

BUILDING THE NEXT GENERATION

# AASHTOWare BRIDGE<sup>®</sup>

PRODUCT NEWSLETTER

## BrDR

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- Bridge Design/Rating Data Exchange via IFC Data Standards
- Bridge Design/Rating 7.3 Enhancements
- Bridge Rating AASHTO Timber Engine
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## BrM

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- NBI Conversion Profiles
- Dashboards
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June • 2022



# A Letter from the Chair of Bridge Rating and Bridge Design



Greetings from the AASHTOWare Bridge Task Force. These last couple of years have been dynamic. We think we are back to normal and then the pandemic decides it's not quite over yet. Most of us are back to normal as far as work and

some have adopted new normal of working from home or a hybrid approach of working from the office and home. Thankfully our contractors were all able to continue to work and deliver high quality software products for the states during this time. The contractors have adapted and evolved to meet the demands with the conditions put upon them. I believe moving forward these new processes and approaches will continue to help improve the delivery of our software.

AASHTOWare released Bridge Design and Rating 7.2 in February 2022 and 7.1 in September 2021. With the 7.0 Modernized Release in January 2021, we are approaching the time to sunset the legacy version 6.8.4 on June 30, 2022.

Some of the major enhancements included with version 7.2 include the following:

- Steel Plate Girder Design Tool
- Prestressed Concrete Design Tool enhancements. Several of the significant new features and capabilities are:
  - » Girder system entry and girder line entry with additional design parameters.
  - » Structure framing plan, typical section, and beam profile schematics.
  - » Prestress tee beam design and additional strand configurations.
  - » Additional reporting capabilities including stability checks for transport.
- Load rating Tool enhancements: LRFr analysis of multi-girder systems, slab systems, and multi-cell box beams.
- In-memory management of Load Rating Tool's precomputed data repository.

- Superstructure data exchange via Industry Foundation Classes (IFC) data standard.
- Modernized BrDR Database Migration Wizard.
- Support Microsoft Azure SQL and PostgreSQL as BrDR database management system.
- Application Program Interface documentation updates.

Development has already begun on version 7.3 with a planned release in the Fall of 2022. Here are a few of the major enhancements included:

- AASHTO Timber Engine for ASR and LRFr
- AASHTO Metal Pipe Culvert Engine for LFR and LRFr
- AASHTO Structural Plate Box Culvert Engine for LFR and LRFr
- Manual for Bridge Evaluation Updates (3rd Edition, 2021 Interim Revisions)
- System Default Analysis Engine Settings by Member Types
- Refactoring of the Section Properties and Geometry Computation Modules
- BrDR Migration Wizard Phase 2—Database Repair Script Generator
- Improve BrDR Oracle Database Data Types Precision
- Modernize Bridge Copy Utility – Microsoft .NET 6 Platform
- BrDR WiX Installer—Next Generation BrDR Installer
- Internal Release Utility Version 3—Beta Testing Automation
- New York State DOT Sponsored Service Unit Enhancement
  - » User-Defined Flange Lateral Bending Stresses for Analysis

AASHTO currently plans to hold the user group meetings in person this year. So, plan to attend and reconnect with all the other users across the county or connect with new folks. Will be exciting to meet in person again.

I do want to thank all the users and their state agencies that allow them to participate in the numerous Technical

*(cont'd on next page)*

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Advisory Groups. This grass roots effort really ensures the success of AASHTOWare since it is the states software to guide and help move it in the right direction. There are dozens and dozens of users that have devoted their time to move the product forward. The Task Force really appreciates all the time and effort the states put into the product.

I would also want to thank all the task force members for the time they volunteer to help the product. We have three members how were re-appointed for a second three-year

term. Those members are David Hedeem, Kent Miller, and Mark Bucci. If you have any ideas, complaints, or compliments—please reach out to any of the Task Force members. We all care about the product and want it to be the best that it can be. So, any feedback is extremely appreciated.

*Todd Thompson, P.E.  
AASHTOWare Bridge Task Force Chair*

## Bridge Design PS Design Tool Upgrades and Testing

The latest version of the PS Design Tool (PSDT) released with Version 7.2 of BrDR contains many new features that will be of interest to the user. The software was also tested in a unique way that exercised the strand pattern algorithm in a more vigorous fashion.

