

District 11 Mobility Performance Report

2023 First Quarter

DEPARTMENT OF TRANSPORTATION

April 28, 2023

: District 11- Traffic System Performance

District 11 Mobility Performance Report

2023 First Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 11 consists of both the Imperial and San Diego counties, with San Diego having a population of approximately 3,286,069 residents and Imperial County with approximately 179,851 residents. Although, District 11 is composed of these two counties, Imperial County does not report any performance data due to less population.

The Mobility Performance quarterly analysis compares traffic information with the information collected in the same quarter over a year ago. In addition, it compares traffic information with its preceding quarter. The following parameters are used to show the performance measures of the area freeways:

- Vehicle Miles of Travel (VMT))
- Vehicle Hours of Delay (VHD), Bottleneck Locations
- Lost Lane Miles (equivalent lost productivity)
- 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 presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents total congestion. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the first quarter of 2023, total delay equaled 2.3 million vehicle hours of delay (VHD) at the 35 mph speed threshold, and 5.2 million VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 35 thousand VHD at 35 mph, and 77 thousand VHD at 60 mph.

Top Ten Bottlenecks for the 2023 First Quarter:

| County | Shift | Fwy | Direction | Name | Abs PM | CA PM | Latitude | Longitude | # Days Active | Avg Extent (Miles) | Total Delay (veh-hrs) | Total Duration (mins) |
|-----------|-------|---------|-----------|-----------------------------|--------|--------|----------|-----------|---------------|--------------------|-----------------------|-----------------------|
| San Diego | PM | I805-S | S | 805 SB N-O 15 | 15.23 | 15.38 | 32.74 | -117.12 | 58 | 7.00 | 239,460.60 | 11,510.00 |
| San Diego | PM | I15-N | N | 15 NB 1.5 Mi N-O Mission Rd | 52.35 | 52.09 | 33.41 | -117.16 | 50 | 4.24 | 101,809.60 | 9,465.00 |
| San Diego | PM | SR125-S | S | Grossmont Blvd to 125 SB | 1.83 | 0 | 32.59 | -116.97 | 61 | 4.21 | 81,474.60 | 9,885.00 |
| San Diego | PM | I5-S | S | Clairemont Dr EB to 5 SB | 21.97 | 22.082 | 32.79 | -117.21 | 43 | 5.48 | 75,251.40 | 5,305.00 |
| San Diego | PM | SR78-E | E | Twin Oaks Villy Rd to 78 EB | 12.98 | 12.988 | 33.14 | -117.16 | 62 | 3.88 | 64,610.20 | 7,710.00 |
| San Diego | PM | SR52-E | E | 52 EB W-O 15 | 7.25 | 7.245 | 32.84 | -117.12 | 65 | 1.50 | 62,108.60 | 9,510.00 |
| San Diego | PM | SR163-N | N | 163 NB S-O I-8 | 2.79 | 3.34 | 32.76 | -117.16 | 65 | 2.90 | 57,505.50 | 10,725.00 |
| San Diego | PM | I5-S | S | 5th Ave to 5 SB | 16.00 | 16.11 | 32.72 | -117.16 | 58 | 2.59 | 53,610.50 | 6,080.00 |
| San Diego | PM | I15-S | S | 15 SB S-O Balboa Ave | 8.83 | 8.662 | 32.81 | -117.11 | 54 | 3.20 | 47,962.30 | 4,760.00 |
| San Diego | PM | I15-S | S | Balboa Ave WB to 15 SB | 9.37 | 9.195 | 32.82 | -117.12 | 60 | 2.58 | 44,757.90 | 6,430.00 |

