

BRIDGE ADVISORY NUMBER: **BA-2018-02**

DATE: April 30, 2018

SUBJECT: **Required Documentation and Procedure for Electronic Waterway Data**

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ELECTRONIC WATERWAY DATA

Michigan Department of Transportation (MDOT) policy now **requires waterway data for each bridge to be maintained electronically within the Michigan Bridge Inspection and Management System (MiBRIDGE)**. Chapter 4 of the Michigan Structure Inspection Manual ([MiSIM](#)) specifies the data required to be stored.

Recent National Bridge Inspection Program (NBIP) reviews conducted by the Federal Highway Administration (FHWA) have identified that the scour assessment and stream bed cross-sections are sometimes missing or misplaced from the bridge file. Since scour is the primary cause of bridge failure nationwide, the value of having accurate and readily available information for each structure spanning water cannot be understated. The National Bridge Inspection Standards (NBIS) requires all bridges over water to have a documented evaluation of scour vulnerability, that all scour critical bridges have a plan of action (POA) to monitor known and potential deficiencies, and that bridges are monitored in accordance with the POA. To ensure this information is accessible during unplanned events MDOT is now requiring waterway data for each bridge to be maintained electronically within the Michigan Bridge Inspection and Management System (MiBRIDGE). This change will improve compliance with the NBIS and assist inspectors when the information is most needed.

REQUIRED DOCUMENTATION

ALL STRUCTURES OVER WATERWAYS

Prior to the **next inspection** cycle bridge owners shall review their hardcopy or electronic bridge files. Hardcopy documents shall be scanned so they may be stored electronically. The following waterway data for each bridge or culvert crossing water must be uploaded to MiBRIDGE:

- Scour Evaluation showing Coding of Item 113 (one of the following):
 - Level 1 Scour Assessment
 - Level 2 Scour Assessment
 - Scour Depth Calculations
- Stream Bed Cross-Sections

The above information must be maintained in accordance with the MDOT Guidelines for Bridge Inspection Frequency located at [HERE](#).

If any of the information cannot be located, bridge owners will need to complete the scour evaluation and stream bed cross-sections themselves or contract a consultant to provide them with the information. Scour evaluations must be completed according to Chapter 6 of the MDOT Drainage Manual located [HERE](#). Stream bed cross-sections will need to be completed during relatively warm months when surface waters remain unfrozen so prompt attention to scheduling the work is essential.

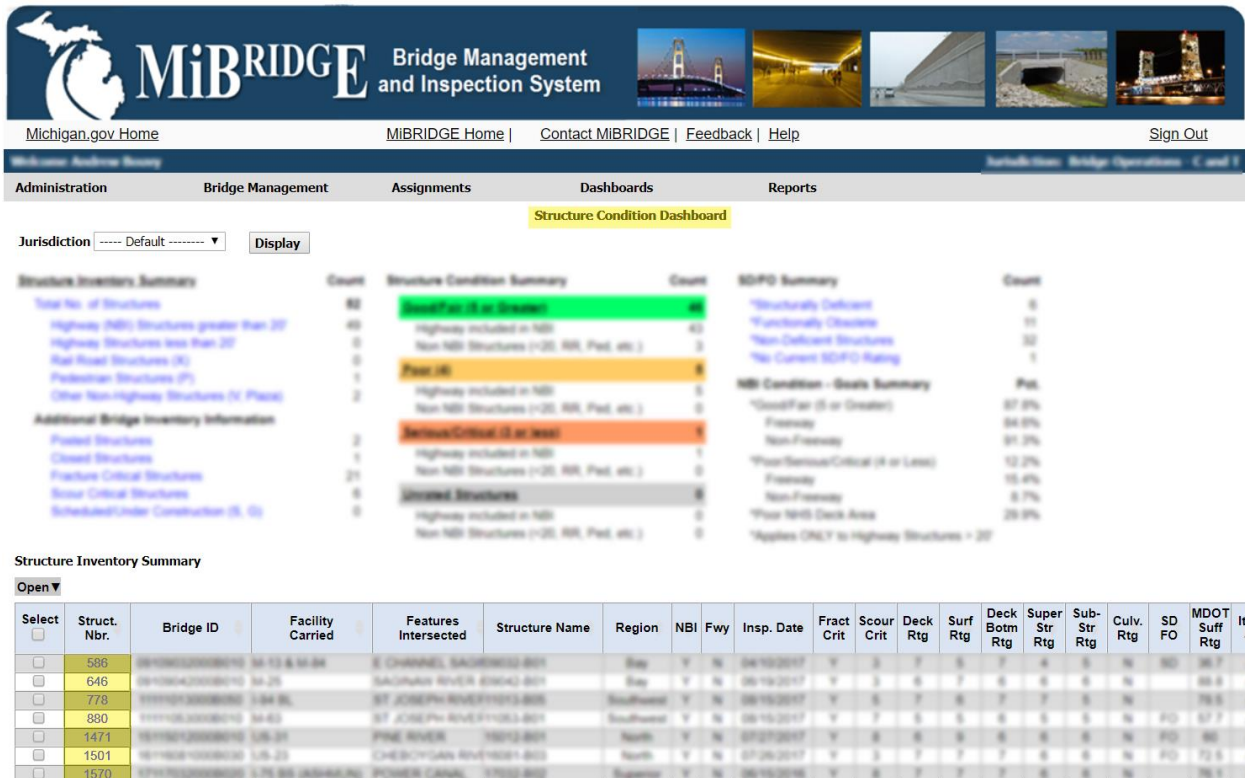
SCOUR CRITICAL STRUCTURES

Once the scour evaluation for all scour critical structures have been located, the POA should be reviewed in MiBRIDGE. Inaccurate or missing information on the POA should be updated to align with information in the bridge file. The POA should also be reviewed at this time to verify that scour monitoring has been performed according to the requirements described in the document. Additional information regarding scour critical bridge responsibilities and monitoring requirements may be accessed in Chapter 6 of the Michigan Structure Inspection Manual located [HERE](#).

