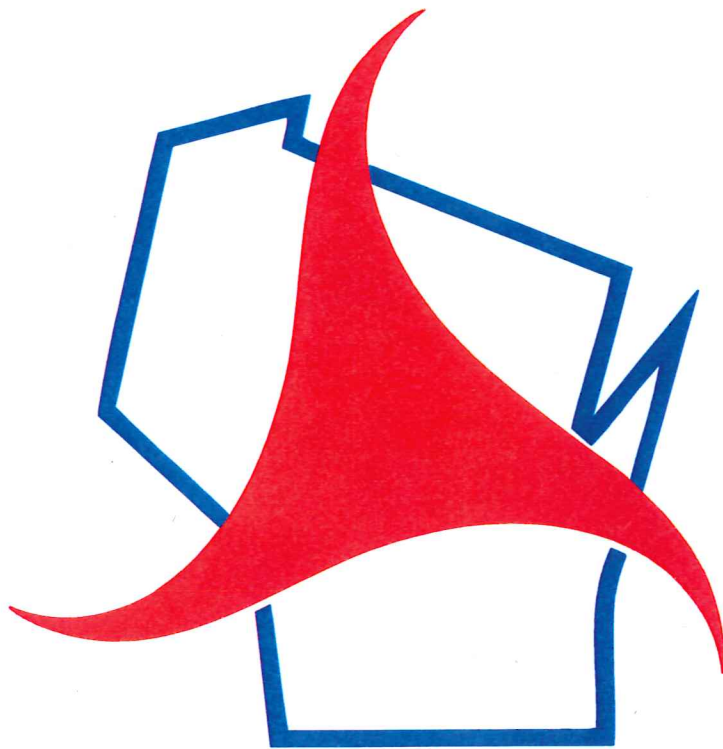


**FDM 3-1 Exhibit 5.2 Agreement for the Use of Federal Funds  
For Preventive Maintenance of Structures**



May 1st, 2016



## AGREEMENT FOR THE USE OF FEDERAL FUNDS FOR PREVENTIVE MAINTENANCE OF STRUCTURES

This agreement between the Wisconsin Department of Transportation (WisDOT) and the Wisconsin Division of the Federal Highway Administration (FHWA), is intended to further implement the use of Federal-aid Highway Funding for Preventive Maintenance (PM) and Preservation activities as authorized in 23 USC 116 (e), and the FHWA Memorandum dated February 25<sup>th</sup>, 2016 titled "Guidance on Highway Preservation and Maintenance" on all eligible Federal Aid Highways in the State of Wisconsin.

The criteria used to develop this Agreement is based on the FHWA Bridge Preservation Guide (FHWA-HIF-11042) published in August 2011, which is the basis for the Wisconsin Bridge Preservation Policy Guide. The Wisconsin Bridge Preservation Policy Guide documents consistent and systematic criteria to identify Structure PM and Preservation activities that are eligible for the use of Federal-aid Highway Funded Projects.


This agreement is limited to PM and Preservation activities on Structures. This agreement includes inspection and training activities to support data driven application of Preventative Maintenance (PM) and Preservation. It does not cover PM activities on Roadways. A separate agreement has been developed for PM activities on Roadways.

By signing this agreement, WisDOT and the FHWA incorporate by reference the laws, regulations, policies, standards, and procedures which govern or are applicable to Federal-aid projects. WisDOT certifies that it will comply with all provisions of 23 USC 133(b), "Surface Transportation Block Grant Program" and 23 USC 119(d) "National Highway Performance Program".

Nothing in this agreement shall be construed to relieve WisDOT from ultimate accountability for compliance with Federal Laws and regulations with respect to the expenditure of Federal-aid highway funds for PM activities in the State of Wisconsin, including those funds used for local government projects.

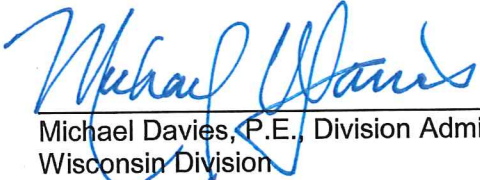
This agreement shall become effective May 1<sup>st</sup>, 2016. It may be canceled or modified at any time by mutual agreement of WisDOT and the FHWA.

