Charge

• Estimate the spending gap for local road and bridge rehab for 20 years
  • Needs
  • Spending
  • Gap
• Identify potential state and local funding mechanisms to fill the funding gap
• Identify ways local governments can maximize the utility of limited resources
• Next steps
Road and Bridge Needs
Focus Groups
Focus Groups

• 6 focus groups in November/December 2015
• Frankfort, Morristown, Delaware County, Milroy, Avilla, and Mt. Vernon
• Participants from 24 counties
Who

• Farmers – grain, specialty crop, livestock
• Processors
• Truckers
• Commercial Haulers
• State elected officials
• Local elected officials (commissioners, highway dept., plan commission, surveyor)
• Other
  • Ethanol
  • Grain marketing
  • Co-op
  • Paving
  • Farm drainage
  • School bus driver
  • Stone quarry
  • EMS/Fire
Responses

• Costs time and $ to detour around impediments
• Affects other roads
• State highway vs. local infrastructure
• Roundabouts (curbs)
• Rough pavement
• Crossings: visibility
• Crossings and bridges: peaked/troughed
Responses

• Drainage around roads
• Effective pavement width (no clearance past pavement, obstacles, etc.)
• Conflicts with urban and suburban road users
• Concerns about short-sighted repair strategy
• Concerns about using same revenue sources for other types of transportation needs
• Varied responsiveness to problems – maintenance needs vs. bigger fixes
Study Counties
Road and Bridge Needs
### PASER – Pavement Surface Evaluation and Rating

<table>
<thead>
<tr>
<th>Rating</th>
<th>Definition</th>
<th>Visible Distress</th>
<th>Treatment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Excellent</td>
<td>None</td>
<td>New construction</td>
</tr>
<tr>
<td>9</td>
<td>Excellent</td>
<td>None</td>
<td>Recent overlay, PDR, PDR or reconstruction</td>
</tr>
<tr>
<td>8</td>
<td>Very Good</td>
<td>No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40” or greater). All cracks sealed or tight (open less than ¾”)</td>
<td>Recent sealcoat or preservative application. Little or no maintenance required.</td>
</tr>
<tr>
<td>7</td>
<td>Good</td>
<td>Very slight or no raveling. Surface shows some traffic wear. Minor longitudinal cracks due to reflection or paving joints. Transverse cracks spaced ~10” or more apart, little or slight crack raveling. No patching or few patches.</td>
<td>First signs of aging. Maintain with crack filling or crack sealing.</td>
</tr>
<tr>
<td>5</td>
<td>Fair</td>
<td>Moderate to severe raveling. Longitudinal and transverse cracks show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking. Extensive to severe flush or polishing. Some patching or edge wedging in good condition.</td>
<td>Surface aging. Sound structural condition. Needs minor patching or wedging and surface seal or HMA overlay.</td>
</tr>
<tr>
<td>4</td>
<td>Fair</td>
<td>Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Severe block cracking. Patching in fair condition. Slight rutting or distortions.</td>
<td>Significant aging and in need of strengthening. Needs major patching or wedging and surface seal or HMA overlay.</td>
</tr>
<tr>
<td>3</td>
<td>Poor</td>
<td>Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe</td>
<td>Needs patching and repair prior to major overlay (6”+) or reconstruction / reclamation.</td>
</tr>
<tr>
<td>County</td>
<td>Road Way Miles</td>
<td>% of Road Miles</td>
<td>PASER Rating</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>--------------</td>
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<tr>
<td>Allen</td>
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<td>Cass</td>
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<td>Daviess</td>
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<td>Dubois</td>
<td>659</td>
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<td>100</td>
</tr>
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<td>Elkhart</td>
<td>1137</td>
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<td>Hamilton</td>
<td>592</td>
<td>0 0 1 0 11 29 42 5 12 0</td>
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<td>Harrison</td>
<td>820</td>
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<td>Hendricks</td>
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<td>Henry</td>
<td>753</td>
<td>1 8 29 18 18 12 14 8 1 0</td>
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<td>Huntington</td>
<td>605</td>
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<tr>
<td>Lake</td>
<td>529</td>
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<td>Morgan</td>
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<td>Noble</td>
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<td>Steuben</td>
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<td>5 7 8 25 25 6 6 6 6 6</td>
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<tr>
<td>Tippecanoe</td>
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<td>1.4 4.0 8.7 13.2 13.5 19.5 15.1 13.7 4.5 2.3</td>
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NR – None reported
### Treatment Costs – LTAP Report SP-28-2013

