

**Minutes Of The**  
**AASHTOWare Bridge Management Task Force Meeting**  
**April 3 - 4, 2019**                      **Alexandria, VA**

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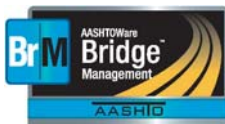
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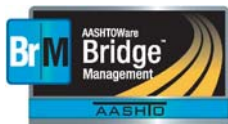
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**General Information – Meeting of the Bridge Task Force**

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Date: Wednesday, April 3, 2019

Participants:

AASHTO	Judy Tarwater	AASHTO	Project Manager
SCOA	Tim Armbrecht	Illinois DOT	SCOA Liaison
T&AA	Will Holmes	Kentucky TC	T&AA Liaison
BrM Task Force	Eric Christie	Alabama DOT	Vice-Chair
	Derek Constable	FHWA	FHWA Liaison
	Beckie Curtis	Michigan DOT	Bridge Management
	Mark Faulhaber	Kentucky TC	Bridge Management
	Craig Nazareth	Rhode Island DOT	Bridge Management
	Bruce Novakovich	Oregon DOT	Bridge Management
BrDR Task Force	Todd Thompson	South Dakota DOT	Chair
	Mark Bucci	Louisiana DOTD	Bridge Design (BrD)
	Michael Johnson	Idaho TD	Bridge Rating (BrR)
	Dean Teal	Kansas DOT	Bridge Design (BrD)
	Vinacs Vinayagamoorthy	Caltrans	Bridge Rating (BrR)
BrM Contractor	Josh Lang	Mayvue	Bridge Management
	Zac Boyle	Mayvue	Bridge Management
	Anthony Hutskow	Mayvue	Bridge Management
Guests	Jose Aldayuz	DCDOT	Bridge Management
	Akeia Carter	AASHTO	AW Marketing
	Tinika Fowlkes – by phone	AASHTO	Cust Success Mgr
	Brian Korschgen	AASHTO	Project
	Vicki Schofield	AASHTO	Safety Anal / Pavement
	Todd Springer	VDOT	Bridge Management
	Douglas Blades	FHWA	

**General Discussion**

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Eric Christie convened the meeting at 1:30pm. Eric introduced and welcomed guests and everyone performed self-introductions.

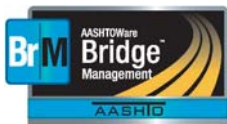
**Agenda Item 00: Review Agenda / Assign Minutes Recorder**

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Judy Tarwater and Anthony Hutskow will take the meeting minutes. The agenda was reviewed and one additional topic was added:

Agenda Item 13d: Element Manual Update

The Task Force scheduled a conference call with Emily Berry (SCDOT) for 9:00am on Thursday to discuss SCDOT Bridge Management and Bridge Rating initiatives.



**Agenda Item 01: Prior Business**

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1a. Review January Meeting Minutes

Minutes from the January 29 – 30, 2019, Task Force meeting held in Long Beach, CA were reviewed and approved as-is.

1b. Review January Meeting Summary Minutes

The Summary Minutes for the January Task Force Meeting in Long Beach, CA were reviewed and approved as-is.

**Agenda Item 02: Project Update**

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2a. Budget and Schedule

Mayvue presented the budget report for the FY19 MSE contract. All billings reported include invoices issued through 03/31/19. The overall budget spent to date – 80%. Mayvue advised that they are likely going to exceed the total for the MSE contract and exceed certain Time and Materials categories such as is (e.g. customer support). Mayvue identified that it will not invoice for any contract overages this fiscal year.

Mayvue presented the budget report for BrM 5.3.01 (6.0) Project contract. All billings reported include invoices issued through 02/28/19. Most of the work to date under the BrM 5.3.01 Project contract has been under FP1 (Patchable Version), FP3 (Updates and Improvements to Reports), FP4 (Mapping Feature Enhancements), FP5 (NBE Import), FP6 (BrM 6.0 Release), and FP8 (Regression Testing Tool). The overall budget spent to date – 37%. Mayvue advised that the version 5.3.01 (6.0 Work Plan) will be fully invoiced before the end of the FY2019.

2b. Customer Support Statistics

Mayvue presented an overview of the customer support hours by agency as of 03/31/19. Georgia, Hawaii, Illinois, Kansas, Kentucky, Los Angeles County, Michigan, New Jersey, Oregon, Rhode Island, and South Carolina have used support hours exceeding 50. Agencies with more than 25 support hours include Alaska, California, FHWA, New Hampshire, and North Dakota. Mayvue estimates that approximately 85%-90% of customer support is related to environmental issues. If we can move towards more agencies hosting their BrM environment with Mayvue, customer support hours would decrease significantly.

