District 12 Mobility Performance Report

2018 2nd Quarter

DEPARTMENT OF TRANSPORTATION

July 9, 2018
District 12 TMC
DISTRICT 12 MOBILITY PERFORMANCE REPORT

2018 2\textsuperscript{nd} 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. 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:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- 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, total delay equaled 2.1 million VHD at the 35 mph speed threshold, and 6.1 million VHD at the 60 mph threshold. Compared to the same quarter the year before, total delay equaled to 2.1 million VHD in 35 mph and 5.4 percent increase in 60 mph from 5.8 million to 6.1 million VHD.

The average weekday delay experienced in this quarter was approximately 29 thousand VHD at 35 mph, and 81 thousand VHD at 60 mph.

Top 10 Bottlenecks for the 2nd Quarter of 2018

<table>
<thead>
<tr>
<th>Fwy</th>
<th>Location</th>
<th>Shift</th>
<th>Abs PM</th>
<th>CA PM</th>
<th># Days Active</th>
<th>Avg Extent (Miles)</th>
<th>Total Delay (veh-hrs)</th>
<th>Total Duration (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I405-N</td>
<td>EUCLID</td>
<td>PM</td>
<td>12.62</td>
<td>12.85</td>
<td>44</td>
<td>2.381818</td>
<td>43569.9</td>
<td>5240</td>
</tr>
<tr>
<td>I405-S</td>
<td>HARVARD</td>
<td>PM</td>
<td>5.98</td>
<td>6.21</td>
<td>62</td>
<td>1.596774</td>
<td>34709.2</td>
<td>10080</td>
</tr>
<tr>
<td>SR55-S</td>
<td>17TH 1</td>
<td>AM</td>
<td>11.602</td>
<td>11.62</td>
<td>64</td>
<td>1.329688</td>
<td>34282.5</td>
<td>12135</td>
</tr>
<tr>
<td>I405-N</td>
<td>WARNER</td>
<td>PM</td>
<td>14.59</td>
<td>14.82</td>
<td>45</td>
<td>2.48</td>
<td>31443</td>
<td>5170</td>
</tr>
<tr>
<td>I405-N</td>
<td>BROOKHUR2</td>
<td>PM</td>
<td>13.74</td>
<td>13.97</td>
<td>48</td>
<td>2.445833</td>
<td>30294</td>
<td>5670</td>
</tr>
<tr>
<td>I405-N</td>
<td>HAMPShIRE</td>
<td>PM</td>
<td>11.93</td>
<td>12.16</td>
<td>40</td>
<td>1.8075</td>
<td>29962.8</td>
<td>3540</td>
</tr>
<tr>
<td>I405-N</td>
<td>BEACH 2</td>
<td>PM</td>
<td>16.53</td>
<td>16.76</td>
<td>59</td>
<td>1.245763</td>
<td>25326.9</td>
<td>9190</td>
</tr>
<tr>
<td>I5-N</td>
<td>B ST</td>
<td>PM</td>
<td>102.251</td>
<td>30</td>
<td>64</td>
<td>2.985938</td>
<td>23921.5</td>
<td>14675</td>
</tr>
<tr>
<td>I5-N</td>
<td>1ST</td>
<td>PM</td>
<td>103.051</td>
<td>30.8</td>
<td>64</td>
<td>0.648438</td>
<td>23796.4</td>
<td>16195</td>
</tr>
<tr>
<td>I5-S</td>
<td>S OF 22</td>
<td>AM</td>
<td>105.988</td>
<td>33.8</td>
<td>64</td>
<td>1.028125</td>
<td>19908.4</td>
<td>10940</td>
</tr>
</tbody>
</table>
### Quarterly Mobility Statistics

#### 2018 Q2

Quarterly Mobility Statistics  
District 12

<table>
<thead>
<tr>
<th>Measure</th>
<th>Graph</th>
<th>Percentage Change</th>
</tr>
</thead>
</table>
| **Vehicle Miles of Travel (VMT)**            | ![Graph](image1.png) | **Over one year ago**  
3.4%  
**Over last quarter**  
5.9% |
| **Total Vehicle Hours of Delay (VHD) at 35 mph** | ![Graph](image2.png) | **Over one year ago**  
-19.3%  
**Over last quarter**  
3.2% |
| **Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph** | ![Graph](image3.png) | **Over one year ago**  
-19.9%  
**Over last quarter**  
-2.6% |
| **Total Vehicle Hours of Delay (VHD) at 60 mph** | ![Graph](image4.png) | **Over one year ago**  
-11.9%  
**Over last quarter**  
5.4% |
| **Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph** | ![Graph](image5.png) | **Over one year ago**  
-12.2%  
**Over last quarter**  
1% |
### 2018 Q2 Quarterly Mobility Statistics District 12

#### Average Vehicle Hours of Delay by Day of Week at 60 mph

<table>
<thead>
<tr>
<th>Measure</th>
<th>Graph</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Vehicle Hours of Delay by Day of Week at 60 mph</td>
<td><img src="chart1.png" alt="Bar Chart" /></td>
<td>Largest Magnitude Decrease over one year ago: Thursday -14.3%&lt;br&gt;Largest Magnitude Increase over one year ago: Saturday 23.4%&lt;br&gt;Monday -11.4%&lt;br&gt;</td>
</tr>
</tbody>
</table>

#### Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays

<table>
<thead>
<tr>
<th>Measure</th>
<th>Graph</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays</td>
<td><img src="chart2.png" alt="Line Chart" /></td>
<td>Largest Magnitude Weekday Decrease over one year ago: 5 PM -17.7%&lt;br&gt;Largest Magnitude Weekday Increase over one year ago: 5 AM 39.4%&lt;br&gt;8 AM 22.5%&lt;br&gt;</td>
</tr>
</tbody>
</table>

#### Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays

<table>
<thead>
<tr>
<th>Measure</th>
<th>Graph</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays</td>
<td><img src="chart3.png" alt="Line Chart" /></td>
<td>Largest Magnitude Saturday Decrease over one year ago: 1 PM -22.1%&lt;br&gt;Largest Magnitude Saturday Increase over one year ago: 6 AM 141.8%&lt;br&gt;4 PM 65.1%&lt;br&gt;</td>
</tr>
</tbody>
</table>

#### Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays

<table>
<thead>
<tr>
<th>Measure</th>
<th>Graph</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</td>
<td><img src="chart4.png" alt="Line Chart" /></td>
<td>Largest Magnitude Sun./Holiday Decrease over one year ago: 12 PM -21.7%&lt;br&gt;Largest Magnitude Sun./Holiday Increase over one year ago: 8 AM 35.9%&lt;br&gt;12 PM 81.4%&lt;br&gt;</td>
</tr>
</tbody>
</table>
# 2018 Q2 Quarterly Mobility Statistics
## District 12

<table>
<thead>
<tr>
<th>Measure</th>
<th>Graph</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Vehicle Hours of Delay (VHD)</strong> by County at 35 mph</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td><strong>Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph</strong></td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td><strong>Average Number of Good and Bad Detectors</strong></td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
</tbody>
</table>
### Congestion by Route

<table>
<thead>
<tr>
<th>Route</th>
<th>County</th>
<th>Vehicle Hours of Delay at 35 mph</th>
<th>Difference 2018 Q2-2018 Q1</th>
<th>Difference 2018 Q2-2017 Q2</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2405</td>
<td>Orange</td>
<td>706,079</td>
<td>-119,130</td>
<td>-16.9%</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>Orange</td>
<td>471,591</td>
<td>-69,419</td>
<td>15.4%</td>
<td>3</td>
</tr>
<tr>
<td>SR91</td>
<td>Orange</td>
<td>495,655</td>
<td>-58,591</td>
<td>27.0%</td>
<td>2</td>
</tr>
<tr>
<td>SR55</td>
<td>Orange</td>
<td>461,403</td>
<td>-9,777</td>
<td>-2.4%</td>
<td>4</td>
</tr>
<tr>
<td>SR57</td>
<td>Orange</td>
<td>226,682</td>
<td>-76,883</td>
<td>-16.6%</td>
<td>1</td>
</tr>
<tr>
<td>I5</td>
<td>Orange</td>
<td>471,591</td>
<td>69,419</td>
<td>15.4%</td>
<td>3</td>
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<td>Orange</td>
<td>495,655</td>
<td>-58,591</td>
<td>27.0%</td>
<td>2</td>
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<td>-9,777</td>
<td>-2.4%</td>
<td>4</td>
</tr>
<tr>
<td>SR57</td>
<td>Orange</td>
<td>226,682</td>
<td>-76,883</td>
<td>-16.6%</td>
<td>1</td>
</tr>
<tr>
<td>SR22</td>
<td>Orange</td>
<td>124,910</td>
<td>101,966</td>
<td>83.3%</td>
<td>1</td>
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<tr>
<td>SR33</td>
<td>Orange</td>
<td>105,409</td>
<td>-10,217</td>
<td>-9.0%</td>
<td>7</td>
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<tr>
<td>SR44</td>
<td>Orange</td>
<td>12,899</td>
<td>20,789</td>
<td>164.6%</td>
<td>8</td>
</tr>
<tr>
<td>SR65</td>
<td>Orange</td>
<td>18,489</td>
<td>-2,263</td>
<td>-11.4%</td>
<td>9</td>
</tr>
<tr>
<td>SR133</td>
<td>Orange</td>
<td>18,199</td>
<td>10,823</td>
<td>107.9%</td>
<td>10</td>
</tr>
<tr>
<td>SR42</td>
<td>Orange</td>
<td>0</td>
<td>10,780</td>
<td>526.5%</td>
<td>11</td>
</tr>
<tr>
<td>SR34</td>
<td>Orange</td>
<td>41</td>
<td>644</td>
<td>158.3%</td>
<td>12</td>
</tr>
<tr>
<td>SR261</td>
<td>Orange</td>
<td>1,015</td>
<td>313</td>
<td>-44.6%</td>
<td>13</td>
</tr>
<tr>
<td>SR1</td>
<td>Orange</td>
<td>0</td>
<td>-7</td>
<td>-100.0%</td>
<td>14</td>
</tr>
<tr>
<td>SR39</td>
<td>Orange</td>
<td>5</td>
<td>-3</td>
<td>-100.0%</td>
<td>13</td>
</tr>
</tbody>
</table>