<table>
<thead>
<tr>
<th>Paser Rating</th>
<th>Initial</th>
<th>Final</th>
<th>Cost/mile</th>
<th>Expected Life (yrs)</th>
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<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>$</td>
<td>112,000</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>$</td>
<td>112,000</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>$</td>
<td>112,000</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>$</td>
<td>82,000</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>$</td>
<td>15,000</td>
<td>7</td>
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## Future Treatment Costs

<table>
<thead>
<tr>
<th>PASER Rating Improvement</th>
<th>Initial cost</th>
<th>Treatment year</th>
<th>Future Cost - 3% annual inflation</th>
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<tbody>
<tr>
<td>4 to 10</td>
<td>82,000</td>
<td>14</td>
<td>$124,032</td>
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<tr>
<td>5 to 6</td>
<td>15,000</td>
<td>7</td>
<td>$18,448</td>
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<tr>
<td>5 to 6</td>
<td>15,000</td>
<td>14</td>
<td>$22,688</td>
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<tr>
<td>5 to 6</td>
<td>15,000</td>
<td>19</td>
<td>$26,303</td>
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Deterioration Curve for Pavements

![Deterioration Curve for Pavements](image-url)
## Years to PASER Rating 5

### Years to PASER Rating 5

<table>
<thead>
<tr>
<th>Paser Rating</th>
<th>Miles</th>
<th>Time to Threshold (yrs)</th>
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<tr>
<td>1</td>
<td>136</td>
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<tr>
<td>2</td>
<td>447</td>
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<td>3</td>
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<td>4</td>
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<td>5</td>
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<td>-</td>
</tr>
<tr>
<td>6</td>
<td>2322</td>
<td>2.75</td>
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<tr>
<td>7</td>
<td>1862</td>
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</tr>
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<td>8</td>
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<td>408</td>
<td>11</td>
</tr>
<tr>
<td>10</td>
<td>298</td>
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### Paser Rating Costs

<table>
<thead>
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<th>Initial</th>
<th>Final</th>
<th>Cost</th>
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<tbody>
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<td>0</td>
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<td>13</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$18,264,158</strong></td>
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</table>

<table>
<thead>
<tr>
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<th>Year</th>
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<th>Final</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>$50,037,501</td>
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<td>13</td>
<td>$10,136,546</td>
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<td></td>
<td><strong>Total</strong></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$60,174,047</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Paser Rating</th>
<th>Year</th>
<th>Initial</th>
<th>Final</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>0</td>
<td>$102,974,122</td>
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<tr>
<td>3</td>
<td>13</td>
<td>6</td>
<td>13</td>
<td>$20,860,393</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$123,834,514</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Paser Rating</th>
<th>Year</th>
<th>Initial</th>
<th>Final</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>0</td>
<td>$115,376,903</td>
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<td>4</td>
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<td>$31,924,009</td>
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<td></td>
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<td></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$147,300,912</strong></td>
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</table>
Represents 10,811 miles

Statewide in counties there are approximately 56,700 miles of paved roads.

To get state costs the 16 county number is prorated.

20 year need for paved roads: ~ $4 billion

Distributing the need over 20 years: ~ $204 Million/Year

<table>
<thead>
<tr>
<th>County</th>
<th>20 Year Estimated Funding Need for Pavements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>$64,750,000</td>
</tr>
<tr>
<td>Cass</td>
<td>$51,100,400</td>
</tr>
<tr>
<td>Daviess</td>
<td>$20,900,242</td>
</tr>
<tr>
<td>Dubois</td>
<td>$29,140,900</td>
</tr>
<tr>
<td>Elkhart</td>
<td>$67,100,200</td>
</tr>
<tr>
<td>Hamilton</td>
<td>$33,300,200</td>
</tr>
<tr>
<td>Harrison</td>
<td>$43,600,900</td>
</tr>
<tr>
<td>Hendricks</td>
<td>$58,870,000</td>
</tr>
<tr>
<td>Henry</td>
<td>$59,600,000</td>
</tr>
<tr>
<td>Huntington</td>
<td>$34,490,000</td>
</tr>
<tr>
<td>Lake</td>
<td>$44,302,000</td>
</tr>
<tr>
<td>Marshall</td>
<td>$88,610,400</td>
</tr>
<tr>
<td>Morgan</td>
<td>$68,500,100</td>
</tr>
<tr>
<td>Noble</td>
<td>$47,740,700</td>
</tr>
<tr>
<td>Steuben</td>
<td>$34,000,300</td>
</tr>
<tr>
<td>Tippecanoe</td>
<td>$29,440,800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$775,447,142</strong></td>
</tr>
</tbody>
</table>
One time funding to raise pavement to a minimum of PASER 6