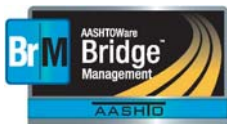
2c. Service Unit Status

Judy Tarwater presented the service unit status report as of 03/19/19. A majority of the service unit projects are on track.

2d. License Revenue Report

Judy Tarwater provided a summary of FY19 license activity (and revenue) as of 03/19/18.

License Type	Quantity
BrM Evaluation License	2
BrM Educational License	5
HAO Service Units	10
BrM Local/Small Agency License	2
Local/Small Agency Support	1



**REDACTED**

Service Units	77
BrM Super Site License	47
BrM Developer License	3

The three developer licenses are licensed by Bridge Intelligence, LLC, iENGINEERING Corporation, and Bentley Systems, Inc.

**2e. Service Unit Report**

Judy Tarwater provided a summary of service unit activity as of 12/12/18. 77 new service units have been purchased in FY2019. A discussion on BrM license fees ensued. In short, there is a need for a significant license to the BrM fee increase structure to align with the software’s abilities and usefulness, and to support the costs associated with on-going customer support and enhancements needed to keep the product relevant.

**Agenda Item 03: FHWA Report**

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Derek Constable provided the following FHWA update.

**National Tunnel Inventory and Inspection Program**

- **NEW** - The FHWA Divisions were provided the NTIP compliance review manual in January. The manual includes 15 metrics and is structured like the NBIP compliance review process. The Divisions received training in March.
- **NEW** - Two-year rollout with some metric compliance determinations made by late 2019. All metrics will be assessed in 2020.
- **NEW** - The Divisions should now be informing their States about the process and coordinating their 2019 review.

**NBIS Regulation Update**

- **NEW** - Release for comment estimated date now July 1, 2019.
- It is currently awaiting USDOT approval, then must be approved by the White House Office of Management and Budget.
- As a reminder, MAP-21 requires an NBIS update that includes (a) the methodology, training, & qualifications for inspectors, and (b) the frequency of inspection with consideration of risk-based approach.
- For current status refer to <https://www.transportation.gov/regulations/report-on-significant-rulemakings>

**National Bridge Inventory Coding Guide Update**

- Still planned to be released for comment with the NBIS update.

**Asset Management Plans**

- Each State submitted an initial TAMP by 04/30/18. FHWA has certified the processes for all States.
- Each State shall submit a Complete TAMP developed in accordance with their FHWA certified processes and demonstrate implementation by 06/30/19.
- Using the initial TAMPs FHWA is preparing a report on best practices. Webinars will likely follow.



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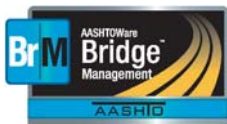
- Continue to monitor the FHWA AM page for new and updated resources. Q&As are consistently updated. A life-cycle planning handbook was recently posted.
- **NEW** - A life-cycle planning (LCP) document titled A Handbook on Putting the Federal Guidance into Practice was posted January 2019.
  - Supplements the 11/17 LCP guidance.
  - Demonstrates how alternative strategies for investing in different work types can be analyzed, including comparing worst-first, moderate preservation, and aggressive preservation.
  - Performance outcomes are measured by condition and life-cycle cost.
  - Demonstrates how analysis can produce a series curves show performance over time versus annual investment for different work allocation strategies.
  - These curves can then be used to generate the curves given in the 11/17 guidance that show performance versus total annual investment. Typical of benefit-cost curve, this demonstrates a diminishing return at higher levels of investment (keeping in mind that the point of substantial diminishing return is higher than typical budget levels). Such curves can inform decisions on investment strategy and targets.

## TPM – Transportation Performance Management

- Targets were reported to FHWA in 2018. Mid-performance period reports are due 10/01/20.
- FHWA resources for bridge TPM:
  - NHI one-day instructor lead bridge training. Schedule from NHI website.
  - **NEW** - Web-based bridge training posted to NHI website in January 2019. This free and approximately 1-hour training presents the fundamentals of the FHWA bridge TPM requirements including measures data and calculations. Should be informational to people new to bridge TPM.
  - FHWA procedure for computing the measures  
<https://www.fhwa.dot.gov/tpm/guidance/hif18023.pdf> ... Keep in mind FHWA ultimately calculates the baseline, two- and four-year measure values, and compares to State targets when determining if significant progress was achieved. Keep in mind that the dataset FHWA uses is a June 15 published dataset that precedes the October 1 report of the same year whether baseline, mid period, or end of period report.

