North Avenue Reconstruction Project

CSS Meeting #5

February 17, 2016
Agenda

• Convene the Meeting
• Review of CSS Advisory Group Meetings 1 - 4
• Refined Purpose and Need
• Traffic Discussion
• Traffic Calming Discussion
• Revised Alternatives
• Adjourn
REVIEW OF CSS ADVISORY GROUP MEETINGS 1 – 4
CSS Meeting #1

• Issues affecting North Avenue
  – Speeding, access, lack of bike/ped facilities, good visual setting, RR crossing delays & safety, roadway configuration

• Vision for the future North Avenue
  – Better intersection configurations, safety, address speeding, stormwater treatment, stormwater treatment
CSS Meeting #2

• Individual and group weighting exercises
  – Improve access to/from North Avenue
  – Address speeding/safety
  – Improve curves/intersections
CSS Meeting #3

• Crash analysis & discussion
• Review of “draft” Purpose and Need
  – Safety, capacity, roadway deficiencies, consistency with local plans
• Proposed typical sections
• Locations for traffic counts and speed study
CSS Meeting #4

• Drainage & stormwater process discussion
• Speed survey and traffic counts results and discussion
• Walk through of the initial alternatives
REFINED PURPOSE AND NEED
North Avenue Reconstruction Project

Purpose and Need

• Roadway Deficiencies
  – Variable cross sections
  – Off-set intersections
  – Sub-standard vertical curves (hills/valleys)

• Safety
  – 250 crashes from 2010 through 2014
  – About 40% of crashes are injury crashes

• Traffic Demand
  – WisDOT forecasts show 12 to 22 percent traffic increase between 2015 and 2039
  – Difficulty turning onto and off North Avenue to/from side streets and driveways
North Avenue Reconstruction Project

Purpose and Need

• Traffic Operations
  – Some design year (2039) movements operate at LOS F during peak hours
    • Intersections with Pilgrim Square Drive, Highland Drive, and 124th Street
  – Other sections are expected to operate at unacceptable levels below LOS D during the peak hours
    • North Avenue through the Calhoun Road intersection
    • Two-lane roadway section

• Transportation and Land Use Planning
  – North Avenue is designated in the National Highway System as principal arterial
  – SEWRPC 2035 Regional Plan shows North Ave as a 4-lane roadway through entire corridor
TRAFFIC DISCUSSION
Traffic Diversion Forecasts – Year 2039

• SEWRPC provided three sets of forecasts:
  1. “Build” – with a 4-lane North Avenue and all other planned improvements (I-94 interchange, 4-lane Pilgrim, and 124th Street extension)
  2. “No-Build” – without 4 lanes on North Avenue, but with all other planned improvements; note that this scenario consistently results in the lowest forecasts on North Avenue
  3. “No-Build Scenario 2” – without 4 lanes on North Avenue and without the three other planned improvements listed above
Traffic Diversion Forecasts – Year 2039

• Year 2039 forecasted volumes were very similar under all three scenarios
  – Between Calhoun and Pilgrim: maximum difference is 2,500 vehicles per day (about 18%)
  – Between Pilgrim and Lilly: maximum difference is 1,500 vehicles per day (about 10%)
  – Between Lilly and 124th: differences are mostly within 2,500 vehicles per day (about 12%)

• None of these scenarios drop forecasted volumes enough to eliminate the need for additional capacity on North Avenue between Calhoun and 124th
TRAFFIC CALMING DISCUSSION
Traffic Calming Definition

• Traffic calming is the combination of vertical and horizontal measures that:
  – Reduce the negative effects of motor vehicle use
  – Alter driver behavior
  – Improve conditions for non-motorized street users
Traffic Calming Goals

• Reduce Speed
  – Slow vehicles to increase safety for other users

• Reduce traffic volume
  – Used to discourage vehicles “cutting through” residential or local access streets
  – This is not appropriate for arterials such as North Avenue
Raised Right Turns/Crosswalks
Speed Hump/Table
Roundabout
Chicane
Bump Out
Neighborhood Traffic Circles
City of Brookfield Neighborhood Traffic Calming Guidelines (NTCG)

• To be eligible for the NTCG program, the street must:
  – Be a *residential neighborhood or collector street* under the City of Brookfield’s jurisdiction
  – Have traffic volumes ranging from 300 to 5,000 vehicles per day
  – Have a posted speed limit of 30 mph or less
  – Be at least 1,000 feet
  – Not be cul-de-saced
## Vertical Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Applicable to NHS Routes</th>
<th>Acceptable on North Avenue</th>
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</thead>
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<tr>
<td>Speed Hump/Table</td>
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<tr>
<td>Raised Right Turn/ Crosswalk</td>
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<td>✓</td>
</tr>
<tr>
<td>Raised Intersection</td>
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## Horizontal Measures

<table>
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<th>Measure</th>
<th>Applicable to NHS Routes</th>
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</thead>
<tbody>
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<td>✓</td>
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<tr>
<td>Chicane</td>
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<tr>
<td>Bump out</td>
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<tr>
<td>Traffic Circles</td>
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</tbody>
</table>

*Will be considered at Lilly, Highland, and Pilgrim*
REVISED ALTERNATIVES
Roadway Typical Sections

TYPICAL FINISHED SECTION CTH M/NORTH AVENUE
FIVE-LANE WITH TWO-WAY LEFT TURN LANE ROADWAY

TYPICAL FINISHED SECTION CTH M/NORTH AVENUE
FOUR-LANE DIVIDED ROADWAY
Next Steps

• Public Meeting #2
  – Narrowed range of alternatives (Early March 2016)

• CSS Advisory Group meeting #6
  – Narrowed range of alternatives (April 13, 2016)