~$1.6 Billion
Road Costs Summary

Need to Upgrade Network Initially:

~ $1.6 billion

20-Year Need: ~$4.1 Billion

Annual Need for 20 years: ~$204 Million
Bridges

- Information obtained from FHWA Bridge Database
- Unit Repair Costs from INDOT
- Calculated cost to fix structurally deficient bridges and replace functionally deficient bridges.
<table>
<thead>
<tr>
<th>County</th>
<th># of Bridges</th>
<th># Structurally Deficient</th>
<th># Functional Obsolete</th>
<th>Repair Cost Deficient</th>
<th>Repair Cost Obsolete</th>
<th>Total Repair Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>390</td>
<td>44</td>
<td>29</td>
<td>$30,780,446</td>
<td>$49,154,170</td>
<td>$79,934,617</td>
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<tr>
<td>Cass</td>
<td>121</td>
<td>3</td>
<td>1</td>
<td>$1,233,406</td>
<td>$204,088</td>
<td>$1,437,495</td>
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<tr>
<td>Daviess</td>
<td>125</td>
<td>4</td>
<td>20</td>
<td>$342,461</td>
<td>$19,422,965</td>
<td>$19,765,427</td>
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<tr>
<td>Dubois</td>
<td>164</td>
<td>14</td>
<td>16</td>
<td>$7,070,533</td>
<td>$14,290,970</td>
<td>$21,361,504</td>
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<tr>
<td>Elkhart</td>
<td>172</td>
<td>14</td>
<td>24</td>
<td>$7,367,827</td>
<td>$38,959,649</td>
<td>$46,327,477</td>
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<td>Hamilton</td>
<td>305</td>
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<td>32</td>
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<td>$50,964,987</td>
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<tr>
<td>Harrison</td>
<td>74</td>
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<td>$5,742,640</td>
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<td>Henry</td>
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<td>10</td>
<td>$2,618,903</td>
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<td>39</td>
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<td>4</td>
<td>$3,819,041</td>
<td>$8,604,406</td>
<td>$12,423,448</td>
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<td>22</td>
<td>32</td>
<td>$26,689,657</td>
<td>$67,911,258</td>
<td>$94,600,915</td>
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<tr>
<td>Marshall</td>
<td>116</td>
<td>9</td>
<td>4</td>
<td>$9,921,710</td>
<td>$5,415,501</td>
<td>$15,337,211</td>
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<tr>
<td>Morgan</td>
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<td>22</td>
<td>14</td>
<td>$18,177,422</td>
<td>$10,334,543</td>
<td>$28,511,965</td>
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<tr>
<td>Noble</td>
<td>64</td>
<td>13</td>
<td>2</td>
<td>$13,362,336</td>
<td>$1,898,136</td>
<td>$15,260,472</td>
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<tr>
<td>Tippecanoe</td>
<td>208</td>
<td>14</td>
<td>14</td>
<td>$9,519,563</td>
<td>$25,404,653</td>
<td>$34,924,216</td>
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<tr>
<td>Totals</td>
<td>2602</td>
<td>185</td>
<td>247</td>
<td>$148,284,948</td>
<td>$335,018,952</td>
<td>$483,303,901</td>
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<tr>
<td>Averages</td>
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<td>7.1%</td>
<td>9.5%</td>
<td>$801,540</td>
<td>$1,356,352</td>
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<tr>
<td>Local bridges in the state</td>
<td>13,090</td>
<td></td>
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<td></td>
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<td></td>
</tr>
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</table>
Bridge Deterioration

Average Sufficiency Rating

- 2004: 90.00
- 2006: 86.00
- 2008: 85.00
- 2010: 87.00
- 2012: 84.00
- 2014: 83.00
Deficient and Obsolete Bridges
Statewide Bridge Cost Summary