Some significant new features and capabilities of the PSDT were added for this release that make the tool more robust. Some of the features/updates include:

- Girder system entry and girder line entry with additional design parameters and a diaphragm wizard
- Structure framing plan, typical section, and beam profile schematics
- Prestress tee beam design and additional strand configurations
- The capability to save beam designs
- A feature to export from BrDR/BrD/BrR to the Design Tool
- Debonding of harped strand patterns
- Cut top strands
- Compute the area of steel required in the negative moment region for bridges made continuous for live load
- Iterate on the concrete strength
- User control for Continuous/Continuous-Simple modeling
- Revisions to the strand pattern algorithm including moving strands to the web so they can be harped
- Additional reporting capabilities including stability checks for transport, camber tables, and hold down force calculations
- Capability to run the PSDT from a command line interface

In addition to the new features, a new method of verifying and later regression testing the PS Design Tool was developed. This included automatically generating and running thousands of PS Design input files in a batch mode and plotting the results in a way that can detect relative anomalies in the design tool algorithm. Using a spreadsheet, more than 8,000 PSDT input files for PS I-girders and PS spread box beams were generated and subsequently run in a batch mode using the newly added command line interface feature (see Table 1).

The output data was gathered and the results for the prestressing force vs beam spacing were plotted for different span lengths (see Figure 1) to try to determine if there are any breaks in the algorithm. For the figure showing the harped strands, expected patterns were observed as the PS force increases as the beam spacing increases for each specific span length. Eventually, the beam spacing becomes too large and a design is not found (as expected). Gaps in the curves and spikes in the curves would indicate an anomaly that would need to be investigated.

This type of testing allows us to fully exercise the algorithm by providing “snapshot” views of hundreds of testing cases at once which allows for the quick identification of potential problems. For this version, input files were developed for I-beams and Box beams which will continue to be used for future regression testing of the PSDT. Additional input files for different beam types (T-beams, U-Beams) can be added for future testing as well.

**Table 1. PSDT—Table of Runs**

Number of PSDT Runs				
Beam Type		Straight	Straight/Debonded	Harped
I-Girders	I-28x66	289	289	289
	I-28x78	289	289	289
	I-28x84	289	289	289
	I-28x90	289	289	289
	I-28x96	289	289	289
Spread Box Girders	BI-36		266	266
	BII-36		266	266
	BIII-36		266	266
	BIV-36		266	266
	BI-48		266	266
	BII-48		266	266
	BIII-48		266	266
	BIV-48		266	266
Subtotal		1445	3573	3573
Total		8591		

