State Street Corridor Study
Recommended Alternative Review
November 2, 2017
AGENDA

• Process Overview
  – Project Goals
  – Alternatives Considered
  – Evaluation

• Recommended Alternative Overview
  – Design Features
  – Traffic Operations
  – Key Feature Improvements

• Next Steps
**STUDY GOALS**

- **Safety:** Provide safe conditions for all travelers
- **Entry:** Create a more attractive entry to the city
- **Pedestrians:** Improve conditions for pedestrians along/across State St
- **Bicycles:** Provide a safe place for bicyclists separate from travel lanes
- **Transit:** Enhance transit conditions through traffic flow, stop accessibility
- **Vehicles:** Maintain reasonable traffic operations along the corridor
- **Land Use:** Support planned land use described in S. State St. Corridor Plan
- **Access:** Ease accessibility of corridor businesses
Alternatives Overview

• Alternative 1: Narrow Median with Direct Left Turns
• Alternative 2: Narrow Median with Roundabout Intersections
• Alternative 3: Wide Median with Indirect ("Michigan") Left Turns
**Alternative 1 - Narrow Median**

- Direct left-turns
- No u-turns
- Plantable median space
ALTERNATIVE 2 - ROUNDABOUTS

- Roundabout intersections
- Plantable narrow median space
ALTERNATIVE 3 – WIDE MEDIAN

• Indirect (“Michigan”) left turns
• Plantable wide median space
**ALTERNATIVE SCORING**

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>ENTRY</th>
<th>PEDESTRIANS</th>
<th>BICYCLES</th>
<th>TRANSIT</th>
<th>LAND USE</th>
<th>VEHICLES</th>
<th>ACCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="Alternative_One.png" alt="Diagram" /></td>
<td><img src="Alternative_Two.png" alt="Diagram" /></td>
<td><img src="Alternative_Three.png" alt="Diagram" /></td>
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</tbody>
</table>

*Scoring Guide: + Best, + Better Than Existing, 0 Similar to Existing, - Worse Than Existing*
RECOMMENDED ALTERNATIVE

• A hybrid solution drawing from narrow and wide median alternatives

• Common non-motorized elements throughout the corridor:
  – Buffered bike lanes
    • Bike lane configuration across I-94 similar to Ann Arbor-Saline Road
  – Continuous sidewalks on both sides of the corridor
STATE STREET – RECOMMENDED ALTERNATIVE

- All indirect left turns at Airport/Research diverted to east and west crossovers
- Geometric improvements to discourage direct left turns at Airport/Research
- Desired potential mid-block crossing near State Circle, coinciding with transit stops
- Full signalization of ramp intersections (both directions of State Street stop)
State Street — Recommended Alternative

- Indirect left-turns; accommodates all driveway movements
- Addition of two traffic signals; split direction signals minimize impact on State St.
- New pedestrian crossings:
  - Briarwood Circle
  - Hilton/Victors
  - I-94 WB Ramps
  - Potential for additional mid-block crossing south of Mall Drive
RECOMMENDED ALTERNATIVE TRAFFIC MANEUVERS

Vehicle turning movement

Pedestrian movement across State St

No Turn Allowed
**Recommended Alternative Traffic Maneuvers**

- **Existing**
  - Vehicle turning movement
  - Pedestrian movement across State St
  - No Turn Allowed

- **Recommended Alternative**
  - Hilton Blvd
  - Mall Dr
  - Briarwood Cir

**EXISTING SIDEWALK**

**MODIFIED INTERSECTION**
ANIMATION OF RECOMMENDED ALT.
### Recommended Alternative Improvements

<table>
<thead>
<tr>
<th>Goal</th>
<th>Feature</th>
<th>No-Build Condition</th>
<th>Recommended Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike lanes and sidewalks along full corridor</td>
<td></td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Number of pedestrian crossing points</td>
<td></td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Number of left-turns requiring merging or yielding in the median</td>
<td></td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Left-turn access to/from side streets and major driveways between I-94 and Eisenhower (% of possible movements)</td>
<td></td>
<td>50% (6 of 12)</td>
<td>92% (11 of 12)</td>
</tr>
<tr>
<td>Median treatment north of I-94</td>
<td></td>
<td>Paved</td>
<td>Landscaped, with potential to incorporate water absorption/rain garden features</td>
</tr>
<tr>
<td><strong>Total end-to-end peak travel time along State Street (non-peak will be minimally affected)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AM Northbound</strong></td>
<td></td>
<td>4-5 minutes</td>
<td>5-7 minutes</td>
</tr>
<tr>
<td><strong>PM Southbound</strong></td>
<td></td>
<td>4-5 minutes</td>
<td>4-6 minutes</td>
</tr>
<tr>
<td>Location</td>
<td>5-Year Crashes</td>
<td>Crash Reduction From</td>
<td>Estimated Crash Reduction Potential</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
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</tr>
<tr>
<td>State St between I-94 EB and WB Ramps</td>
<td>24</td>
<td>Elimination of left-hand merging movements</td>
<td>90%</td>
</tr>
<tr>
<td>State St at Hilton/Victors Way</td>
<td>128</td>
<td>Removing direct left turn, adding signalization</td>
<td>40%</td>
</tr>
<tr>
<td>State St at Mall Dr</td>
<td>27</td>
<td>Removing direct left turn, adding signalization</td>
<td>60%</td>
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## Cost Estimate

<table>
<thead>
<tr>
<th>ITEM</th>
<th>COST</th>
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<tbody>
<tr>
<td>Roadway Removal and Construction</td>
<td>$16,600,000</td>
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<tr>
<td>Bridge Deck Replacement</td>
<td>$4,100,000</td>
</tr>
<tr>
<td>Design and Construction Administration</td>
<td>$6,700,000</td>
</tr>
<tr>
<td>TOTAL (City Costs)</td>
<td>$27,400,000</td>
</tr>
</tbody>
</table>

*Note: preliminary design-level cost estimate, includes 20% contingency.*
Next Steps

- Consider public feedback
- Secure funding
- Incorporate in the Transportation Improvement Program (TIP)
- Conduct final design and construction

Share with us your thoughts!