Downtown Transportation Plan
&
Downtown Livability Initiative

Transportation Analyses Review

TRANSPORTATION COMMISSION
FEBRUARY 23, 2017

Shuming Yan, PE
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Background

• DTP analysis was completed in 2013
• DLI analysis was completed in 2015
• DLI modeling was done to compare transportation performance relative to DTP
DTP 2030 Scenarios

• **Baseline Scenario included:**
  • 2013-2019 CIP projects
  • 2013-2024 TFP projects
  • ST and WSDOT funded projects

• **Build Scenario included additional, “reasonably foreseeable” projects:**
  • SR 520: 124th Avenue NE interchange completion
  • SR 520: Eastbound slip ramp under 148th Avenue NE to the Overlake Village area in Redmond
  • I-405: Southbound braid from SR 520 to NE 10th Street
  • I-405: One auxiliary lane (collector/distributor lane) each direction, between SE 8th Street and SR 520
DLI Analysis: Purpose and Assumptions

• To compare DLI’s transportation performance relative to DTP

• To enable “apples to apples” comparison, the DLI assumed:
  • Same network as DTP “Build” Scenario
  • Same total employment and population as DTP, but with slightly different distribution
Results Comparison (2030 PM Peak Period)

Compared to the DTP scenario, the DLI scenario would improve overall traffic operations in the Downtown area:

<table>
<thead>
<tr>
<th>Downtown</th>
<th>2030 DTP Scenario</th>
<th>2030 DLI Scenario</th>
<th>Difference</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly Volume</strong></td>
<td>118,000</td>
<td>117,000</td>
<td>-1000</td>
<td>-0.8%</td>
</tr>
<tr>
<td><strong>Delay/Vehicle (sec)</strong></td>
<td>49</td>
<td>45</td>
<td>-4</td>
<td>-8.0%</td>
</tr>
<tr>
<td><strong>Total Vehicle Delay (hours)</strong></td>
<td>1611</td>
<td>1,472</td>
<td>-139</td>
<td>-8.6%</td>
</tr>
</tbody>
</table>
Questions and Discussion

Thank You!

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425-452-7858
Backup slides
DLI Redistributed DTP Growth in Downtown

Source: Planning and Community Development Department, City of Bellevue (March, 2015)
## DTP Results Summary (2030 PM Peak Period)

<table>
<thead>
<tr>
<th>Downtown</th>
<th>2010 Base Year</th>
<th>2030 Baseline Scenario</th>
<th>2030 “Build” Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Volume</td>
<td>82,000</td>
<td>112,000</td>
<td>119,000</td>
</tr>
<tr>
<td>Delay/Vehicle (seconds)</td>
<td>27</td>
<td>56</td>
<td>48</td>
</tr>
<tr>
<td>Total Vehicle Delay (hours)</td>
<td>600</td>
<td>1,700</td>
<td>1,600</td>
</tr>
</tbody>
</table>

Source: Transportation Department, City of Bellevue (March, 2015)
2030 Average Vehicle Delay at Downtown Intersections

Based on DTP Scenario

Source: Transportation Department, City of Bellevue (March, 2015)
2030 Average Vehicle Delay at Downtown Intersections
Based on DLI Scenario

Source: Transportation Department, City of Bellevue (March, 2015)