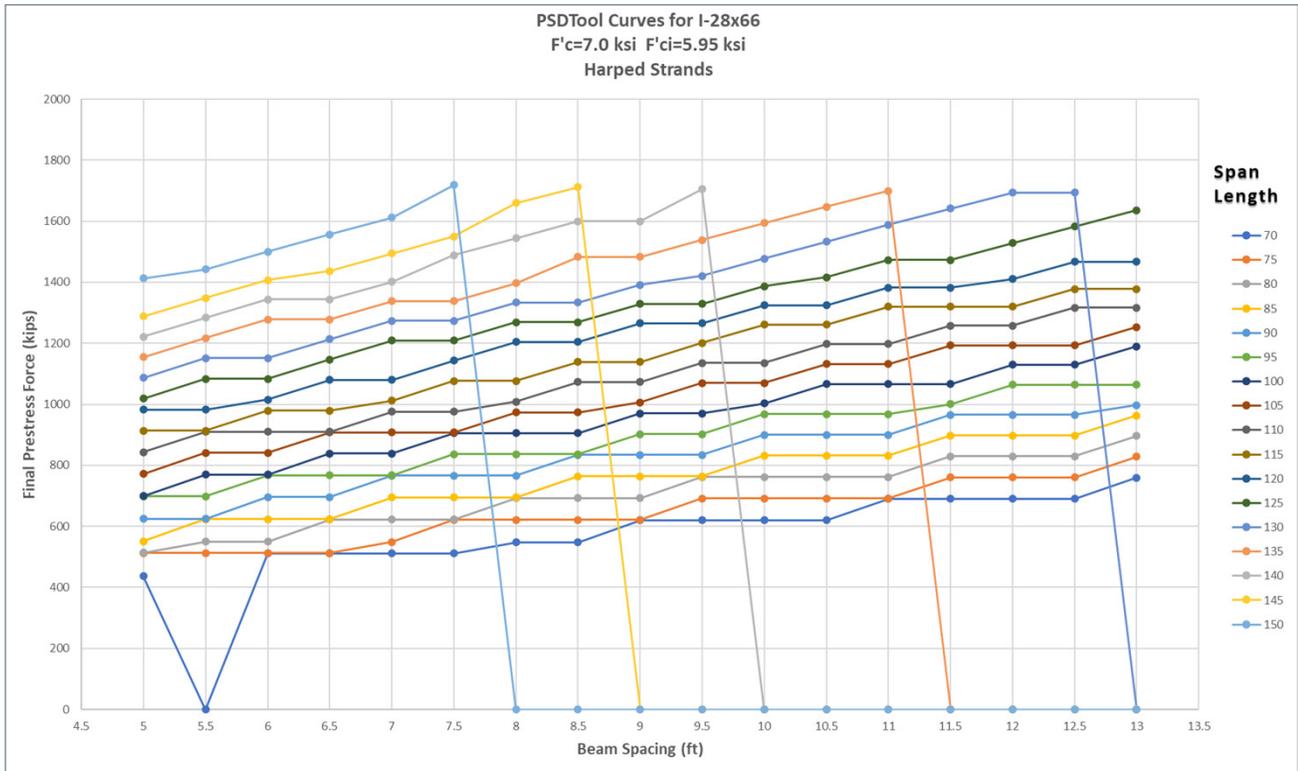


Figure 1. Harped Strands Curves

## Bridge Design/Rating Data Exchange via IFC Data Standards

In October 2019, the AASHTO Board of Directors approved Administrative Resolution AR-1-19 Title: “Adoption of Industry Foundation Classes (IFC) Schema as the Standard Data Schema for the Exchange of Electronic Engineering Data” recommending the adoption of the IFC Schema as the national standard for AASHTO States. The AASHTOWare BrDR Task Force recognized the importance of committing to this effort and submitted a request to the AASHTOWare Research, Innovation and Product Improvement Program for the implementation of BrDR data exchange via the IFC data standard. The objective of the product improvement request is to provide the ability to export BrDR bridge model data to IFC 4.3 bridge model files and to import IFC 4.3 bridge model files to the BrDR database. This new feature allows agencies to exchange BrDR bridge model data in a non-proprietary and vendor-neutral data format with other software that supports the IFC based data exchange. The tasks include populating the IFC 4.3 domain through the BrDR API and fully integrating the IFC import/export feature into the BrDR user interface. The BrDR superstructure data exchange via the IFC 4.3 data standard was implemented for the BrDR 7.2 release and the substructure data exchange is currently under planning.

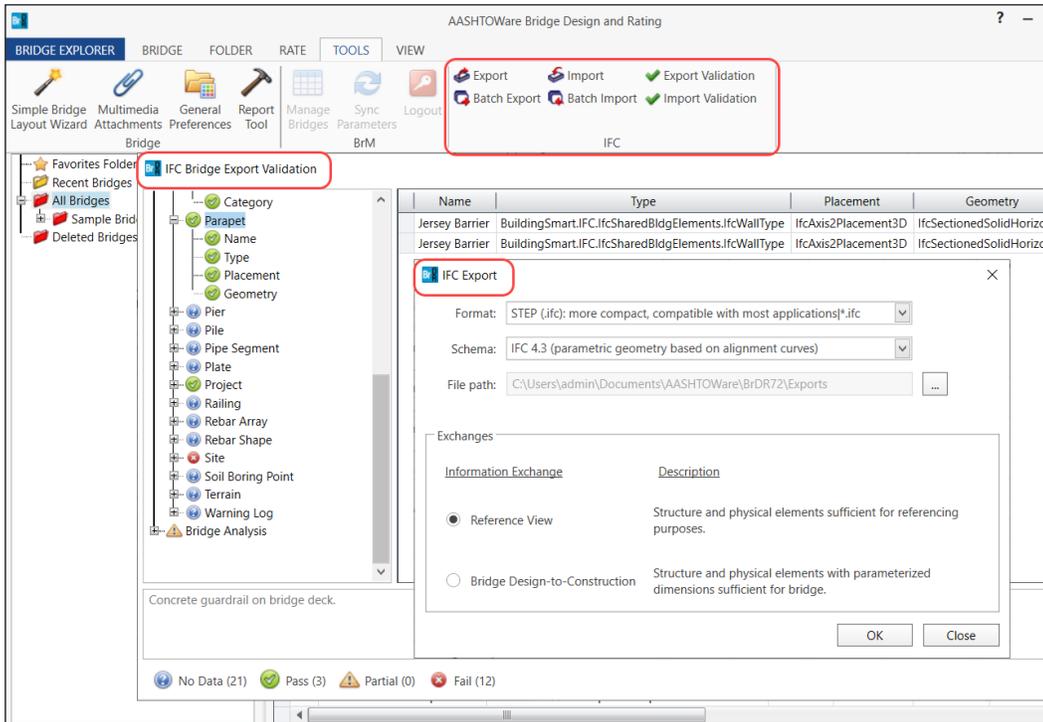


Figure 2. IFC Image

## Bridge Design/Rating 7.3 Enhancements

The major 7.3 enhancements expand the capabilities of the AASHTO Structural Analysis and Specification Checking Engine by supporting timber bridges and metal culverts. The 7.3 release is targeted for September 2022. Please contact BrDR Support at [BrDR@promiles.com](mailto:BrDR@promiles.com) for more information on the enhancements.

