Going beyond performance measures & targets

• MnDOT has been using performance-based planning and programming for 10 years, but . . .

• CIMS aims to identify and prioritize opportunities to meet objectives for which no system performance target exists

• Lots of things fall into this definition!
Minnesota’s multimodal transportation system maximizes the health of people, the environment and our economy.
Policy Objective: Critical Connections

Strategy #1: Apply multimodal solutions that ensure a high return-on-investment, given constrained resources, and that complement the unique social, natural and economic features of Minnesota.
CIMS Solicitation

• Projects that advance the Minnesota GO objectives of Quality of Life, Economic Competitiveness and Environmental Health

• Solutions that ensure a high return-on-investment
Funding

- MnDOT’s 2014-2015 biennial budget includes use of $30 million for solicitation
  - Goal was no more than 60% of funds be awarded to Greater MN or Twin Cities Metro
  - Maximum $10 million / Minimum $200,000
  - Required 10% local match
  - All trunk highways were eligible
  - Projects had to be let for construction by June 2015
Interagency Advisory Group

- Helped develop the evaluation criteria and reviewed projects
- Membership includes: Tourism, Commerce, Education, Employment & Econ Dev, Health, Natural Resources, Public Safety, MnDOT, and Pollution Control
## Scoring Criteria

<table>
<thead>
<tr>
<th>Points</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>Benefit/Cost Ratio</td>
</tr>
<tr>
<td></td>
<td>• Includes social, economic and environmental factors</td>
</tr>
<tr>
<td></td>
<td>• Cost includes life cycle costs</td>
</tr>
<tr>
<td>30</td>
<td>Other Factors:</td>
</tr>
<tr>
<td></td>
<td>• Local Economic Impacts (7.5 points)</td>
</tr>
<tr>
<td></td>
<td>• System Considerations (6.3 points)</td>
</tr>
<tr>
<td></td>
<td>• Multimodal Impacts (6 points)</td>
</tr>
<tr>
<td></td>
<td>• Community Health and Access (5.6 points)</td>
</tr>
<tr>
<td></td>
<td>• Context Sensitivity (4.6 points)</td>
</tr>
<tr>
<td>10</td>
<td>Consideration for projects with &gt;10% non-MnDOT $</td>
</tr>
</tbody>
</table>
Local Economic Impacts

- Creation/retention of non-project construction jobs relative to the size of the project

- Improves access for designated tourist destinations and/or schools/universities
Context Sensitivity

- Consistency with surrounding land uses

- Avoids/minimizes impacts to or enhances natural, historical, archeological and cultural resources
System Considerations

• Closes a gap in a trail or bikeway or oversize/overweight network or addresses other system gaps

• Adds redundancy to the system necessary to improve system reliability

• Is consistent with existing plans for the region or corridor
Community Health

• Improves access to preventative and clinical health care facilities or recreational facilities

• Avoids/minimizes negative impacts to or positively improves access for low-income or disadvantaged populations
Multimodal Impacts

• Positively impacts transit service
• Positively impacts rail service
• Positively improves access to an airport or port or intermodal terminal
• Includes Complete Streets treatment
• Improves conditions for pedestrians, bicyclists or other trail users
PRISM – B/C Analysis

We also measured induced economic activity from the construction expenditures.
At a ratio of 5/1, get 90% of possible points.

Threshold B/C ratio of 1.0.
Non-MnDOT Funding Points

At a 20% match, get 40% of possible points

At a 50% match, get 80% of possible points
45 Applications
28 Greater MN
17 Metro*
$100 M + requested

* 4 Metro projects also applied to TED
Funded

8 Greater MN (55%)
2 Metro (45%)

Leverages ~$65 M*

* ~ $12 M is other MnDOT funding
Successful Project Types

• Generally 3 types of projects did well:

  – Addresses a significant safety issue

  – Low-cost operational improvement

  – Multifaceted urban complete/main streets projects
Greater MN Project Examples
US 61 Main Street in Red Wing

