Freeway System Challenges and Opportunities

As the geographic center of the Bay Area, Alameda County’s extensive freeway network has experienced consistent congestion due to population and job growth, housing demand and an increasing number of commuters. Strategic improvements are underway or planned, which present the opportunity to increase overall network throughput and promote the use of alternative transportation modes.

CHALLENGES

As the region’s freeway network hub, Alameda County experiences a disproportionately high share of the region’s congestion.

Alameda County freeways carry a high number of commuters traveling either to, from or through Alameda County. Although only 21 percent of the Bay Area’s population lives in Alameda County, it hosts one in three commutes regionwide.

The absolute number of drive-alone trips and vehicle miles traveled are increasing.

Congestion across more of the network remains severe, despite recent incremental improvements.

OPPORTUNITIES

Using local sales tax dollars and other regional, state and federal funds, Alameda CTC funds operational improvements and limited strategic improvement projects on the county’s freeways, many of which are already underway, and more are planned. Many of these projects are on major freight corridors and benefit goods movement.

Working with partners at all levels, Alameda CTC is maximizing existing capacity. As most freeways are built out, and the options for improvements are limited, Alameda CTC is working with partners at all levels of government to explore opportunities to maximize use of existing capacity through improved operations and to promote use of alternative modes on Alameda County’s major local roads.

Although the absolute number of commuters who drive alone has increased since 2000, the drive-alone mode share has fallen almost 10 percent since that time.

Increasing the number of managed lanes facilitates carpool expansion, offers excess capacity at the appropriate marginal cost, and provides the opportunity to reinvest revenues into the corridors.

Data sources:
- 2016 Level of Service Monitoring Report, 2016 Performance Report, Alameda CTC.
- Traffic volumes for managed lanes available at: https://www.alamedactc.org/traffic-monitoring/managed-lanes

Alameda County’s Freeway System Connects the Region

As the geographic center of the San Francisco Bay Area, Alameda County connects the region with an extensive freeway network of almost 140 miles on six Interstates and four state routes. These freeways provide critical mobility for millions of commuters each day, and they are some of the most heavily-used and congested roads in the entire Bay Area.

Alameda County’s freeways also facilitate the movement of more goods than any other county in the Bay Area. The freeway network includes 96 miles of managed lanes (carpool and express lanes), which extend the overall capacity of the network.

IMPORTANCE OF FREEWAYS

Alameda County’s freeways are key regional and interregional connectors.

- The freeway network carries goods between the Port of Oakland, the region, and domestic markets beyond.
- The county’s freeways carry the most pass-through trips in the region (e.g., trips with origins and destinations outside Alameda County).

MANAGED LANES

Alameda County has express lanes on I-580, I-680, with more under construction on I-880 as well. These lanes are free for carpools, buses and motorcycles, and available to those driving alone for a fee based on distance and demand at peak hours. Express lanes in Alameda County have been shown to improve overall performance where after studies have been conducted.

Alameda County has another 47 miles of carpool lanes. These lanes are free to high-occupancy vehicles (at least two or three persons per vehicle) and off-limits to single-occupancy vehicles during peak hours.
### Freeway System Performance

**After peaking in 2016, congestion declined slightly in 2018.** Average freeway speeds stayed stable—improving 1.2 mph—and the number of congested freeway-miles decreased. Despite the recent incremental improvement, freeways remain far more congested today than they were a decade ago, and commute durations have continued to rise.

**Freeway speeds increased slightly in 2018,** after a multi-year decline, but remain below recession-era highs.

While average speeds improved, about one-quarter of the freeway network is still congested during the afternoon peak-period. This consistent congestion can be attributed to a growing population, a booming economy, and related job growth.

#### Commute times rising.

Commutes have continued to get longer, even as freeway speeds have stabilized in Alameda County. Compared to 2010, there are also four times as many supercommuters (90+ minutes).

**Total collisions and fatal and severe collisions continue to rise.** Total collisions and fatal and severe collisions have both increased by roughly one-third since the end of the recession.

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**CONGESTED FREEWAY SEGMENTS IN ALAMEDA COUNTY IN 2018**

<table>
<thead>
<tr>
<th>Freeway</th>
<th>Direction</th>
<th>Freeway Length</th>
<th>Express Lanes</th>
<th>Peak Daily Vehicle Delay</th>
<th>AM Congested Miles**</th>
<th>PM Congested Miles**</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-80</td>
<td>N/S</td>
<td>8.0</td>
<td>–</td>
<td>275,000 vehicles at SR-13</td>
<td>11,519</td>
<td>6.0</td>
</tr>
<tr>
<td>I-238</td>
<td>E/W</td>
<td>2.5</td>
<td>–</td>
<td>155,000 vehicles at I-580</td>
<td>94</td>
<td>2.5</td>
</tr>
<tr>
<td>I-580</td>
<td>E/W</td>
<td>46.7</td>
<td>yes</td>
<td>254,000 vehicles at SR-13, Oakland</td>
<td>9,174</td>
<td>8.1</td>
</tr>
<tr>
<td>I-680</td>
<td>N/S</td>
<td>21.3</td>
<td>yes</td>
<td>172,000 vehicles at I-580, Pleasanton</td>
<td>7,730</td>
<td>4.0</td>
</tr>
<tr>
<td>I-880</td>
<td>N/S</td>
<td>35.3</td>
<td>–</td>
<td>277,000 vehicles at A Street, Hayward</td>
<td>19,456</td>
<td>19.2</td>
</tr>
<tr>
<td>I-980</td>
<td>E/W</td>
<td>2.5</td>
<td>–</td>
<td>134,000 vehicles at I-880, Oakland</td>
<td>60</td>
<td>–</td>
</tr>
<tr>
<td>SR-13</td>
<td>N/S</td>
<td>5.9</td>
<td>–</td>
<td>83,000 vehicles at Broadway Terrace</td>
<td>640</td>
<td>1.1</td>
</tr>
<tr>
<td>SR-24</td>
<td>E/W</td>
<td>3.5</td>
<td>–</td>
<td>173,000 vehicles at Caldecott Tunnel</td>
<td>2,269</td>
<td>–</td>
</tr>
<tr>
<td>SR-84</td>
<td>E/W</td>
<td>6.3</td>
<td>–</td>
<td>76,000 vehicles at I-880</td>
<td>180</td>
<td>5.1</td>
</tr>
<tr>
<td>SR-92</td>
<td>E/W</td>
<td>8.4</td>
<td>–</td>
<td>125,000 vehicles at I-880, Hayward</td>
<td>1,400</td>
<td>1.9</td>
</tr>
</tbody>
</table>

*Congestion miles. **Express lane miles of US 4 with average speeds below 20 mph.*