

BRIDGE ADVISORY NUMBER: **BA-2019-03**

DATE: October 1, 2019

**SUBJECT: Storing Bridge Plans and Load Rating Documentation in MiBRIDGE**

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### **STORING BRIDGE PLANS AND LOAD RATING DOCUMENTATION IN MIBRIDGE**

Recent National Bridge Inspection Program (NBIP) reviews conducted by the Federal Highway Administration (FHWA) found that some bridge files did not include all required components. To ensure that all bridge files meet Federal requirements, Michigan Department of Transportation (MDOT) policy now **requires bridge plans and load rating documentation to be stored electronically in the Michigan Bridge Management and Inspection System (MiBRIDGE) beginning November 1, 2019**. All bridge plans and load rating documentation should be saved in MiBRIDGE within six months of the first bridge inspection performed after November 1, 2019, but no later than October 31, 2021. To satisfy this requirement, **bridge plans must be saved in MiBRIDGE using the Report/Group type “Documents Tab” and Category type “Plans/Sketches”, load rating documentation must be saved using the Report/Group type “Load Rating” and images of weight limit signs must be saved individually using the image Category type “Posting”**.

When work impacting the structural capacity is performed on a structure, the associated bridge plans must be saved in MiBRIDGE within 30 days of completion of the project. When a new load rating is performed or updated, the new load rating documentation must be saved in MiBRIDGE within 30 days of the load rating review date.

### **BRIDGE PLANS**

Bridge owners are required to upload digital plans or scans of hard copy bridge plans into MiBRIDGE. When file sizes exceed approximately 12 MB, it is recommended to split the file into multiple files or use a reduced quality setting.

If bridge plans do not exist, sketches must be created to capture the general characteristics and dimensions of the structure, including a general plan and elevation depicting the layout of the bridge, and detailed information describing load path members. Field measurements must be collected for steel or timber members carrying live load in order to complete the load rating analysis.

### **LOAD RATING DOCUMENTATION**

The AASHTO Manual for Bridge Evaluation (MBE) provides guidelines regarding the load rating and load posting documentation that should be included in the bridge file. These guidelines can be satisfied by:

- Completely and accurately filling out the load rating assumptions screen in MiBRIDGE, including, but not limited to:
  - Detailing any deterioration that impacts the capacity of the structure

- Describing all work completed since the structure was built that impacts the structural capacity or loading on the structure
- Describing the structure geometry and material properties of the structure
- Listing any unique factors that impact structural capacity
- Completely and accurately filling out the load rating summary screen in MiBRIDGE, including, but not limited to:
  - Listing the controlling component and failure mode
  - Listing the posted weight limits, if applicable
  - Entering the load rating analyst's name and the load rating reviewer's name, both of whom must have active MiBRIDGE user accounts
- Saving load rating documentation in MiBRIDGE using the Report/Group type "Load Rating". Suggested load rating documentation includes, but is not limited to:
  - AASHTOWare Bridge Rating (BrR) XML file (if applicable)
  - Input file or source file for the computer model (if applicable), for analysis programs other than AASHTOWare BrR. Note that MiBRIDGE currently only supports saving the following file extensions: XLS/XLSX, DOC/DOCX, PDF, RTF and XML. It is recommended that the bridge owner maintains an easily accessible copy of all program files that cannot be saved in MiBRIDGE to allow for future load rating analysis updates.
  - Output file (if applicable) for the controlling member, clearly indicating analysis methodology used, vehicles analyzed and analysis date
  - Hand calculations (if applicable), clearly indicating analysis methodology used, vehicles analyzed, analysis date and names of analyst and reviewer
- Verifying that existing load rating documentation meets the criteria listed below. If the existing documentation does not meet these criteria, a new load rating analysis may be necessary.
  - Matches the data entered on the load rating summary screen in MiBRIDGE
  - Includes all Michigan legal vehicles, as appropriate for the analysis methodology
  - Supports the posted weight limits (if applicable)
  - Identifies both the engineer who completed the analysis and the engineer who reviewed the analysis, one of whom must be a licensed PE in Michigan
  - Meets all FHWA requirements for the Assigned Rating methodology (if applicable). For additional guidance on Assigned Ratings, refer to the [9/29/11 FHWA memorandum on Assigned Load Ratings](#).
  - Meets all FHWA requirements for the Judgment Rating methodology (if applicable). For additional guidance on Judgment Ratings, refer to [MDOT Bridge Advisory BA-2012-02](#).
- Taking pictures of all weight limit signs present during each bridge inspection and saving the images in MiBRIDGE using the image Category type "Posting". For additional guidance on this requirement and for instructions on saving images in MiBRIDGE, refer to [MDOT Bridge Advisory BA-2018-01 \(REVISED\)](#).