### Wisconsin Department of Transportation

  
Joseph S. Olson, P.E., Administrator  
Division of Transportation System Development

05/13/16  
Date

### Federal Highway Administration

  
Michael Davies, P.E., Division Administrator  
Wisconsin Division

4/25/16  
Date

## I. DEFINITION AND PURPOSE OF PREVENTIVE MAINTENANCE

A PM program for structures can be defined as a planned strategy of cost-effective treatments to existing structures that are intended to maintain or preserve the structural integrity and functionality of elements and/or components, and retard future deterioration, thus maintaining or extending the useful life of the structure.

Preventive maintenance and preservation activities should extend the useful life of the existing structure without degrading safety or roadway geometrics. The evaluation of geometric features and accident information, in order to determine if geometric or safety enhancements are warranted is required, however some actions may be beyond the scope of many structures preventive maintenance and preservation work. However, installation or upgrading of guardrail and end treatments, restoring or upgrading bridge parapets, rails, approach signing, and approach and deck pavement marking to meet the minimum criteria may also be supported by this agreement where they are determined to be cost-effective .

Limits for bridge preventive maintenance will include the bridge plus nominal approach roadway lengths on each end to include the bridge approach guardrail. Advance load posting and vertical clearance signs beyond these limits may be included.

## II. SYSTEMATIC CRITERIA, TOOLS, AND PROCESS FOR IMPLEMENTATION OF PREVENTIVE MAINTENANCE (PM)

WisDOT's systematic PM program stems from the goals, measures, and criteria outlined in the WisDOT Bridge Preservation Policy Guide. The identification of our structures PM needs is accomplished with our structures management systems that include Highway Structures Information System (HSIS) and Wisconsin Structures Asset Management System (WiSAMS). These tools serve for identification, planning, and implementation of PM work by contract (LET) and county forces (RMA/DMA/PBM or equivalent). Our overall PM program will assure FHWA that WisDOT is compliant with the requirements of a Systematic Preventive Maintenance (SPM) Program as outlined in the August 2011 FHWA publication "Bridge Preservation Guide" Section VI as follows:

1. **Goals and Objectives** – The goals and objectives for the SPM program as outlined in the WisDOT Preservation Policy Guide, Section 4.
2. **Inventory and Condition Assessment** – WisDOT has a well-documented structures inspection program that utilizes Bridge Management Data System (HSIS).
3. **Needs Assessment** – The WiSAMS application conducts needs assessment based on Bridge Management Data (HSIS) and Preservation Policy criteria to identify, prioritize, and support programming of structures work.
4. **Cost Effective PM Activities** – WisDOT Bridge Preservation Policy documents that the proposed PM and Preservation activities are a cost-effective means of extending the life of a bridge.
5. **Accomplishing the Work** – WiSAMS supports Program and Project Level identification and programming of work to be accomplished through contract (LET) and county forces (RMA/DMA/PBM or equivalent).
6. **Reporting and Evaluation** – The combination of Structures Inspection Program, HSIS, WiSAMS, and FIIPS will have the ability to track, evaluate, and report on the planned and accomplished PM work on an annual and/or as-needed basis.

### III. CONDITIONS APPLYING TO THE USE OF FEDERAL FUNDS FOR PREVENTIVE MAINTENANCE (PM) AND PRESERVATION WORK ON STRUCTURES

The application of the Bridge Preservation Policy Guide and the Structures Management system comprised of the Highway Structures Information System (HSIS) and Wisconsin Structures Asset Management System (WISAMS) represent comprehensive structures (bridge) management policy and systems. Therefore, the use of Surface Transportation Block Grant Program and National Highway Performance Program funds are included in this agreement for Preservation and Preventive Maintenance Work actions.

