Bridge Preservation Activity Matrix

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2012 Midwest Bridge Preservation Conference
Bridge Preservation Matrix

- History
- Current Matrix
- Today’s Goals
History

- The matrix was originally developed as a survey of bridge preservation actions and whether they were performed by contract forces or state forces and whether they were eligible for highway funds.
- More information was requested this summer to collect costs, frequency of cyclical items and the conditions that drive PM activities.
### Current Matrix

#### Cyclical PM Deck Activities

<table>
<thead>
<tr>
<th>Deck / Approach / Surface Items</th>
<th>Activity</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seal Bridge Deck Cracking (eg. crack chaser)</td>
<td>Kansas</td>
</tr>
</tbody>
</table>

#### Cyclical PM Deck Activities - Seal Bridge Deck Cracking (eg. crack chaser)

<table>
<thead>
<tr>
<th></th>
<th>All Midwest States</th>
<th>Kansas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Forces Only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State or County Forces Only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Performed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both Contract and State Forces</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Current Matrix

#### Cyclical PM Deck Activities

**Deck / Approach / Surface Items**

<table>
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<tbody>
<tr>
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</tbody>
</table>

#### Cyclical PM Deck Activities - Seal Bridge Deck Cracking (eg. crack chaser)

<table>
<thead>
<tr>
<th>Activity</th>
<th>State</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Only</td>
<td>All Midwest States</td>
<td>1</td>
</tr>
<tr>
<td>State or County Forces Only</td>
<td>All Midwest States</td>
<td>4</td>
</tr>
<tr>
<td>Not Performed</td>
<td>Both Contract and State Forces</td>
<td>0</td>
</tr>
<tr>
<td>Both Contract and State Forces</td>
<td>Kansas</td>
<td>3</td>
</tr>
</tbody>
</table>

Select Cyclical PM Activities, Condition Based PM Activities or Condition Based Rehab/Replacement
Current Matrix

Cyclical PM Deck Activities
Deck / Approach / Surface Items

Activity: Seal Bridge Deck Cracking (e.g. crack chaser)
State: Kansas

Select Action

Cyclical PM Deck Activities - Seal Bridge Deck Cracking (e.g. crack chaser)

- Contract Forces Only
- State or County Forces Only
- Not Performed
- Both Contract and State Forces

Cyclical PM Deck Activities - Seal Bridge Deck Cracking (e.g. crack chaser)

- All Midwest States
- Kansas
### Current Matrix

#### Cyclical PM Deck Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>State</th>
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<tbody>
<tr>
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</tr>
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</table>

#### Select State for comparison with Midwest averages and totals

**Graph:**

- **Cyclical PM Deck Activities - Seal Bridge Deck Cracking (eg. crack chaser)**
- **States:** All Midwest, Kansas
- **Legend:**
  - All Midwest States
  - Kansas

**Axes:**

- X-axis: Contract Forces Only, State or County Forces Only, Not Performed, Both Contract and State Forces
- Y-axis: Count (0 to 6)

**Data:**

- **Kansas:**
  - Contract Forces Only: 1
  - State or County Forces Only: 4
  - Not Performed: 5
  - Both Contract and State Forces: 2

- **All Midwest:**
  - Contract Forces Only: 1
  - State or County Forces Only: 2
  - Not Performed: 5
  - Both Contract and State Forces: 2

**Note:**

- Select a state to compare with Midwest averages and totals.
Current Matrix - Cyclical

Cyclical PM Deck Activities - Seal Bridge Deck Cracking (eg. crack chaser)

- Contract Forces Only
- State or County Forces Only
- Not Performed
- Both Contract and State Forces

- All Midwest States
- Kansas
Current Matrix - Cyclical

Cyclical PM Deck Activities and Costs - Seal Bridge Deck Cracking (e.g. crack chaser)

- Contract Forces Only
- State or County Forces Only
- Not Performed
- Both Contract and State Forces

Midwest States - Count
Midwest States - Avg Cost
Michigan - Count
Michigan - Cost
Current Matrix - Cyclical

Cyclical PM Deck Activities and Frequency - Seal Bridge Deck Cracking (eg. crack chaser)

- Not Performed
- Not Provided
- As Needed
- Frequency

Count

- Midwest States - Count
- Michigan
- Average Frequency
- Michigan - Frequency

Frequency in Years

Midwest States - Count: 5
Michigan: 7
Average Frequency: 6
Michigan - Frequency: 5
Current Matrix - Condition
Current Matrix - Condition

Condition Based PM Deck Activities and Costs - Epoxy Overlay

- Count
- Average Cost

- Contract Forces Only
- State or County Forces Only
- Not Performed
- Both Contract and State Forces

- Midwest States - Count
- Michigan - Count
- Midwest States - Avg Cost
- Michigan - Cost

[Graph showing bar charts for different conditions and their associated costs.]
Current Matrix - Condition

Condition Based PM Deck Activities and Results - Epoxy Overlay

- Not Performed
- Not Provided
- Begin Condition
- End Condition

Count

- All Midwest States
- Michigan
- Average Condition
- Michigan - Condition
Current Matrix - Condition

Condition Based PM Deck Activities and Results - Epoxy Overlay

Count

Good - 1  Good or Fair  Fair - 2  Fair or Poor  Poor - 3  Severe - 4

Midwest States - Begin Condition
Midwest States - End Condition
Michigan - Begin Condition
Michigan - End Condition

All Midwest States
Kansas
Today’s Goals

- Review the list of activities
- There were differences between units. In the groups discuss and help select units for consistency
- Should the matrix be expanded? What would you change?
- The discussion questions will help determine what needs to be improved or modified before continuing with development of the matrix.
- Focus on what will make the matrix useful – for example setting performance measures
Questions?

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