#### **INSTRUCTIONS FOR SAVING BRIDGE PLANS AND LOAD RATING DOCUMENTS IN MiBRIDGE**

The process of saving the necessary documents to MiBRIDGE is simple; however, each applicable bridge must be accessed individually. MiBRIDGE can be accessed via the [MiLogin for Third Party](#) website. If you do not have a MiBRIDGE user profile, select the [Help with Access to MiBRIDGE](#) link located on the MiBRIDGE webpage for instructions.

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

**Structure Inventory Summary**

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
<input type="checkbox"/>	1																	
<input type="checkbox"/>	2																	
<input type="checkbox"/>	3																	
<input type="checkbox"/>	4																	

After selecting the bridge, the next screen will display the Inspections / Reports tab. Select the Documents tab, then click Add Document.

**Documents**

View Documents  View Photos

[Add Document](#) [Edit Document Details](#) [Delete Documents](#)

Select	File Name	Description	Report Date	Report/Group	Category	Upload Date
No data available in table						

After selecting Add Document, a second browser will appear. Select Choose File and navigate to the folder where the document is saved on your computer. Choose the file and briefly wait for the data to upload.

When saving documents containing bridge plans, select “Documents Tab” from the Report/Group dropdown field, then select “Plans/Sketches” from the Category dropdown field. Only documents saved with the Report/Group field set to “Documents Tab” and the Category field set to “Plans/Sketches” will be considered as fulfilling the bridge plans requirement. It is recommended to enter a brief description of the document in the Description field. Once you have entered the necessary document information, select Save, then return to the Documents Tab screen to verify that the file(s) were successfully saved to the application.

 Ensure you select the Save button after upload/update of your photos/documents or they will not be visible within the MiBridge application.

**SUPPORTING DOCUMENTS**

Upload documents Choose File No file chosen

File Name : [Bridge Plans.pdf](#)

Report/Group: Documents Tab ▼

Category : Plans/Sketches ▼

Description : Bridge plans

remove Save

When saving documents containing load rating documentation, select “Load Rating” from the Report/Group dropdown field, then select the appropriate option from the Category dropdown field. Only documents saved with the Report/Group field set to “Load Rating” will be considered as fulfilling the load rating documentation requirement. It is recommended to enter a brief description of the document in the Description field. Once you have entered the necessary document information, select Save, then return to the Documents Tab screen to verify that the file(s) were successfully saved to the application.

 Ensure you select the Save button after upload/update of your photos/documents or they will not be visible within the MiBridge application.

**SUPPORTING DOCUMENTS**

Upload documents Choose File No file chosen

File Name : [Load Rating Documentation.pdf](#)

Report/Group: Load Rating ▼

Category : ▼

Description : Load rating documentation

remove Save

**INSTRUCTIONS FOR SAVING IMAGES OF WEIGHT LIMIT SIGNS IN MiBRIDGE**

The process of saving images to MiBRIDGE is similar to the process for saving documents; however, from the Documents tab, select the View Photos radio button, then click Add Photos.

Inventory & Appraisal	Inspections / Reports	Load Ratings	Work Recommendations	Work History	Documents		
<b>Document / Photo Data</b>							
<input type="radio"/> View Documents <input checked="" type="radio"/> View Photos							
<input type="button" value="View/Print Photos"/> <input type="button" value="Add Photos"/> <input type="button" value="Edit Photo Details"/> <input type="button" value="Attach to Insp. Report"/> <input type="button" value="Detach"/> <input type="button" value="Delete Photos"/>							
Select	File Name	Description	Report/Group	Report Date	Category	Span	Upload Date
No data available in table							

After selecting Add Photos, a second browser window will appear. Select Choose File and navigate to the folder where the photo of the weight limit sign is saved on your computer. Choose the file(s) and briefly wait for the file(s) to upload.

When saving images of weight limit signs, select “Posting” from the Category dropdown field, enter the location of the sign under Description, and then press save. Only images saved with the Category field set to “Posting” will be considered as fulfilling this requirement. Return to the Documents Tab screen to verify that the file(s) were successfully saved to the application.

**SUPPORTING IMAGES**

Upload images

Choose Files



File Name	Posting sign.jpg
Category	Posting
Span	
Description	Westbound sign

remove

Save