Table 2. BrDR 7.3 Enhancement List

Description	Product
<b>Task Force Enhancements</b>	
AASHTO Timber Engine for ASR and LRFR	BrR
AASHTO Metal Pipe Culvert Engine for LFR and LRFR	BrR
AASHTO Structural Plate Box Culvert Engine for LFR and LRFR	BrR
Manual for Bridge Evaluation Updates (3rd Edition, 2021 Interim Revisions)	BrR
System Default Analysis Engine Settings by Member Types	BrD/BrR
Refactoring of the Section Properties and Geometry Computation Modules	BrD/BrR
BrDR Migration Wizard Phase 2—Database Repair Script Generator	BrD/BrR
Improve BrDR Oracle Database Data Types Precision	BrD/BrR
Modernize Bridge Copy Utility—Microsoft .NET 6 Platform	BrD/BrR
BrDR WiX Installer—Next Generation BrDR Installer	BrD/BrR
Internal Release Utility Version 3—Beta Testing Automation	BrD/BrR
<b>New York State DOT Service Unit Enhancement</b>	
User-Defined Flange Lateral Bending Stresses for Analysis	BrD/BrR

# Bridge Rating AASHTO Timber Engine

AASHTOWare BrR (BrR) has supported timber girder and deck analysis using the third-party Madero Engine for Allowable Stress Rating (ASR) since 2001. While it has delivered accurate results over the years, a new undertaking was needed to provide the infrastructure for enhancement requests and allow the seamless operation of the timber structure analysis through both the BrR user interface (UI) and the BrR analysis Application Programming Interface (API).

With these requirements, AASHTO has decided to develop an AASHTO Timber Engine. This engine will conform to the latest design standards of software engineering and will facilitate adding new girder and deck types not currently supported by the BrR with the Madero Engine. For the upcoming release of version 7.3, in addition to the analyses supported by the BrR with the Madero Engine, the AASHTO Timber Engine will also support the analysis of structural glued laminated timber (glulam) girder and Load and Resistance Factor Rating (LRFR) of girder and decks. The BrR analysis with the Madero Engine will also be available like the previous versions.

The following is a summary comparison of the AASHTO Timber Engine features with those of the Madero Engine that will be provided for version 7.3:

**Table 3. AASHTO Timber Engine Capabilities**

Material and Member Type	BrR with Madero Engine	AASHTO Timber Engine	
	ASR	ASR	LRFR
Sawn Girder	✓	✓	✓
Sawn Deck	✓	✓	✓
Glulam Girder	×	✓	✓

Timber sawn material properties will be available in the BrR library based on LRFD Table 8.4.1.1.4-1. Glulam material properties will be available in BrR library based on ASD Table 13.5.3A and LRFD Table 8.4.1.2.3-1.

Adjustment factors entered on the UI will be used in the analysis but if they are not entered, the corresponding ASD or LRFD specification articles will compute them. These computations will be displayed in the specification check viewer.

The features of the new AASHTO Timber engine will include:

- Rating of timber models already entered in the BrR
- Analysis and results generation like other line girder analysis in the BrDR (dead and live load analysis computations) and user defined points of interest
- Glulam girder analysis
- Specification check viewer
- Timber deck LL reduction as per the footnotes of AASHTO Standard Figure 3.7.6A and 3.7.7A

# Bridge Rating Metal Culvert Load Rating

New for the 7.3 release scheduled for September 2022 is the load rating of metal culverts which will allow states to move away from the load rating of these structure types using spreadsheets. States can instead take advantage of the many features of BrR such as easy data entry, storage of culvert data for future ratings, batch load ratings, and permit analysis.

Both Load Resistance Factor and Load Factor load rating will be supported by the new AASHTO Metal Culvert engines and will implement the AASHTO Manual for Bridge Evaluation (MBE) Specification, 3rd Edition with 2021 Interims.

Supported structure types include:

- Metal pipe, pipe arch, arch and structural plate pipe structures
- Long-span structural plate pipe structures
- Structural plate box structures (also known as “metal box culverts”)

Features include:

- Steel or aluminum material
- Analysis follows the empirical procedures in the AASHTO LRFD and Standard specifications
- Deflection and deterioration are considered
- Optional Duncan & Drawsky plastic moment rating for pipe culvert



Figure 3. Metal Culvert



Figure 4. Metal Culvert

# A Letter from the Vice Chair of Bridge Management



After years in the making, the new National Bridge Inspection Standards (NBIS) and Specifications for the National Bridge Inventory (SNBI) have officially been published. The AASHTOWare Bridge Task Force has been actively planning for what has been described as the

most significant change to bridge inspection since the inception of the NBIS. The next generation of the AASHTOWare Bridge Management software is positioned to support DOTs as they implement these new requirements. Our plan will provide a seamless transition for the user community, but we need the help of all our licensees to make this successful.