## Bridge Funding Programs

- **NEW** - FY19 Appropriations (spending) Bill signed January 2019 authorizes \$475M for a bridge rehabilitation and replacement program.
  - Unlike a grant program this will be apportioned to eligible States by formula.
  - Eligible States are those with  $\geq 7.5\%$  poor deck area based on the NBI as of 12/31/17.
  - The apportionment weighting is by percent deck area poor as opposed to deck area poor (State with the greatest percent poor receives the largest apportionment).
  - Shall be obligated on projects in areas of State with population  $\leq 200,000$  based census. If an eligible State has no bridges or insufficient needs in such areas, the projects may be in other areas.
- FY18 Appropriations Bill Competitive Highway Bridge Program applications have been reviewed by FHWA and are now under review by USDOT.
  - Grant programs that provides \$225M to States with  $< 100$  people per square mile. For bridge replacement and rehabilitation projects that demonstrate cost savings by bundling.



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**Miscellaneous**

- **NEW** - Midwest Bridge Preservation Partnership has posted a pool fund solicitation to develop deterioration models representative of the partner States.
- **NEW** - FHWA will be publishing illustrative (plain) language to define the Good, Fair, and Poor bridge classifications.
- **NEW** – The Senate recently approved the nomination of Ms. Nicole Nason as FHWA Administrator. Ms. Nason is a former NHTSA Administrator.

**FHWA Workshop on BMS**

- **NEW** - Will be piloted April 16-18 at NJDOT. Will be offered for free to public agencies starting in summer 2019.
- The workshop materials were briefly presented to the Taskforce. The Presenter Guide was used to show the content. The Presenter Guide includes the workshop slides, slide key message, and presenter notes. The slides and key message will be included in the Participant Workbook. At the Taskforce meeting, the module sections were presented followed by a cursory look at the inventory, inspection, and performance measures data module. This module, as is the case for most modules, presents concepts that are universal to most BMS then shows examples how is applied within the three primary BMS. Slides with screen captures were shown to demonstrate how BrM is represented in the module.

**Agenda Item 04: FY2020 Submission to SCOA**

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Judy Tarwater reported that the recommended budget, license fees, and the FY2020 BrM MSE Work Plan and Contract were approved by SCOA.

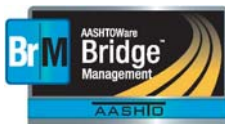
License Type	2019	2020
BrM Super Site	\$ 37,000	\$ 38,100
Asset Tier 1 (1000 bridges)	\$ 16,000	\$ 16,500
Asset Tier 2 (500 bridges)	\$ 10,600	\$ 11,000
Asset Tier 3 (250 bridges)	\$ 7,900	\$ 8,100
Enhanced Asset Tier Support	\$ 3,000	\$ 3,100
Developer	\$ 1,500	\$ 1,500
Contractor (Trng)	N/A	\$ 7,500
Contractor Hosting		\$ 9,000
International	N/A	\$ 50,000
		\$ 30,000

Via ballot, SCOA also approved the appointment of Kent Miller (Nebraska DOT) and David Hedeem (MNDOT) to the AASHTOWare Bridge Task Force effective 07/01/19. Kent Miller and David Hedeem will be invited to attend the June Task Force meeting in Traverse City, MI.

**Agenda Item 05: End User Follow-up**

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The Task Force reiterated the fact that June 30, 2019 is the end of support date for BrM version 5.2.1. This information was published in the FY2019 AASHTOWare Catalog and will be included again in the FY2020



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AASHTOWare Catalog. The Colorado DOT and the Kansas DOT Local instance are two agencies that are known to still use version 5.2.1.

The Task Force discussed the Kansas DOT implementation of BrM (i.e. one instance of BrM for DOT use and a second instance of BrM for use by local agencies under a single BrM Super Site license.) One issue resulting from this arrangement is that the Mayvue team has had to field questions and provide support for two separate support groups under one software license. All requests for contractor support should be forwarded to Mayvue by the licensee’s end user designee; however, this process is not being followed. The Task Force discussed sending a reminder email to the BrM user community to remind them of the prescribed end user designee support process.