Structurally Deficient ~734 million
Functionally Obsolete ~1.6 billion

Current Estimated Repair Cost ~2.3 billion

20-year estimate is difficult to determine due to lack of bridge deterioration curves.
Paved to Gravel

• Some agencies are using this approach
  • Data not available to determine magnitude

• Poor pavements
  • 30% of pavement is below a PASER 3
  • Low traffic volume, AADT< 100

• Costs
  • $42,000 per mile (initial installation)
  • Annual maintenance is $5,000 per mile
  • 20-year cost to maintain current gravel roads (9,240 miles) is $1.2 Billion
Agricultural equipment and Roads

- Limited ROW
- Improper Drainage
- Pavement strength – PASER < 4
- Frost Laws
Bridge Deficiencies

- **Narrow Bridges – Functionally Obsolete**
  - 59 bridges, 3% of bridges in study counties less than 18 ft. wide

- **Reduced Load Capacities – Structurally Deficient**
  - 138 bridges, 5% of bridges in study counties with rated capacity less than 15 tons

- **Bridge replacement is the solution**
  - Cost is dependent on replacement size and location
Bridge Examples
Bridge Examples
Bridge Examples
Road and Bridge Spending
Annual Road and Bridge Rehab Spending

• County Highway Operations Reports, Section III
  • Roads: “Rehabilitation” and “Resurfacing”
  • Bridges: “Rehabilitation”

• Spending
  • Road Rehab: $119 Million – Annual
    $2.4 Billion – 20 Years
  • Bridge Rehab: $126 Million – Annual
    $2.5 Billion – 20 Years
Road and Bridge Spending Gap
Funding Gap – Road Rehab

• 3 scenarios
• 14 counties with good spending data
• Used relative paved road miles to estimate state needs
Funding Gap – Road Rehab

• Gap for Scenario 1 – Immediate Needs in 1 Year
  • Year 1  = -$1.5 Billion
  • Years 2-20 = -$27 Million

• Gap for Scenario 2 – Immediate Needs in 3 Years
  • Years 1-3 = -$487 Million
  • Years 4-20 = -$33 Million

• Gap for Scenario 3 – Immediate Needs in 5 Years
  • Years 1-5 = -$285 Million
  • Years 6 – 20 = -$36 Million
Funding Gap – Bridge Rehab

• 3 scenarios
• 15 counties with good spending data
• Used relative number of classified bridges to estimate state needs
• No good numbers for estimating costs associated with deterioration
Funding Gap – Bridge Rehab

• Gap for Scenario 1 – Immediate Needs in 1 Year
  • Year 1  = -$2.2 Billion
  • Years 2-20 = Rehab to address deterioration

• Gap for Scenario 2 – Immediate Needs in 3 Years
  • Years 1-3 = -$651 Million - Deterioration
  • Years 4-20 = Rehab to address deterioration

• Gap for Scenario 3 – Immediate Needs in 5 Years
  • Years 1-5 = -$340 Million - Deterioration
  • Years 6 – 20 = Rehab to address deterioration
Funding Gap – Summary

• Gap for Scenario 1 – Immediate Needs in 1 Year
  • Year 1 = -$3.7 Billion
  • Years 2-20 = -$27 Million – Rehab for bridge deterioration

• Gap for Scenario 2 – Immediate Needs in 3 Years
  • Years 1-3 = -$1.1 Billion - Rehab for bridge deterioration
  • Years 4-20 = -$33 Million - Rehab for bridge deterioration

• Gap for Scenario 3 – Immediate Needs in 5 Years
  • Years 1-5 = -$625 Million- Rehab for bridge deterioration
  • Years 6 – 20 = -$36 Million- Rehab for bridge deterioration
Funding Gap – Summary

• County needs, spending and gaps vary
• This analysis only county road and bridge rehab, not:
  • New roads/capacity
  • New bridges (very rare)
  • Maintenance and repair (which can be quite variable due to winter weather)
  • Administration or unclassified
Compared to Other Studies

• Current study
  • County roads and bridges only
  • Rehab (and gravel maintenance-needs only)
  • 16 counties as basis, secondary data
  • Paser 6, lasting fixes

• Others
Funding Policy

• 2016 Legislature
  • Provided access to LOIT reserves
  • Allowed increase of LOHUT/gave access to cities
• Community Crossings Matching Grant Program
• Strongly incentivized asset management
Additional Options