AASHTO will be issuing the project solicitation request to fund the revisions to the AASHTOWare Bridge Management software to support compliance with the NBIS and SNBI. We ask that all licensees support this important undertaking through participation in the upcoming project solicitation. More information on the project solicitation is provided on pages 10 and 11.

The AASHTOWare Bridge Task Force looks forward to developing the next generation of the AASHTOWare Bridge Management software with the help and support of the user community. While we have been preparing for the NBIS release we have also been continuing to strategically develop our product to expand on the solutions we offer our users.

Version 6.6 is in final stages of testing and will be released before July 2022. This version will provide the following key features:

- **Funding by Project Allocation**
- **Critical Findings/Request for Action Module**
- **User Certification Module**
- **Signs Module**
- **Multimedia Enhancements (various)**
- **Excel Projects Upload Enhancement**
- **BrM Mapping Widget**
- **Pyramid Navigation**

The development of version 6.7 is underway and will include the top two requested enhancements from the 2021 User Group Meeting. More information about these new features can be found in the articles on pages 12–14. Version 6.7 is planned to be released in early 2023 with the following key features:

- **Ability to assign different NBI Conversion Profiles**
- **Dashboards**
- **Ancillary Assets Module**
- **Display converted General Condition Ratings**
- **Ability of an Agency to configure its Landing Page**
- **LCCA to report inputs and outputs**

The 2022 User Group meeting will be hosted in Minneapolis, Minnesota on September 13-14, 2022. We encourage agencies to participate in the User Group Meeting to continue to shape the future of the AASHTOWare Bridge Management software and learn about upcoming new features.

Finally, we would like to thank the user community for the many contributions ranging from service unit donations to their participation in our Technical Advisory Groups to pre-solicitation funding commitments to incorporate the new NBIS and the SNBI. Your involvement is what makes the AASHTOWare Bridge Management software capable of meeting the ever-changing challenges of bridge inspection and management across the country.

If there is anything that the Task Force can do or continue to do to improve your experience with the AASHTOWare Bridge Management software, please feel free to contact us. The Task Force strives to provide the best bridge management software to meet the needs of all members of the user community.

*Eric Christie, P.E.  
Vice Chairman AASHTOWare Bridge Task Force*

# AASHTOWare Bridge Management (BrM) Next Generation Driven by NBIS Release

The AASHTOWare Bridge Task Force is actively responding to the most significant change to the bridge inspection since the initial adoption of the National Bridge Inspection Standards (NBIS). The NBIS and Specifications for the National Bridge Inventory (SNBI) were released in May 2022. The AASHTOWare business model strives to keep the annual cost of the software as low as possible for all member agencies. However, at strategic times, AASHTO must pursue solicitations to be able to respond to major initiatives, such as changes in federal law or policy. This solicitation will ensure that the AASHTOWare Bridge Management (BrM) software maintains regulatory compliance, improves product functionality, and builds sustainability all in one effort. This effort will also be completed well in advance of the Federal deadlines. The below timeline was issued by the Task Force on the day the NBIS and SNBI were released.

Full participation in the solicitation will ensure that AASHTOWare will not only implement the new inspection requirements into BrM well in advance of Federal deadlines, but also allow agencies to continue bridge management in the new format.

The immediate next steps are for the Task Force to create a work plan around the solicitation funding received by member agencies and have Mayvue start the development. As shown in the timeline, the initial/early hosted release for contributing agencies will be Spring 2023, allowing approximately three years before inspections need to be completed in the new format.

In addition to meeting the new Federal rules, we will be improving the software’s performance, updating the user interface, and proactively updating the BrM codebase to ensure sustainability for years to come. Please consider being a part of building the next generation of BrM through this important initiative.

September 2022	States to notify AASHTO of intent to participate and contributing agencies are encouraged to submit work plan comments to the AASHTOWare Bridge Task Force.
October 2022	Solicitation work plan finalization, development of BrM 7.0 starts.
February 2023	BrM 6.7 release—Includes NBI Conversion upgrades, Dashboards, and Ancillary Assets (advancement to the multi-asset framework). The effort is already underway.
Spring 2023	BrM 7.0 (early) release—Available for contributing agencies on a Mayvue hosted environment. Focused on data collection, first version of the migration tool, and data validation. Agencies can adapt their reports, APIs, and business practices to the new requirements.
March 2024	BrM 7.0 release—Complete inspection overhaul including visual form editor (VFE) for custom forms, inspection types, QA/QC module, multimedia, etc.
January 2025	BrM 7.1 release—Updates to the Optimizer, Life Cycle Cost Analysis (LCCA), and Analysis tools using the new data format, in preparation for the 2026 TAMP submittal!
March 2026	First NBI submittal reported to FHWA in SNBI format. Data can consist of mostly transitioned data that has not yet been collected using the SNBI or verified as conformant with the SNBI.