5a. Status of Mayvue User Outreach

Mayvue reported that they have completed their outreach to all member agency licensees to follow-up with information on the Bentley to Mayvue transition and to answer any questions the users might have. In addition, Mayvue staff has had phone call discussions with various agencies to see if/how Mayvue might provide support/assistance to the agency in their use of BrM and/or to discuss plans for fully transitioning to BrM.

5b. InspectTech Sync Issues

Bentley reported that the InspectTech issues have been resolved; however, we have not received definitive feedback from any user state to confirm the problems have been resolved. Mayvue is currently unaware of any ongoing issues with the InspectTech sync process.

5c. Ongoing Contact

The Task Force discussed the existing environment within several of our licensee states, including New Hampshire, South Carolina, Georgia, Texas and Colorado. The Task Force also discussed the in progress BrM evaluation in the Nova Scotia DOT.

**Agenda Item 06: Minor Enhancement Definition**

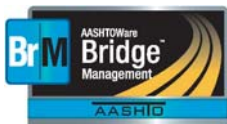
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As a follow-up to T&AA recommendations discussed during the BrM QA meeting, the Task Force was assigned an action item to develop a definition for minor enhancements. The following verbiage is from the BrM QA Report.

**2. FY 2017 MSE**

Product maintenance and minor enhancements were funded under the MSE work plan. All product updates were released in BrM 5.3, which included enhancements developed under a project work plan. There were no separate artifacts created under the MSE that documented the maintenance and minor enhancement work because Bentley and the task force agreed that the changes were minor and did not require separate requirements/design documentation. **An action was identified to define the threshold for a minor enhancement, using factors such as the risk of the effort, the level of complexity, and the amount of planning, design, and testing required to develop the enhancement.**

The Task Force discussed that the minor enhancements that are typically completed under MSE Task Force Directed work are small in scope such that it doesn’t make sense (financially and technically) to complete a functional design specification. Further, Task Force Directed work is commonly used for research type





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work and/or very simplistic enhancements such as adding a button to a screen, tweaking a report, etc. This represents the Task Force / Mayvue definition of a Minor Enhancement to BrM.

Will Holmes interjected that the waterfall review gates documented in the AASHTOWare Standards and Guidelines document were developed to manage risk. T&AA is working to move towards a more agile approach. However, the need remains to continue to manage the risks associate with software enhancements.

The Task Force made the decision to track and manage risks associated with minor enhancement to BrM in the following manner. Anthony (Mayvue) will create and maintain a spreadsheet which lists and tracks minor enhancements developed under the annual MSE contract on a go-forward basis. Spreadsheet input will be derived from the minutes from quarterly Task Force meetings and bi-weekly Task Force calls. The meeting minutes will designate if an enhancement is considered as “minor” by all parties at the time the decision is made to include in the software. The spreadsheet will serve as the artifact for future QA review.

**Agenda Item 07: BrM 5.3.01 (6.0) Project Status**

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7a Project Schedule

- BrM 6.2 Beta testing will begin at the end of April 2019 with completion by 05/30/19.
- The drop-dead date for the 6.2 release is 06/30/19 per the contract.
- Judy Tarwater reminded the Mayvue team that June invoices must be submitted as soon as possible in July but no later than mid-July.

**Agenda Item 08: BrM 6.3 Project Work Plan**

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The Task Force reviewed FDS feedback received from the user community. Additional functionality in the following areas was added to the draft 6.3 Work Plan scope.

Active Directory	Kentucky will also commit 1 SU
BrM Timeout	Kentucky will also commit 1 SU
Inspection Assignment Module	Rhode Island will also commit 1 SU
NBI Deterioration	Michigan, Virginia or Idaho to commit 2 total SUs
Scheduled Processes Functionality	Alabama will commit 1 additional SU

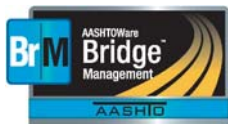
**Agenda Item 09: BrM Enhancement Planning**

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9a. Review Enhancement Champions and Supporters

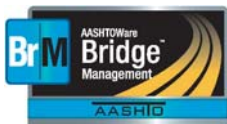
The Task Force again discussed the fact that the current licensing fees (with small incremental increases each year) will not be sufficient to maintain the application long term. It was decided that the Task Force needs to start communicating to the user community the need for major increases to the license fee structure. This will likely be an agenda item for the 2019 BrMUG meeting.