- Improved pedestrian facilities
  - curb extensions, crossings, ADA
- New/extended raised medians
- Closure of 12 driveway access points
- Narrower travel lanes
- Streetscaping
- Utility replacement and pavement reconstruct

CIMS Award: $2.45 M
Total Project: $5.4 M
Year: 2015
US 61 Main Street in Red Wing

General Information:
- City of Redwing Population - 16,472
- TH 61 Speed Limit = 30mph
- TH 61 Pavement and City Utilities Beneath in Poor Condition
- TH 61 Acts as a Barrier to the High Demand of North-South Pedestrian Movements Along the Corridor
- TH 61 is the Great River Road Scenic Byway
- 368 Crashes in 10 Years (Old Main St to Broad St)
- YMCA is a Major Community Resource generating Pedestrian, Automobile and Bus Traffic

Legend
- Mississippi River Trail
- Downtown Historic District

Source: Goodhue County, MnDNR, MnDOT

Project Context Map
Figure 2
April, 2013
US 61 Main Street in Red Wing
**US 61 Main Street in Red Wing – PRISM Analysis**

<table>
<thead>
<tr>
<th>Benefits (2011$)</th>
<th>Value</th>
<th>Distribution</th>
<th>Summary by Year</th>
<th>Totals by Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>1,898,145</td>
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<td><img src="image" alt="Graph" /></td>
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<td>Social</td>
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<td>Economic</td>
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<td>Total Benefits</td>
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</table>

<table>
<thead>
<tr>
<th>Costs (2011$)</th>
<th>Value</th>
<th>Distribution</th>
<th>Summary by Year</th>
<th>Totals by Category</th>
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<td>Capital</td>
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<td>Rehabilitation Costs</td>
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<td>Residual Value</td>
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<tr>
<td>Total Costs</td>
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<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
</tr>
</tbody>
</table>

| NPV (2011$)      | 8,140,349 | ![Graph](image) | ![Graph](image) | ![Graph](image) |
| B/C (ratio)      | 4.45     | ![Graph](image) | ![Graph](image) | ![Graph](image) |
US 52 & CSAH 9 in Goodhue County

- Lower-cost interchange design
- High fatal crash location
- Agricultural vehicle crossings
- Sets up future lower-cost safety improvements at nearby crossings

- Extra Safety Interchange Bonds meant lower CIMS grant required

CIMS – $250,000
Total Project – $8.9 M
Year: 2014
US 52 & CSAH 9 in Goodhue County

TH 52 / GOODHUE COUNTY 9
INTERCHANGE CONCEPT LAYOUT
Metro Projects
Robert St. “Main Street” in W St. Paul

- Raised median and new lanes
- Geometric changes
- Turn lanes
- Signal upgrades, rebuilt sidewalks and ADA
- Access Management and multiple R-in/R-out, ¾ access
- Streetscaping
- Prepares for future BRT

CIMS – $3.5 M
Total Project – $23.5 M
Year: 2014
Robert St.
Main Street
in W St. Paul
Robert St. Main Street in W St. Paul
Robert St. Main Street in W St. Paul
Robert St. Main Street in W St. Paul
Robert St. Main Street in W St. Paul
Robert St. Main Street in W St. Paul
Robert St. Main Street in W St. Paul

[Map of Robert St. Main Street in W St. Paul]
Robert St. Main Street in W St. Paul
Robert St. Main Street in W St. Paul
US 10/CSAH 83 Interchange in Ramsey

• Interchange
• Rail grade separation
  – 48+ trains per day
• High crash location
• Emergency vehicle access
• Improved access to Commuter Rail Station
• New sidewalks/trail

CIMS – $10 M
Total Project – $34.4 M
Year: 2015
Reflections

• An expanded or enhanced Benefit-Cost Analysis helps translate broad goals into comparable and common metrics
  • In particular – elevates environmental impacts
  • Answers a different set of questions than INVEST or other LEED-like systems

• Data and forecasting not always reliable/available
  • Example: Bike/ped forecasting methodologies aren’t well developed and data is largely absent
Questions?

www.mndot.gov/cims

Philip Schaffner
651-366-3743
philip.schaffner@state.mn.us