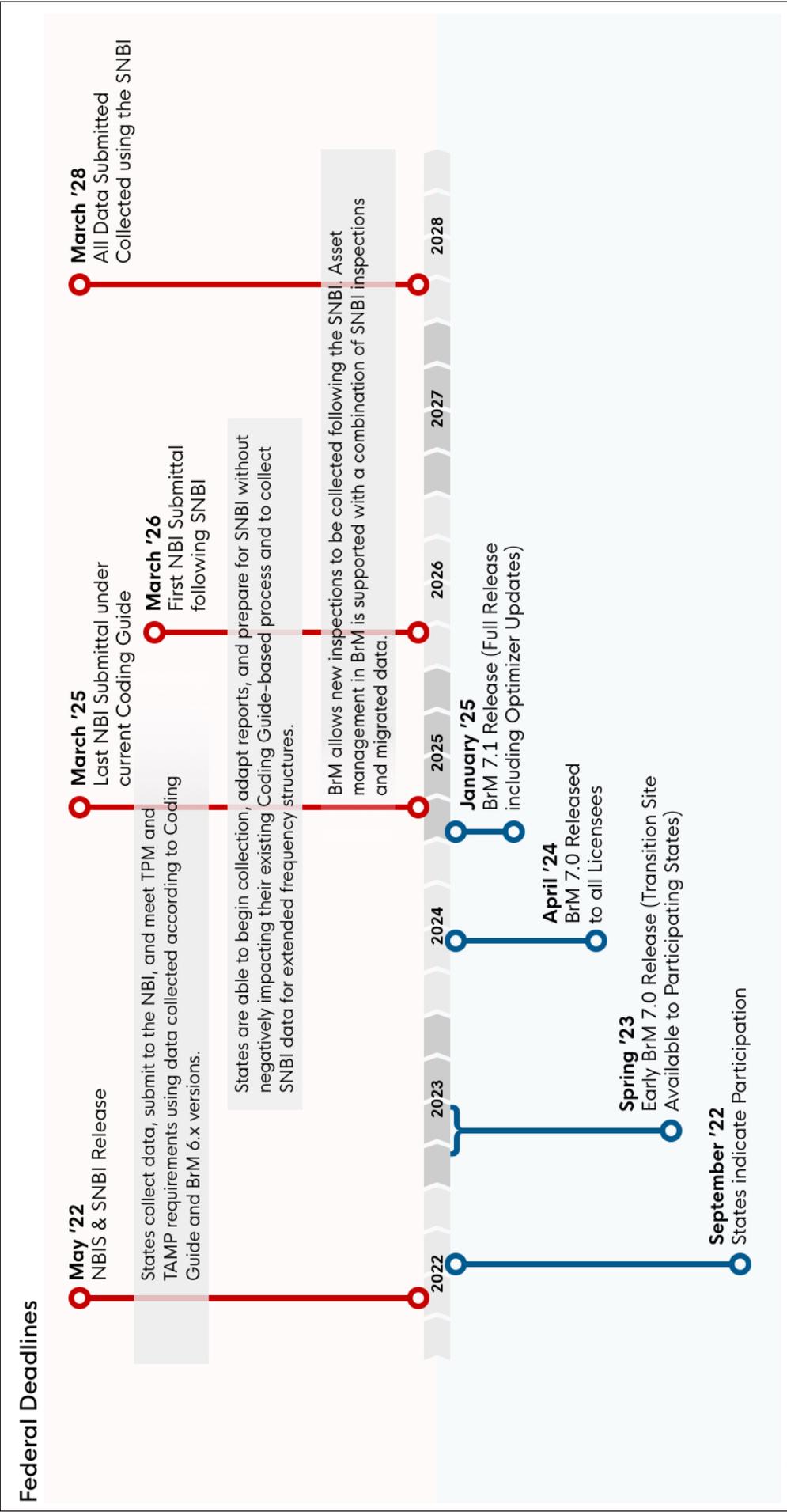


Figure 5. Timeline

# BrM's Evolution into a Multi-Asset Solution

Many state DOTs are interested in collecting inventory and inspection data of ancillary structures in order to maintain public safety and support asset management. A number of our DOT partners, after evaluating options, have decided that they would prefer to manage these structures in BrM, which has been trusted for bridge data collection and management for decades. In the spirit of joint development that is the backbone of AASHTOWare, these states have led enhancements of the software to support multi-asset data collection.