	Enhancement	Champion Contact	Agencies that voted for the enhancement	Estimate	Possible Funding	Status



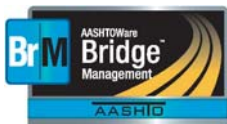
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1	LCCA, Bridge by Bridge		AK, CA, CT, DE, HI, ID, IL, IA, KS, KY, LA, MS, NH, NJ, NM, ND, OH, OK, PA, RI, SD, TX, UT, VT, WA, WI, DC, PR	59	HIDOT = 2 ITD = 2 ILDOT = 10	
2	QA/QC Module	<a href="mailto:ryan.cram@ky.gov">ryan.cram@ky.gov</a>	AL, AK, CO, DE, FL, HI, ID, IA, KS, KY, LA, MI, NH, NM, NY, ND, OK, PA, RI, SD, UT, VT, VA, WI, DC, PR	35	HIDOT = 1 ITD = 1 KYTC = 5 RIDOT = 1 UTDOT = 1	
3	Expanded Export/Import Options		AK, AZ, CO, CT, IA, LA, MA, MS, NH, NM, NY, OH, RI, TX, VT, VA, WA, WI	4.5		
4	Training Videos (User Group will Form a Committee for Guidance)	<a href="mailto:paul.cooley@dot.ca.gov">paul.cooley@dot.ca.gov</a>	AK, CA, DE, ID, KS, MN, NH, NM, OH, RI, TX, VT, WA	--		
5	Clearance Tab	<a href="mailto:ryan.cram@ky.gov">ryan.cram@ky.gov</a>	AK, CA, CO, DE, ID, KY, LA, NH, NJ, NM, NY, ND, OH, PA, RI, SD, UT, WI	7 - 10	ITD = 1 KYTC = 1 RIDOT = 1	
6	Work Candidates for Tunnels	<a href="mailto:Bruce.D.NOVAKOVICH@odot.state.or.us">Bruce.D.NOVAKOVICH@odot.state.or.us</a>	AK, CA, CO, CT, FL, ID, LA, OR, PA, UT, DC	8	ORDOT = 2 ITD = 2 RIDOT = 1 ALDOT = 1 CADOT = 2	BrM 6.3
7	Multimedia Interface	<a href="mailto:ryan.cram@ky.gov">ryan.cram@ky.gov</a>	AL, CA, HI, ID, KS, KY, LA, MI, NH, ND, PA, RI, SD, VA, DC	22 - 39	HIDOT = 1 ITD = 1 KYTC = 4 RIDOT = 1 ALDOT = 4	
8	General Dashboards	<a href="mailto:zac.boyle@mayvue.com">zac.boyle@mayvue.com</a>	AL, AK, CO, ID, IA, KY, LA, MS, NH, ND, OH, PA, RI, SD, VT, VA, WA, WI	--		
9	Utility Value and Health Index	<a href="mailto:kevin.a.murata@hawaii.gov">kevin.a.murata@hawaii.gov</a>	AK, CT, DE, HI, ID, IA, KY, LA, MS, NH, ND, OH, PA, RI, TX, UT, WA, DC	4.5		