The following conditions apply to the use of Federal funds for PM and Preservation work:

1. A structure is defined as a bridge or culvert which carries highway traffic.
2. The structure on which the work is to be done must be eligible for Federal funding.
3. For structures located off of the Federal Aid System (Local Road or Rural Minor Collector or less), the structures must have an opening measured along the centerline of the roadway of 20 ft. or greater to be eligible for Federal funding.
4. Work should be by competitive bid. Any non-let work must be approved in accordance with the requirements of FDM 3-20-11: Force Account Agreements and FDM 3-20-12: Cost Effectiveness Finding (i.e. Public Interest Documentation).
5. Federal funds can be used only for structure work and appurtenances to the structure under this agreement. PM work on the roadway is not covered by this agreement with the exception of installation or upgrading of guardrail and end treatments and advanced signage.
6. Roadway geometrics and appurtenances (i.e. guardrail, sign bridges, drainage structures, etc.) should not be degraded by the preventive maintenance work.
7. Bridge parapets and rails, approach guardrail, approach signing, and approach and bridge deck pavement markings must be evaluated and as practical be restored or upgraded to meet the criteria included in Section VI of this agreement.

**IV. ELIGIBLE ACTIVITIES & TYPES OF WORK**

This agreement acknowledges the data driven requirements for systematic PM and Preservation programs under 23 USC 144 (a) and the funding eligibility of Inspection and associated training for Structures Inspectors in accordance with 23 USC 119 (d) & (e).

The following types of work are eligible for the use of federal funds for preventive maintenance and preservation. In order to optimize the value of performing these activities, the various types of preventive maintenance and preservation work needed to restore a given structure (or combined structures for a given activity) should be combined into one project whenever practicable.

Examples of PM and Preservation to structures may include but are not limited to the following:

<ul style="list-style-type: none"> <li>• Power washing decks or bridges to remove chlorides &amp; de-icing chemicals</li> <li>• Sealing cracks or joints</li> <li>• Sealing decks</li> <li>• Concrete deck patching</li> <li>• Thin Polymer Overlay</li> <li>• Asphalt deck overlay with membrane</li> <li>• Polymer Modified Asphalt deck overlay (low permeability)</li> <li>• Concrete deck overlay</li> <li>• Installation of a Cathodic Protection System</li> <li>• Chloride Extraction</li> </ul>	<ul style="list-style-type: none"> <li>• Repair bridge length culverts (aprons, barrels, slope protection)</li> <li>• Riprap placement</li> <li>• Channel Restoration</li> <li>• Removing large debris from channels</li> <li>• Channel scour mitigation &amp; repair</li> <li>• Slope protection repair</li> <li>• Significant erosion around abutments, wing-walls, and slope paving</li> </ul>
<ul style="list-style-type: none"> <li>• Clean Expansion Joints</li> <li>• Open expansion joint replacement with a waterproof joint</li> <li>• Joint gland repair and replacement</li> <li>• Expansion joint repair or joint replacement</li> <li>• Expansion joint elimination</li> </ul>	<ul style="list-style-type: none"> <li>• Bridge approach restoration</li> <li>• Structural concrete and steel repairs including wing walls (except vehicle damage)</li> <li>• Bridge Rail Restoration/Retrofit to New Standards</li> <li>• Installing vehicle warning systems</li> <li>• Bridge sign placement and repair to include Load and Clearance Posting and protective Tiger Board on Bridge</li> </ul>
<ul style="list-style-type: none"> <li>• Spot painting</li> <li>• Zone repainting</li> <li>• Complete repainting</li> <li>• Spot repainting with complete overcoat</li> <li>• Bearing repairs, painting, or replacements</li> <li>• Railing spot &amp; zone painting</li> <li>• Railing retro-fit and replacement</li> </ul>	<ul style="list-style-type: none"> <li>• Repair Anchor Rod</li> <li>• Repair Galvanizing (rails &amp; bearings)</li> <li>• Pin &amp; Hanger replacement</li> <li>• Retrofit of Fracture Critical details and Fatigue Prone details</li> </ul>

Other structure restoration activities when justified through a design study report and concurred by the WisDOT Bureau of Structures and FHWA will be acceptable on an individual basis.

Bundling (combining projects) locations to establish a reasonable sized cost effective project is encouraged and eligible under 23 USC 144 (j).

#### V SPECIAL LIMITATIONS

The following actions are usually considered routine maintenance and are not allowed under this agreement.