In 2017, the AASHTOWare Bridge Management software was enhanced with a Tunnels module to comply with the National Tunnel Inspection Standards (NTIS) that was signed into law in 2015. With the release of version 6.6, the BrM software was again enhanced with a Signs module providing agencies with a means to track, inspect, and manage their overhead signs inventory. This was a joint development funded effort by multiple states.

BrM Version 6.7, planned for release in 2023, will take multi-asset a step further by allowing agencies to create their own asset types, define the fields for collection for each asset type, define and collect their elements per inspection, and the ability to store multimedia with those inspections. In other words, this will allow BrM agencies to define, track, and inspect whatever asset type the agency needs. BrM's ancillary asset module will leverage the inspection capabilities and many of the core inspection features designed and improved for bridges over decades.

This strategic addition is driven by BrM users looking for a one-stop location for all asset inspection data and fueled by the Michigan Department of Transportation who funded the design and development of this module. The Task Force has reviewed, supplemented, and approved its integration into BrM core and is excited for its roll out in 2023.

The effort does not include modifying the management modules within BrM currently. However, the Optimizer could eventually be enhanced with options to complete cross-asset optimization analysis for agencies that include other asset types, if the BrM users have this need. More information will be sent to the user community concerning the impact of the software becoming multi-asset, including impact to the software's name, branding, and roadmap.

## Coming Soon to BrM: Dashboards

The ability of a transportation agency to effectively implement asset management can be directly related to how well they are able to consume and communicate important data – for both inspection and management. The dashboard enhancements added to the program in version 6.7 will support agencies in fulfilling these tasks. Inclusion of general dashboards was the second highest voted user priority in 2021. This enhancement will provide important information to managers and inspectors alike without having to dig through the software to find or export the data into a third-party dashboard software. The Dashboard module released with version 6.7 will be the first iteration and is targeted to meet the essential needs of dashboards and reporting. Additional enhancements and reporting tools will be added as the software progresses and the user community further defines their dashboard and visual graphic needs.

The Dashboards modules will support users in sharing important bridge inspection and management data. The Dashboards module will have a Visual Dashboard Editor that allows agencies to create and manage graphs that can be added as widgets to any Visual Dashboard Editor pages. The Dashboard Module will also support users in working within their bridge data. The dashboards will have a counts component, providing users with calculated counts about their specific region/jurisdiction or across the entire agency depending on permissions, and populating a filtered table just below the dashboard if/when the count is selected.



Figure 6. BrM’s current Executive Summary setup page. The dashboard graph configuration will probably have similar features to this screen.

## NBI Conversion Profiles Enhancement (#1 User Voted Priority)

Accuracy of inspection data is key to having confidence in your asset management analysis. Agencies have expressed interest in converted GCR ratings on the inspection in order to improve inspection ratings by guide inspectors to consider the gap between their GCR rating and the conversion of their elements. The NBI Conversion Profiles enhancement was the highest voted user priority in 2021 and will support this agency direction. The purpose of NBI Conversion profiles are to convert element data to an approximate General Condition Rating (GCR). These converted ratings are then used throughout the optimization process for applicable network policies, lifecycle policies, and performance measures.

In the past, agencies were forced to use a one-size-fits-all approach to these conversion profiles. The same threshold of how much condition state 4 constitutes an NBI of 4 was the same for all districts, for all structure types and material types. And while this gets the agency close, it’s not as close as it could be.

This improvement will also allow agencies to tighten their accuracy for the varying district practices and for the different structure types (condition state 4 quantities tend to be much worse for pre-stressed concrete beams than for reinforced concrete beams, and so agencies might want a different threshold).

While enhancing this feature, the Task Force will also be allowing the slab elements to convert to both a super and a deck rating—an improvement that helped propel this to the top User Group Request of 2021.

FHWA is simultaneously working on some improved recommendations for conversion profiles, and the Task Force will be watching their progress as well to ensure we take their recommendations into consideration.

In summary, element conversion is about to experience a quantum leap forward in accuracy and precision.