• Adjustments to gas/diesel taxes
• VMT tax
• Local options
  • Additional funding
  • Improving efficiency and effectiveness
Indiana Infrastructure Funding
Projections 2016 – 2035
Introduction

• Factors influencing fuel consumption
  • Number of vehicles
  • Fuel economy
  • Vehicle miles traveled

• Factors influencing tax revenue
  • Excise tax rate
  • Sales price of gasoline and diesel

• Importance of the rates of change in determining future outcomes
  • Fuel economy is outpacing increase in vehicle miles traveled!
Approach

• Time frame: 2016 to 2035
• Projections from the U.S. Energy Information Administration (EIA) Annual Energy Outlook adapted to Indiana
• Baseline (status quo) + 3 scenarios:
  • Indexing fuel taxes (gasoline and special fuels) to inflation
  • Indexing fuel taxes to inflation and fuel economy
  • Using a vehicle miles traveled (VMT) fee
• Other revenue sources:
  • Major Moves Draw, Motor Carrier Fuel Use Tax (MCFUT), vehicle permits, Motor Carrier Surtax, International Registration Plan (IRP), and states sales tax.
General Overview

Major Moves
- Draw, MCFUT
- Permits, Miscellaneous

Draw, MCFUT

Permits, Miscellaneous

Motor Carrier Surtax

IRP, General Fund, Court Fees, State Sales Tax

Local Distribution

MVHA (available for disbursement)

Refunds and Adjustments

SHF

Motor Carrier Surtax

Special Fuels Tax

IRP, General Fund, Court Fees, State Sales Tax

Intermediate Balance

Highway Road and Street Fund

To counties based on car registrations

Special Distribution Account

Gasoline Tax

SHF

Gasoline Tax

Special Fuels Tax

MVHA

2 ¢/gal.

25m

40%

30%

30%

1 ¢/gal.

1 ¢/gal.

47%

53%

45.5%

$25m

55%

45%

75%

25%

30%

30%

45%

IRP, General Fund, Court Fees, State Sales Tax

Motor Carrier Surtax

Permits, Miscellaneous

Major Moves

- Draw, MCFUT
- Permits, Miscellaneous

Motor Carrier Surtax
Local Distribution

- Local Distribution
  - 31.9% to Cities and Towns
  - 68.1% to Counties

- Cities and Towns
  - Population based

- Counties
  - 5% equally to all counties
  - 30% based on vehicle registration
  - 65% based on county mileage
### Results Overview

<table>
<thead>
<tr>
<th>Summary Forecast</th>
<th>2016</th>
<th>2035</th>
<th>2035 (Total Change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Base-line</td>
<td>CPI</td>
</tr>
<tr>
<td>Consumption (in Million Gallons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gasoline</td>
<td>2,995</td>
<td>2,094</td>
<td>2,081</td>
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<tr>
<td>Diesel</td>
<td>1,517</td>
<td>1,872</td>
<td>1,871</td>
</tr>
<tr>
<td>Excise Tax Revenue</td>
<td>769</td>
<td>454</td>
<td>674</td>
</tr>
<tr>
<td>SHF INDOT</td>
<td>592</td>
<td>416</td>
<td>534</td>
</tr>
<tr>
<td>Counties</td>
<td>270</td>
<td>191</td>
<td>245</td>
</tr>
<tr>
<td>Counties (Car Registration)</td>
<td>92</td>
<td>60</td>
<td>85</td>
</tr>
<tr>
<td>Cities and Towns</td>
<td>124</td>
<td>87</td>
<td>112</td>
</tr>
</tbody>
</table>
Consumption of gasoline and diesel
Baseline Excise Tax Revenue

Revenue (in Million 2015 Dollars)

- Total Excise Tax Revenue
- Gasoline
- Diesel
Distribution of the MVHA
## Cost per Mile

