# Importance Factors of Maintenance Activities on Bridge Elements

The matrix below describes the relative importance of each PM task to each bridge component. Opacity is set by the importance of the maintenance task to achieving the full life of the component.

<table>
<thead>
<tr>
<th>Maintenance Activity</th>
<th>Paint</th>
<th>Joints</th>
<th>Wearing Surface</th>
<th>Curbs</th>
<th>Sidewalks</th>
<th>Deck</th>
<th>Piers</th>
<th>Bearings</th>
<th>Bridge Seats</th>
<th>Stanchions</th>
<th>Rails</th>
<th>Adjustments</th>
<th>Plywood</th>
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# Importance Factors of Maintenance Activities on Bridge Elements

The matrix below describes the relative importance of each PM task to each bridge component. Opacity is set by the importance of the maintenance task to achieving the full life of the component.
Bridge Preservation Model and Optimization

Maintenance Model Simulation

The display below simulates the basic functions of the preventive maintenance model.

Bridge Service Age: 75-years  Uniform PM Task Frequency: 0%

The buttons below scale the longevity estimate at different Maintenance Levels:
- Uniformly Increase Preventive Maintenance by 20%
- Ideal Preventive Maintenance

Equal Sized Components  Component width Weighted by Repair Cost

Presentation by Cole Richards
CDOT Staff Bridge
Bridge Preservation Model and Optimization

Maintenance Model Simulation
The display below simulates the basic functions of the preventive maintenance model.

Bridge Service Age: 75-years Uniform PM Task Frequency: 100%

The buttons below scale the longevity estimate at different Maintenance Levels:
- Uniformly Increase Preventive Maintenance by 20%
- Ideal Preventive Maintenance

- Equal Sized Components
- Component width Weighted by Repair Cost

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CDOT Staff Bridge
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Presentation by Cole Richards
CDOT Staff Bridge
Bridge Preservation Model and Optimization

Life Cycle Cost vs PM Program Funding

Presentation by Cole Richards
CDOT Staff Bridge
So What?

- A simple and understandable way to present the mechanics of preventive maintenance to decision makers (read: funding).

- Helps agencies keep sight of fundamental asset management questions.

- Model optimization may reveal bias in assumptions or errors in data and/or analysis.

- Model optimization aids in the initial decisions on where to emphasize program efforts/expenditures.

- Easy to develop and maintain in-house.

Questions?