INSTRUCTIONS FOR SAVING DOCUMENTS

The process of saving the necessary documents to MiBRIDGE is simple; however, additional time must be allocated as each applicable bridge must be accessed individually. Access the application at www.michigan.gov/bridgeinspect. If you do not have a username or profile please select the “Help with Access to MiBRIDGE” link located on the webpage.

Upon logging in to MiBRIDGE the default screen will display the Structure Condition Dashboard. Select the appropriate structure to upload files by clicking on the bridge number in blue numerals displayed in the Structure Number column.



The screenshot displays the MiBRIDGE Bridge Management and Inspection System interface. At the top, the logo and navigation links are visible. The main content area is titled "Structure Condition Dashboard" and includes a "Jurisdiction" dropdown menu set to "Default" and a "Display" button. Below this, there are several summary sections:

- Structure Inventory Summary:** A table with columns for "Count" and "Structure Condition Summary". It lists various structure types and their counts, such as "Total No. of Structures" (82) and "Highway (NB) Structures greater than 20'".
- SBFO Summary:** A table with columns for "Count" and "SBFO Summary". It lists structural and functional statuses, such as "Structurally Deficient" (6) and "Functionally Obsolete" (1).
- NBI Condition - Status Summary:** A table with columns for "Count" and "SBFO Summary". It lists various condition statuses, such as "Good (3 or Greater)" (87.8%) and "Fair" (9.3%).

At the bottom of the dashboard, there is a "Structure Inventory Summary" section with an "Open" button. Below this is a detailed table with the following columns: Select, Struct. Nbr., Bridge ID, Facility Carried, Features Intersected, Structure Name, Region, NBI, Fwy, Insp. Date, Fract Crit, Scour Crit, Deck Rtg, Surf Rtg, Deck Botm Rtg, Super Str Rtg, Sub-Str Rtg, Culv. Rtg, SD FO, MDOT Suff Rtg, and It4. The table lists several structures, including those with IDs 596, 646, 778, 880, 1471, 1501, and 1570.

After selecting the bridge the next screen will display the Inspections / Reports tab. Select the Documents tab located to the right and then click Add Document.

Inventory & Appraisal Inspections / Reports Load Ratings Work Recommendations Work History Documents						
Document / Photo Data						
<input checked="" type="radio"/> View Documents <input type="radio"/> View Photos Add Document Edit Document Details Delete Documents						
Select	File Name	Description	Report Date	Report/Group	Category	Upload Date
<input type="checkbox"/>	9902_2013_0202.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2014_0902_0902_7708.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013_Cross.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 East Pen Elev 201.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 East Pen Elev 202.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 SP Street.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 West Pen Elev 201.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 West Pen Elev 202.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013_Bridge.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Shore Crossings Part1.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Shore Crossings Part2.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Shore Crossings part 2 - 113 part 1, 112			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Tread and under 2006 Shore Crossings			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013_U76 Report.pdf	2013 Underwater Report		Under Water		02/28/2018
<input type="checkbox"/>	9902_2013_2018 & 13 Cross Section			Waterway	Cross Section	04/13/2018

A second browser window will appear after selecting Add Document. Next, click on Choose File and navigate to the folder where the scour evaluation or stream bed cross-section is saved on your computer. Choose the file and briefly wait for the data to upload. Select Waterway from the Report/Group dropdown field, click on the accurate Category Description, and then press save. Return to the Documents Tab screen to verify that the file(s) were saved to the application.

Inventory & Appraisal Inspections / Reports Load Ratings Work Recommendations Work History Documents						
Document / Photo Data						
<input checked="" type="radio"/> View Documents <input type="radio"/> View Photos Add Document Edit Document Details Delete Documents						
Select	File Name	Description	Report Date	Report/Group	Category	Upload Date
<input type="checkbox"/>	9902_2013_0202.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2014_0902_0902_7708.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013_Cross.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 East Pen Elev 201.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 East Pen Elev 202.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 SP Street.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 West Pen Elev 201.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013 West Pen Elev 202.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013_Bridge.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Shore Crossings Part1.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Shore Crossings Part2.pdf			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Shore Crossings part 2 - 113 part 1, 112			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	Tread and under 2006 Shore Crossings			Documents Tab	Photo/Sketches	02/28/2018
<input type="checkbox"/>	9902_2013_U76 Report.pdf	2013 Underwater Report		Under Water		02/28/2018
<input type="checkbox"/>	9902_2013_2018 & 13 Cross Section			Waterway	Cross Section	04/13/2018

https://miloginworker.michigan.gov/mdot-waps10/mibridge/displayDocumentTabAction.do?bridgeKey=091090320008010... - X

Secure | https://miloginworker.michigan.gov/mdot-waps10/mibridge/displayDocumentTabAction.do?bridgeKey=09109032...

SUPPORTING DOCUMENTS

Upload documents Choose File

File Name: [Sample Cross Section.xls](#)

Report/Group: Waterway

Category: Cross Section

Description: Level I

remove Level II

Save

Showing 1 to 15 of 15 entries Show 40 entries