



**INDIANA DEPARTMENT OF TRANSPORTATION**  
*Driving Indiana's Economic Growth*

**Design Memorandum No. 18-22**

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**TO:** All Design, Operations, and District Personnel, and Consultants

**FROM:** /s/Elizabeth W. Phillips  
Elizabeth W. Phillips  
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Bridge Design Division

**SUBJECT:** Bridge Preventative Maintenance Criteria

**REVISES:** *Indiana Design Manual (IDM) Figure 412-1A*

**EFFECTIVE:** Start Plan Development on or after October 1, 2018

IDM Figure 412-1A, Condition-driven Preventative Maintenance Eligibility Criteria, has been revised. The figure has been incorporated into IDM Chapter 412 online and is included for reference on the following pages.

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Treatments Type	Bridge Component (Item Code)	Component Rating	Other Criteria <sup>2</sup>
Bridge Culvert Liners	Culverts (62)	2-5	N/A <sup>3</sup>
Deck Patching (partial/full depth)	Wearing Surface (58.01)	>4	D/SS >4 and Max. 10% Deck Patching
Approach Slab Repair/Replacement	Approach Slab (Misc. Asset Data) or Concrete approach slab Elements	<6, or >10% Element Level in CS2 or any % in CS3	WS/D/SS>4
Expansion Joint Repair/Replacement/ Elimination	Transverse Joints (Misc. Asset Data - Joints) or Joint Elements	<6, or >10% Element Level in CS2 or any % in CS3	WS/D/SS>4
Mudwall Patching	Substructure Backwall (60)	<6, or >10% Element Level in CS2 or any % in CS3	WS/D/SS>4
Bridge Deck Overlays - Flexible	Wearing Surface (58.01)	>4	D/SS>4 and Max. 10% Deck Patching
Bridge Deck Overlays - Rigid	Wearing Surface (58.01)	>3	D/SS>4 and Max. 15% Deck Patching
Spot Coating/Bridge Painting	Condition of Paint (Misc. Asset Data – Paint Condition Steel Superstructure Corrosion Elements, and/or Steel Bearing Corrosion Elements)	<7 <sup>4</sup> or >10% Element Level in CS2 or any % in CS3	WS/D/SS>4
Substructure/Pile Patching/Sealing/Fiber Wrap	Substructure (60)	N/A	WS/D/SS>4
Superstructure Crack Mitigation Superstructure Patching / Fiber Wrap	Concrete Girders (59) or Concrete Beams (59)	N/A	WS/D/SS>4
Erosion Mitigation	Channel and Channel Protection (61)	<6	WS/D/SS>4
Debris Removal/Channel Cleaning	Channel and Channel Protection (61)	<6	WS/D/SS>4
Slopedwall Repair/Replacement	Misc. Asset Data - Slopedwall	<6	WS/D/SS>4
Bearing Repair/Replacement	Bearings (Misc. Asset Data), or Bearing Element Items	<6, or any % Element Level in CS2 or CS3	WS/D/SS>4

**CONDITION-DRIVEN PREVENTATIVE MAINTENANCE  
ELIGIBILITY CRITERIA**

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Treatments Type	Bridge Component (Item Code)	Component Rating	Other Criteria <sup>2</sup>
Scour Mitigation	NBI Scour Evaluation Code (113)	2-4	Not Programmed for Bridge Replacement
Deck Crack Sealing	Wearing Surface (58.01)	>5	D/SS>5
Brush Cutting/Herbicide Application <sup>1</sup>	Deficiency Noted	N/A	WS/D/SS>4
Railing Repair <sup>1</sup>	Deficiency Noted	N/A	WS/D/SS>4
Relief/Terminal Joint Repair <sup>1</sup>	Deficiency Noted	N/A	WS/D/SS>4
Upgrading End Treatments, Guardrail, Railing, Attenuators <sup>1, 4</sup>	N/A	N/A	WS/D/SS>4
Adding Reinforced Concrete Deck to an Adjacent Box Beam Bridge without a Deck <sup>5</sup>	Superstructure (59) and Substructure (60)	(59) >5 (60) >4	N/A

CS = Condition State

<sup>1</sup> Items may only be included in a project incorporating other preventative maintenance treatments

<sup>2</sup> WS = Wearing Surface (58.01); D = Deck (58); SS = Superstructure (59) and Substructure (60)

<sup>3</sup> Treatments should raise the condition of the rating to 5 or higher

<sup>4</sup> When found to be cost-effective

<sup>5</sup> Treatment is applicable to LPA bridges only. The minimum allowable deck thickness is 5 in.

## CONDITION-DRIVEN PREVENTATIVE MAINTENANCE ELIGIBILITY CRITERIA

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