Quarterly Mobility Statistics

| Measure | Graph | Percentage Change | | | | | | | | | |
|--|---|-------------------|-------|---------|------|---------|------|---------|------|-------------------|-------------------|
| Vehicle Miles of Travel (VMT) | <p>Miles (Billions)</p> <table border="1"> <tr><th>Period</th><th>Value</th></tr> <tr><td>2022 Q1</td><td>3.34</td></tr> <tr><td>2022 Q4</td><td>3.47</td></tr> <tr><td>2023 Q1</td><td>3.39</td></tr> </table> | Period | Value | 2022 Q1 | 3.34 | 2022 Q4 | 3.47 | 2023 Q1 | 3.39 | Over one year ago | Over last quarter |
| | | Period | Value | | | | | | | | |
| | | 2022 Q1 | 3.34 | | | | | | | | |
| | | 2022 Q4 | 3.47 | | | | | | | | |
| 2023 Q1 | 3.39 | | | | | | | | | | |
| 1.3% | -2.3% | | | | | | | | | | |
| ↑ | ↓ | | | | | | | | | | |
| Total Vehicle Hours of Delay (VHD) at 35 mph | <p>Hours (Millions)</p> <table border="1"> <tr><th>Period</th><th>Value</th></tr> <tr><td>2022 Q1</td><td>1.7</td></tr> <tr><td>2022 Q4</td><td>2.4</td></tr> <tr><td>2023 Q1</td><td>2.3</td></tr> </table> | Period | Value | 2022 Q1 | 1.7 | 2022 Q4 | 2.4 | 2023 Q1 | 2.3 | Over one year ago | Over last quarter |
| | | Period | Value | | | | | | | | |
| | | 2022 Q1 | 1.7 | | | | | | | | |
| | | 2022 Q4 | 2.4 | | | | | | | | |
| 2023 Q1 | 2.3 | | | | | | | | | | |
| 33.3% | -3.9% | | | | | | | | | | |
| ↓ | ↑ | | | | | | | | | | |
| Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph | <p>Hours (Thousands)</p> <table border="1"> <tr><th>Period</th><th>Value</th></tr> <tr><td>2022 Q1</td><td>24</td></tr> <tr><td>2022 Q4</td><td>36</td></tr> <tr><td>2023 Q1</td><td>35</td></tr> </table> | Period | Value | 2022 Q1 | 24 | 2022 Q4 | 36 | 2023 Q1 | 35 | Over one year ago | Over last quarter |
| | | Period | Value | | | | | | | | |
| | | 2022 Q1 | 24 | | | | | | | | |
| | | 2022 Q4 | 36 | | | | | | | | |
| 2023 Q1 | 35 | | | | | | | | | | |
| 44.6% | -2.4% | | | | | | | | | | |
| ↑ | ↓ | | | | | | | | | | |
| Total Vehicle Hours of Delay (VHD) at 60 mph | <p>Hours (Millions)</p> <table border="1"> <tr><th>Period</th><th>Value</th></tr> <tr><td>2022 Q1</td><td>4.1</td></tr> <tr><td>2022 Q4</td><td>5.1</td></tr> <tr><td>2023 Q1</td><td>5.2</td></tr> </table> | Period | Value | 2022 Q1 | 4.1 | 2022 Q4 | 5.1 | 2023 Q1 | 5.2 | Over one year ago | Over last quarter |
| | | Period | Value | | | | | | | | |
| | | 2022 Q1 | 4.1 | | | | | | | | |
| | | 2022 Q4 | 5.1 | | | | | | | | |
| 2023 Q1 | 5.2 | | | | | | | | | | |
| 25.7% | 2.4% | | | | | | | | | | |
| ↑ | ↑ | | | | | | | | | | |
| Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph | <p>Hours (Thousands)</p> <table border="1"> <tr><th>Period</th><th>Value</th></tr> <tr><td>2022 Q1</td><td>58</td></tr> <tr><td>2022 Q4</td><td>74</td></tr> <tr><td>2023 Q1</td><td>77</td></tr> </table> | Period | Value | 2022 Q1 | 58 | 2022 Q4 | 74 | 2023 Q1 | 77 | Over one year ago | Over last quarter |
| | | Period | Value | | | | | | | | |
| | | 2022 Q1 | 58 | | | | | | | | |
| | | 2022 Q4 | 74 | | | | | | | | |
| 2023 Q1 | 77 | | | | | | | | | | |
| 33% | 3.7% | | | | | | | | | | |
| ↑ | ↑ | | | | | | | | | | |