**USER, PONTIS** Admin > Modeling Config > NBI Conversion Profiles

**BrM Bridge Management** AASHTOWare

**NBI Profiles**

NBI Profile Name	Status
BrM Default	▶
BrM Default - Copy	✖
FHWA Profile	▶
RIDOT	✖

**Profile Details:**

Name: BrM Default - Copy

Profile enabled

• Generic | **Deck** | Superstructure | Substructure | Culvert

**Generic Upper Limits**

Group enabled  
Method of CS averaging: Element weighting

NBI	Enabled	CS1 %	CS2 %	CS3 %	CS4 %
9	<input checked="" type="checkbox"/>	100	1	1	1
8	<input checked="" type="checkbox"/>		5	5	1
7	<input checked="" type="checkbox"/>		20	5	2
6	<input checked="" type="checkbox"/>			10	3
5	<input checked="" type="checkbox"/>			20	5
4	<input checked="" type="checkbox"/>				15
3	<input checked="" type="checkbox"/>				100
2	<input type="checkbox"/>				
1	<input type="checkbox"/>				

**Network NBI Rating distributions**

Bridge Filter: Entire Network [Re-estimate results](#)

Component: Bridge-Level

	Latest Inspection	Latest Inspection Converted	Current	+5 Years	+10 Years
NBI Rating 9	1	23	17	5	2
NBI Rating 8	33	47	43	34	15
NBI Rating 7	242	109	113	107	97

Figure 7. The existing BrM NBI conversion profiles page, which take a one-size fits all bridges approach to NBI Conversion.

## AASHTOWare Bridge Mobile Inspection Powered by Mayvue

Mayvue's mobile application, which functions as an extension of the AASHTOWare Bridge Management software, is available for agencies to license via the AASHTOWare catalog.

It is an opportune time to research how the mobile application can benefit your agency. With the forthcoming changes stemming from the NBIS and SNBI release, the current state of practice for bridge inspection is being upended and inspection staff across the country will need to be retrained. This may be the time to not only train inspectors on the modern inspection format but also on modern inspection data collection tools. The mobile application will be modified to remain aligned with the BrM software and compliant with the NBIS and SNBI, providing a uniform approach to completing inspections. Furthermore, the mobile application has been developed in a way to easily modify/configure to the agency's exact setup.

While all of the inspection process changes may seem time consuming and challenging, Mayvue can make mobile implementation seamless and pain-free to the agency. Please contact Mayvue to learn more.



## Product

### WEBSITES

AASHTOWare® Bridge Management:  
<https://www.aashtowarebridge.com/bridge-management/>

AASHTOWare® Bridge Rating and Design:  
<https://www.aashtowarebridge.com/bridge-rating-and-design/>

### SAVE THE DATES

#### 2022 AASHTOWare Bridge User Group Meetings

Rating and Design Bridge User Group (RADBUG)

August 2–3, 2022—New Orleans, LA  
Bridge Management User Group (BrMUG)

September 13–14, 2022—Minneapolis, MN

For additional information on the bridge product user group meetings, please contact Ryan Fragapane, AASHTOWare Bridge Products Project Manager ([rfragapane@ashto.org](mailto:rfragapane@ashto.org))



## AASHTOWare Bridge Product Contractors

### AASHTOWare Bridge Management

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Phone: 877-462-9883  
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### AASHTOWare Bridge Design and Rating

ProMiles Software Development Corporation  
300 Corporate Center Drive, Suite 310  
Moon Township, PA 15108  
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## AASHTOWare Bridge Task Force

**Todd Thompson—South Dakota DOT**  
Chair, Bridge Products Task Force

**Eric Christie—Alabama DOT**  
Vice Chair/Task Force member, BrM

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**Beckie Curtis—Michigan DOT**  
Task Force member, BrM

**Craig Nazareth—Rhode Island DOT**  
Task Force member, BrM

**David Hedeem—Minnesota DOT**  
Task Force member, BrM

**Kent Miller—Nebraska DOT**  
Task Force member, BrM

**Derek Constable—FHWA**  
Task Force FHWA Liaison, BrM

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**Mark Bucci—Louisiana DOTD**  
Task Force member, BrDR

**Mike Johnson—Idaho TD**  
Task Force member, BrDR

**Jeffrey Ruby—Kansas DOT**  
Task Force member, BrDR

**Vinacs Vinayagamoorthy—California DOT**  
Task Force member, BrDR

**Tom Saad—FHWA**  
Task Force FHWA Liaison, BrDR

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**Ryan Fragapane—AASHTO**  
Project Manager

**Monica Ledet—AASHTO**  
Associate Project Manager



## About AASHTOWare®

The AASHTOWare technical service program has a rich history of serving its customers and being a leader in bringing the power of technology through automation to the public sector transportation industry.

As we look to the future, it is important that we build on this rich and robust tradition to create the next generation of technology solutions and continuously improve service to our customers. We base our success on the commitment of hundreds of volunteers, in partnership with the private community, to produce quality products that meet the common needs of our customers.

The challenges we face now and into the future are increasingly more complex than in the past. To ensure continued success as we establish our next generation of products and services, we will clearly focus on a mutually agreed upon set of principles and values to drive our strategic plan, vision, mission, goals and objectives.

### American Association of State Highway and Transportation Officials

555 12th St. NW, Suite 1000, Washington, DC 20004

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