Quality of Our Bridges

Measuring Bridge Conditions

In January 2015, the Federal Highway Administration (FHWA) proposed changes to how bridge conditions are analyzed following the passage of MAP-21. Bridges are given a rating of Good, Fair, or Poor based on the lowest rating between the bridge deck, superstructure, and substructure as reported in the Nation Bridge Inventory (NBI). FHWA has proposed the use of two performance measures - percentage of deck area for bridges in Good Condition and percentage of deck area for bridges in Poor Condition.

80% of bridges in the region are classified as in Good Condition.

The region has 418 bridges on the National Bridge Inventory (NBI).

Performance Threshold

Currently, the region does not exceed the FHWA recommended threshold for deck area in Poor Condition (10%).
Performance Measures

*Mobilizing Tomorrow* identifies performance measures based on average sufficiency rating and the percent of deficient bridges within the region. The proposed performance measures identified by FHWA - percentage of deck area in *Good Condition* and percent of deck area in *Poor Condition* - are included in the table below.

<table>
<thead>
<tr>
<th>GOAL</th>
<th>MEASURE</th>
<th>DATA</th>
<th>2050 TARGET</th>
<th>GOAL</th>
<th>ACTUAL</th>
<th>TREND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Sufficiency Rating</td>
<td>Average Rating</td>
<td>2014: 82</td>
<td>No Target Set</td>
<td>No Target Set</td>
<td>↑</td>
<td>1%</td>
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<td></td>
<td></td>
<td>2015: 83</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Deficient Bridges (%)</td>
<td>2014: 26%</td>
<td>Maintain</td>
<td></td>
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<td>-6%</td>
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<td></td>
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<td>2015: 20%</td>
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<tr>
<td>Deck Area*</td>
<td>Good Condition (%)</td>
<td>2014: 59%</td>
<td>No Target Set</td>
<td>No Target Set</td>
<td>↑</td>
<td>26%</td>
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<tr>
<td></td>
<td></td>
<td>2015: 85%</td>
<td></td>
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<tr>
<td></td>
<td>Poor Condition (%)</td>
<td>2014: 8%</td>
<td>No Target Set</td>
<td>No Target Set</td>
<td>↓</td>
<td>-7%</td>
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<tr>
<td></td>
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<td>2015: 1%</td>
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<tr>
<td>Environmental Justice*</td>
<td>Good Condition (%)</td>
<td>2014: 68%</td>
<td>No Target Set</td>
<td>No Target Set</td>
<td>↑</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2015: 86%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Poor Condition (%)</td>
<td>2014: 9%</td>
<td>No Target Set</td>
<td>No Target Set</td>
<td>↓</td>
<td>-7%</td>
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<tr>
<td></td>
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<td>2015: 2%</td>
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</tbody>
</table>

* *Measures for these Goals are not included in *Mobilizing Tomorrow*, but are tracked in accordance with new guidance from FHWA.*

**FAST Act Bridge Provisions**

- National Highway Performance Program Funds may be obligated for the reconstruction, resurfacing, restoration, rehabilitation, or preservation of a bridge not on the National Highway System, if the bridge is on a Federal-aid highway.
- Allows the bundling of 2 or more similar bridge projects into a single project.
- Exempts certain bridges from preservation requirements.
- Streamlines the taking of nesting swallows in at-risk bridges.
- Commmissions a study on the performance of bridges funded by the innovative bridge research and construction program.
Measuring Bridge Sufficiency

Bridges are given a sufficiency rating as well as a Structurally Deficient or Functionally Obsolete classification. Sufficiency ratings indicate a bridge’s sufficiency to stay in service and help determine which bridges may need repair or replacement. Structurally Deficient (SD) refers to bridges needing significant maintenance, rehabilitation, or replacement, while Functionally Obsolete (FO) refers to bridges that no longer meet current design criteria, either because traffic volumes exceed what was anticipated or design standards have changed.

20% of bridges in the region are classified as being Structurally Deficient or Functionally Obsolete.

Federal Funding Eligibility

Only bridges categorized as structurally deficient or functionally obsolete with a sufficiency rating below 80 are eligible for certain federal funds. Currently, 15% of bridges in the region are eligible for this funding.
An Environmental Justice (EJ) review was completed to compare bridge conditions in EJ areas versus non-EJ areas.

Of the 67 bridges located within EJ areas, 9 are classified as being Structurally Deficient or Functionally Obsolete.

Iowa DOT bridges were included in the EJ review.
Local Conditions

Component defects are limited to minor problems.

Good

Structural capacity of the component is not affected by minor deterioration, section loss, spalling, cracking, or other deficiency.

Fair

Structural capacity of the component is affected or jeopardized by significant deterioration, section loss, spalling, cracking, or other deficiency.

Poor

Data Source: Iowa Department of Transportation
National Bridge Inventory, 2015

Jurisdiction totals were calculated using the National Bridge Inventory’s information on maintenance responsibility.