| 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 |
| | | Saturday -13.7% | Thursday -7.2% |
| 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 |
| | | 9 PM -36.6% | 5 PM -10.3% |
| 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 |
| | | 12 PM -27.4% | 5 PM -8.4% |
| 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 |
| | | 1 PM -63.3% | 4 PM -60% |
| | | Largest Magnitude Increase over one year ago | Largest Magnitude Increase over last quarter |
| | | Tuesday 53.3% | Friday 13.4% |
| | | 5 PM 50.5% | 8 AM 15.4% |
| | | 8 AM 170.3% | 1 PM 63.6% |
| | | 8 AM 213.5% | 8 PM 150.1% |

| Measure | Graph | Percentage Change | |
|--|---|---|---|
| Total Vehicle Hours of Delay (VHD) by County at 35 mph | <p>Hours (Millions)</p> <p>■ 2022 Q1 ■ 2022 Q4 ■ 2023 Q1</p> <p>San Diego</p> | Largest Magnitude Decrease over one year ago | Largest Magnitude Decrease over last quarter |
| | | - | San Diego -3.9% |
| | | Largest Magnitude Increase over one year ago | Largest Magnitude Increase over last quarter |
| | | San Diego 33.3% | - |
| Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph | <p>Miles</p> <p>■ 2022 Q1 ■ 2022 Q4 ■ 2023 Q1</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 |
| | | - | Off-Peak Night -1.4% |
| | | Largest Magnitude Increase over one year ago | Largest Magnitude Increase over last quarter |
| | | PM Peak 44.5% | AM Peak 22.2% |
| Average Number of Good and Bad Detectors | <p>Number of Detectors</p> <p>■ Average of Good ■ Average of Bad</p> <p>2022 Q1 2022 Q4 2023 Q1</p> | Change in Good over one year ago | Change in Good over last quarter |
| | | -15% | -8% |
| | | Change in Bad over one year ago | Change in Bad over last quarter |
| | | 39% | 16% |

| 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 |
| I5 | San Diego | 655,931 | 636,251 | 551,449 | -104,482 | -15.9% | -84,802 | -13.3% | 1 | 1 | 1 |
| I15 | San Diego | 274,910 | 381,677 | 469,666 | 194,756 | 70.8% | 87,989 | 23.1% | 3 | 3 | 2 |
| I805 | San Diego | 298,328 | 433,089 | 467,808 | 169,481 | 56.8% | 34,719 | 8.0% | 2 | 2 | 3 |
| SR78 | San Diego | 114,223 | 224,990 | 252,194 | 137,972 | 120.8% | 27,205 | 12.1% | 5 | 5 | 4 |
| I8 | San Diego | 81,560 | 97,485 | 153,107 | 71,547 | 87.7% | 55,623 | 57.1% | 6 | 7 | 5 |
| SR52 | San Diego | 60,783 | 105,180 | 141,512 | 80,729 | 132.8% | 36,331 | 34.5% | 7 | 6 | 6 |
| SR125 | San Diego | 146,157 | 347,304 | 96,412 | -49,745 | -34.0% | -250,892 | -72.2% | 4 | 4 | 7 |
| SR163 | San Diego | 44,851 | 78,992 | 67,492 | 22,641 | 50.5% | -11,500 | -14.6% | 8 | 8 | 8 |
| SR56 | San Diego | 24,551 | 48,769 | 60,943 | 36,392 | 148.2% | 12,174 | 25.0% | 10 | 9 | 9 |
| SR94 | San Diego | 29,356 | 46,012 | 46,138 | 16,782 | 57.2% | 126 | 0.3% | 9 | 10 | 10 |
| I905 | San Diego | 10,915 | 14,066 | 9,888 | -1,027 | -9.4% | -4,178 | -29.7% | 11 | 11 | 11 |
| SR67 | San Diego | 409 | 1,993 | 6,506 | 6,097 | 1491.0% | 4,512 | 226.4% | 14 | 13 | 12 |
| SR54 | San Diego | 1,342 | 6,499 | 4,286 | 2,944 | 219.4% | -2,213 | -34.1% | 13 | 12 | 13 |
| SR11 | San Diego | 8 | 15 | 2 | -6 | -78.8% | -14 | -89.0% | 15 | 15 | 14 |
| SR76 | San Diego | 2,433 | 332 | 1 | -2,432 | -100.0% | -331 | -99.7% | 12 | 14 | 15 |
| TOTALS | | 1,745,756 | 2,422,654 | 2,327,404 | 581,647 | 33.3% | -95,251 | -3.9% | | | |