- Vehicle damage repair
- Asphalt deck patching
- Asphalt Overlay without Membrane
- Graffiti Removal
- Flood damage & minor channel debris removal

The following actions are usually considered as Improvements and are not considered Preventive Maintenance or Preservation under this agreement:

- Bridge replacement
- Deck replacement
- Box culvert extensions

#### VI SAFETY CRITERIA FOR BRIDGE APPROACH GUARDRAIL, HIGHWAY SIGNING, AND PAVEMENT MARKING

The bridge parapets and rails, bridge approach guardrail, bridge approach signing, and bridge deck and approach pavement markings within the limits of a PM project must be evaluated and should be restored or upgraded when practical to meet the following minimum criteria (however it may not be practical or cost effective to include these elements in some PM projects):

- Restore damaged bridge parapet and rail elements.
- Replace damaged approach guardrail elements.
- Adjust rail height of guardrail to meet the criteria in FDM 11-45-1 and FDM 11-45-2.
- Transition and connect stand-alone bridge guardrail installations to the bridge rails.
- Eliminate all blunt end approach guardrail sections.
- Upgrade all approach guardrail installations with 12'-6" post spacing or with no block-outs.
- Upgrade all approach strong-post cable guard installations.
- Remove all vegetation obscuring any highway signing.
- Upgrade all deficient bridge approach signing and pavement marking.
- On Interstate Highways, bridge approach guardrail and end treatments must be upgraded to current standards for all overlays or similar projects; unless otherwise justified in the Design Study Report, and concurred in by the WisDOT Bureau of Highway Operation and FHWA prior to the submittal of the PS&E.

In addition, projects on the National Highway System (NHS) will be subject to the January 7<sup>th</sup>, 2016 FHWA Memo "**AASHTO/FHWA Joint Implementation Agreement for Manual for Assessing Safety Hardware (MASH)**" This memo encourages to upgrade existing safety hardware to comply with the 2016 addition of the MASH either when it becomes damaged beyond repair, or when an individual agency's policies require an upgrade to the safety hardware. This memo contains details on implementation requirements and timelines for NHS Federal Aid LET contracts.

## VII DEFINITIONS

**Preventive Maintenance (PM)** is a planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system (without substantially increasing structural capacity).

**Bridge preservation** is defined as actions or strategies that are planned and performed to prevent, delay, or reduce deterioration of bridges or bridge elements, restore the function of existing bridges, keep bridges in good condition and extend their life. Preservation actions may be preventive or condition-driven. Preservation activities improve, sustain, or restore the condition of transportation facilities.

**WisDOT Bridge Preservation Policy Guide** provides goals, measures, and strategies for the preservation of bridges. This document contains criteria that is used to identify condition based and non-condition based cyclical preservation, maintenance, and improvement actions that promote cost effective structure work actions that maximize project and system-wide life cycle cost and performance.

**Highway Structures Information System (HSIS)** is a web-based software developed by the Wisconsin Department of Transportation (WisDOT) that stores bridge and other ancillary structures' inventory and inspection related information.

**Wisconsin Structures Asset Management System (WiSAMS)**. Automated application to determine optimal work candidates for improving the condition of structures. This application serves as a programming and planning tool for structures improvements, rehabilitations, maintenance, and preservation. This application coupled with the Highways Structures Information System (HSIS) serves as a comprehensive Structures (Bridge) Management system.

**Routine Maintenance Agreement (RMA)**. Maintenance of state highways is performed by county highway departments under annual calendar year contracts called the Routine Maintenance Agreement (RMA) document. The RMA document provides each county with a state highway maintenance budget and the approval for expenditure within that budget.

**Discretionary Maintenance Agreement (DMA)**. This is a contracting mechanism initiated by the department with a county highway department for specific projects and locations. DMAs are typically entered in response to highway or services maintenance research opportunities, or awarded as part of a targeted maintenance initiative.

**Performance-based Maintenance (PbM) pilot**. Performance-based highway maintenance is based on the authority to contract with counties to perform specific highway maintenance tasks. Unlike Discretionary Maintenance Agreements which are paid based on actual cost reimbursement basis, PbM contracts are paid based on a negotiated contract price