<table>
<thead>
<tr>
<th>Cost per Mile</th>
<th>2016</th>
<th>2035</th>
<th>2035 (Total Change)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Base</td>
<td>CPI</td>
</tr>
<tr>
<td>Gasoline Car</td>
<td>0.126</td>
<td>0.098</td>
<td>0.100</td>
</tr>
<tr>
<td>Gasoline Truck</td>
<td>0.171</td>
<td>0.133</td>
<td>0.136</td>
</tr>
<tr>
<td>Diesel Truck (Light Duty)</td>
<td>0.139</td>
<td>0.143</td>
<td>0.143</td>
</tr>
<tr>
<td>Diesel Truck (Freight</td>
<td>0.268</td>
<td>0.296</td>
<td>0.298</td>
</tr>
<tr>
<td>Heavy Duty)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• Introduction of the Local Option Highway User Tax in 1980:
  • **Vehicle excise surtax:**
    • Paid at the time of registration and applied to cars, motorcycles and trucks under 11,000 pounds.
  • **Wheel tax:**
    • Applied to all vehicles not subject to the surtax, e.g., buses, RVs, trailers, trucks, tractors.
    • Ranges between $5 and $40 per vehicle and may differ within each vehicle category based on weight.
    • Public or certain non-profits are excluded.

• Revenue generated in 2010: $69 million
Calculations for 2017

- Some revenue collected goes to cities and towns as well besides the county.
- Estimated maximum county portion of LOHUT without an asset management plan: $108.3 million.
- Estimated maximum county portion of LOHUT with an asset management plan: $217.2 million.
- Average annual statewide growth rate of 0.26%:
  - LOHUT growth approximated by population.
- Minimum and maximum growth: -0.96% and 1.82%.
Conclusion

• Increase in fuel economy is outpacing VMT
  • Consequence: Indexing fuel taxes to inflation only partially compensates for the decrease.
  • Indexing fuel taxes to inflation and fuel economy results in fuel taxes driven by the increase in VMT (which is driven by an increase in population).

• Cost per mile for drivers is decreasing due to an increase in fuel economy.
Local Options - Funding

- Utilize debt to fund additional projects in short-term
  - Commercial lending
  - Bonding
  - State Infrastructure Bank (would have to be expanded)
  - Indiana Bond Bank – Pool Program and Community Funding Resource
Local Options - Funding

• Cost sharing
• Enable local transportation improvement districts
  • Based on Economic Improvement Districts (IC 36-7-22)
  • Self-help option
• Ensure a targeted investment in a particular location
Local Options- Increased Efficiency/Effectiveness

• Make method for local transportation decisionmaking overt
  • Asset management
  • Capital improvements planning

• Need good regular information about assets, conditions, traffic, trip patterns, etc.
Asset Management

- HB1001 requirement for the Grant program
- Good requirement
- Determining what you have and how you are going to take care of it.
- Multi-year plan that optimizes funding and network condition
- Abandon a worst first approach
- Adopt a systemic approach to the network
- Create a mix of fixes
- Use the right treatment on the right road at the right time
Asset Management Plans

• Pavement Plan
• Bridge Plan
Data Management System

- Developing design document
- GIS and web based
- Allow LTAP to archive and analyze data
  - Annual report data
  - Pavement condition
  - Establish pavement and bridge deterioration curves
  - Treatment costs
  - Maintenance costs
  - Winter operation costs
  - More accurate unit costs for future need calculations
Capital Improvements Plan

- Short-range plan (three to ten years) that selects and sequences local government capital projects and equipment purchases.
- Review capital needs and recommendations in various local plans (asset inventory, land use, economic development, redevelopment, etc.)
- Solicit need from other agencies with justification
- Develop costs
- Evaluate project against available funding.
- Select projects for each year of the plan
Local Options- Increased Efficiency/Effectiveness

• Local investment/disinvestment strategies
  • Doesn’t have to be worst first, ought to be more strategic
• Fix it first strategy
• Selective reduction of bridge inventory
• Return paved roads to gravel
• Set local farm-to-market truck routes or farm-to-farm routes as a priority
• Aligning land use and transportation decisionmaking
Local Options- Increased Efficiency/Effectiveness

• Collaborate with other local governments on the purchase of road and bridge construction, maintenance, and materials
  • Outsourcing
  • Joint purchasing
Some Thoughts

• Clear need for a way to get resources to counties, in part, using some other method than current distribution formulas that reward for population and vehicles.

• Recommendations for standardizing highway report data
  • LTAP working with counties to make them electronic
  • Need better definitions and review of data

• With the strong inducement for asset management plans, add’l analyses possible
Next Steps

- Long-term state-level funding solutions
- Local funding solutions
- “Other” local responses when funding isn’t enough