Dynamic Implementation Tool for Flexible Mitigation Strategy

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Context

• Population: 1.55M
  – 594k (38%) unincorporated
• Growth Rate

[Bar chart showing growth rates]

[Map showing geographical data]
Infill vs. Greenfield Unincorporated Areas
Previous Approaches

• Early 1990’s: Fair Share
  – Developer pays fee, County delivers improvements

• Mid 2000’s: Triggers
  – Developer delivers a set of improvements when a specified level of development is reached

• Today: Dynamic Implementation Tool
Dynamic Implementation Tool

• Input
  – Select Zone assignment from the TDM
  – Development assumptions in each zone

• Calculation
  – Volume added to each roadway segment and intersection turning movement

• Output
  – Road segment ADT and LOS
  – Synchro-ready CSV
Modeling Methodology

- Select Zone Assignment
  - TAZs aggregated to larger traffic sheds called “districts”
  - Volume growth allocated to each district

- Estimation of Volume Increase
  - By VMT generation rate

<table>
<thead>
<tr>
<th>District</th>
<th>Single Family Dwelling Units (du)</th>
<th>Multi Family Dwelling Units (du)</th>
<th>Retail (s.f.)</th>
<th>Calculated VMT by District</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buildout</td>
<td>Assumed</td>
<td>Buildout</td>
<td>Assumed</td>
</tr>
<tr>
<td>1</td>
<td>562</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>333</td>
<td>0</td>
<td>204</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>351</td>
<td>175</td>
<td>202</td>
<td>101</td>
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<tr>
<td>4</td>
<td>340</td>
<td>170</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>
Assigning Improvements

• Financial Check

   Financial Obligation = DUEs in Development x Fee Program Rate

   – Example: 350 DUEs x $14,400/DUE = $5M

• 80%/20% Split

   – Goal is to assign improvements identified by the tool costing approximately 80% of the Financial Obligation, and bank 20% for higher cost items.

   – Example: Assign roadway improvements up to $5M x 0.8 = $4M, deposit $1M into the roadway fee account.
Limitations

• Shelf Life
  – Traffic Counts
  – Update Modeling
• “Double Counting”
  – Intra-project trips
• Staff Time

<table>
<thead>
<tr>
<th>E/B Volume in Traffic Study</th>
<th>E/B Volume in Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing: 1000</td>
<td>Existing: 1000</td>
</tr>
<tr>
<td>Project: +350</td>
<td>District 3: +250</td>
</tr>
<tr>
<td></td>
<td>District 7: +150</td>
</tr>
<tr>
<td></td>
<td>Existing Plus 100% of District 3: 1250</td>
</tr>
<tr>
<td></td>
<td>Existing Plus 100% of District 7: 1150</td>
</tr>
<tr>
<td></td>
<td>Existing Plus 100% of Districts 3 and 7: 1400</td>
</tr>
<tr>
<td>Existing Plus Project: 1350</td>
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</table>
Acknowledgements
Questions?

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