter 11 AM 127.2%
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 -42.4%	Largest Magnitude Sun./Holiday Decrease over last quarter 4 PM -9.1%
		Largest Magnitude Sun./Holiday Increase over one year ago 8 PM 39.3%	Largest Magnitude Sun./Holiday Increase over last quarter 11 PM 133.5%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Kern -27.2%	Largest Magnitude Decrease over last quarter Fresno -32.5%
		Largest Magnitude Increase over one year ago Madera 9.4%	Largest Magnitude Increase over last quarter Tulare 50.3%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago Off-Peak Night -53.9%	Largest Magnitude Decrease over last quarter PM Peak -20.6%
		Largest Magnitude Increase over one year ago AM Peak 14.8%	Largest Magnitude Increase over last quarter AM Peak 34.7%
Average Number of Good and Bad Detectors		Change in Good over one year ago -4%	Change in Good over last quarter 3%
		Change in Bad over one year ago 19%	Change in Bad over last quarter -11%

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2024 Q3-2023 Q3		Difference 2024 Q3-2024 Q2		Rank		
Route	County	2023 Q3	2024 Q2	2024 Q3	Absolute	Percentage	Absolute	Percentage	2023 Q3	2024 Q2	2024 Q3
SR99	Kern	84007.6	95172.7	62492.9	-21514.7	-26%	(32,680)	-34%	1	1	1
I5	Kern	60490.6	37224.8	51309.8	-9180.8	-15%	14,085	38%	2	5	2
SR99	Madera	39389.7	43549.7	45199.2	5809.5	15%	1,650	4%	4	4	3
SR99	Fresno	34902.8	63484.5	38620	3717.2	11%	(24,865)	-39%	5	2	4
SR99	Tulare	33529.3	24468.3	36026.4	2497.1	7%	11,558	47%	6	7	5
I5	Fresno	21522.4	52238.6	29487.5	7965.1	37%	(22,751)	-44%	8	3	6
SR41	Fresno	44270.5	31797.2	28272.6	-15997.9	-36%	(3,525)	-11%	3	6	7
SR198	Tulare	7766.7	4094.2	6894.6	-872.1	-11%	2,800	68%	11	9	8
SR180	Fresno	25845.7	7335.4	6769.8	-19075.9	-74%	(566)	-8%	7	8	9
I5	Kings	2602.9	1387.9	3432.7	829.8	32%	2,045	147%	13	11	10
SR198	Kings	699.6	1785.8	2849.7	2150.1	307%	1,064	60%	15	10	11
SR168	Fresno	5152.4	1110.7	2069.7	-3082.7	-60%	959	86%	12	13	12
SR58	Kern	14162.8	1150	1507.3	-12655.5	-89%	357	31%	9	12	13
SR41	Kings	8267.8	7.2	349.9	-7917.9	-96%	343	4760%	10	17	14
SR178	Kern	3.3	8.9	126.8	123.5	3742%	118	1325%	17	16	15
SR152	Madera	0.2	0.5	102.1	101.9	50950%	102	20320%	18	18	16
SR41	Madera	2029.6	24	25.2	-2004.4	-99%	1	5%	14	15	17
SR46	Kern	13.5	292.1	21.8	8.3	61%	(270)	-93%	16	14	18
TOTALS		384,657	365,133	315,558	-69,099	-18.0%	-49,575	-13.6%			