REDACTED

10	Maintenance Records Module	<a href="mailto:kevin.deaver@wyo.gov">kevin.deaver@wyo.gov</a>	CO, CT, NH, NJ, ND, UT, WI, WY, DC	6	WYDOT = 6	
11	Schedule Process Functionality	<a href="mailto:christiee@dot.state.al.us">christiee@dot.state.al.us</a>	AL, HI, IA, KY, LA, ND, PA, RI, TX, UT, VA, WI, DC, PR	6	ALDOT = 4 CADOT = 1 VDOT = 2	BrM 6.3
12	Inspection Scheduling Module	<a href="mailto:craig.nazareth@dot.ri.gov">craig.nazareth@dot.ri.gov</a>	CA, HI, MI, ND, OK, RI, SD, UT, WI, WY	4	CADOT = 1	BrM 6.3
13	Tool-Tip Functional Update	<a href="mailto:zac.boyle@mayvue.com">zac.boyle@mayvue.com</a>	FL, IA, NH, OK, PA, RI, SD, DC	4.5 - 7		
14	More Finite Control of Fields (Security by Role)	<a href="mailto:kent.miller@nebraska.gov">kent.miller@nebraska.gov</a>	CA, MI, NE			
15	Detailing Results by Optimization	<a href="mailto:costas.manousakis@dot.state.ma.us">costas.manousakis@dot.state.ma.us</a>	ID, IA, MA, MN, OH, VT		MassDOT = 4	
16	Project Workflow	<a href="mailto:paul.cooley@dot.ca.gov">paul.cooley@dot.ca.gov</a>	CA, ID, NJ, UT, WA			
17	Mobile Inspection	<a href="mailto:kevin.a.murata@hawaii.gov">kevin.a.murata@hawaii.gov</a>	CO, HI, OK, RI, UT, DC			
18	Enhance NBI Deterioration Modeling	<a href="mailto:david.hedeen@state.mn.us">david.hedeen@state.mn.us</a>	CA, CT, ID, IA, MN, NH, NM, TX	FDS = 7	MIDOT = 6 CADOT = 1	BrM 6.3
19	Enhancing Mapping User Interface (Bounding Boxes, GIS Friendly)	-	AZ			
20	Batch File for Optimizer Configurations & Tools for Analysis	<a href="mailto:kent.miller@nebraska.gov">kent.miller@nebraska.gov</a>	MN, NE, TX			
21	3D Inspection	<a href="mailto:nmhuether@nd.gov">nmhuether@nd.gov</a>	LA, ND, OH, PA, UT, DC			
22	Funding by Allocation Project Category	<a href="mailto:todd.springer@vdot.virginia.gov">todd.springer@vdot.virginia.gov</a>	IA, VA			
23	Linked Element Deterioration	<a href="mailto:kent.miller@nebraska.gov">kent.miller@nebraska.gov</a>	MN, NE			
24	Enhance Metric Reports	<a href="mailto:todd.springer@vdot.virginia.gov">todd.springer@vdot.virginia.gov</a>	MN, NH, VA			
25	Report Elements from Optimizer results	<a href="mailto:kevin.a.murata@hawaii.gov">kevin.a.murata@hawaii.gov</a>	HI, MA, MN			
26	Performance Measures by Formula	<a href="mailto:todd.springer@vdot.virginia.gov">todd.springer@vdot.virginia.gov</a>	IA, VA			



**REDACTED**

27	<b>Allow Multiple Report Writers</b>	<a href="mailto:yared.tesfaye@dc.gov">yared.tesfaye@dc.gov</a>	NH, DC			
28	<b>Multimedia for Tunnels</b>	<a href="mailto:stanley.juber@ct.gov">stanley.juber@ct.gov</a>	CT, DC			
29	<b>Project Completion Date by Year, More Detail, Open to Traffic</b>	<a href="mailto:stanley.juber@ct.gov">stanley.juber@ct.gov</a>	CT			
30	<b>Ability to Activate/Deactivate Elements</b>	<a href="mailto:ryan.bowers@dot.wi.gov">ryan.bowers@dot.wi.gov</a>	CA, WI			
31	<b>Any Number of User Tables for Bridges</b>	<a href="mailto:tsutton@odot.org">tsutton@odot.org</a>	OK			
32	<b>Need a Way for Admin. to View Current Users</b>	<a href="mailto:paul.cooley@dot.ca.gov">paul.cooley@dot.ca.gov</a>	CA			
ADD	<b>Pavement Inclusion</b>	<a href="mailto:curtistr4@michigan.gov">curtistr4@michigan.gov</a>	HI, MI	FDS = 3	MIDOT = 3	BrM 6.3
ADD	<b>BrM Timeout</b>	<a href="mailto:Mark.Faulhaber@ky.gov">Mark.Faulhaber@ky.gov</a>		~2	CADOT = 1	BrM 6.3
ADD	<b>Form Designer</b>			~10	CADOT = 5	BrM 6.3
ADD	<b>Active Directory</b>			1	CADOT = 1	BrM 6.3

**9b. Pavement Inclusion Statement of Work**

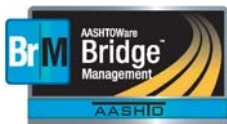
The Pavement SOW was completed under Task Force Directed Work and was delivered to the MIDOT team for review and comment. If the approach is approved by MIDOT management, MIDOT will likely proceed with developing the enhancement as a MIDOT customization. Hawaii is also interested in including pavement data in BrM.

Beckie Curtis reported that MIDOT will make the decision on whether or not to move forward with incorporating pavement asset management into the core BrM product by April 15, 2019. The estimated cost for the inclusion of pavement assets in BrM is in excess of \$2M. If the decision is made to move forward with the pavement inclusion enhancement, the work will be included in a separate work plan given the fact that BrM 6.3 is planned to be release prior to the BrMUG in September 2019.

The Task Force discussed options for selling pavement as a component of BrM and/or as a separate license. It was decided that since the framework already exists in BrM to handle various asset types, the addition of pavement data would not significantly increase the scope of the current BrM feature set.

**9c. MultiMedia Enhancement**

Mark Faulhaber will discuss further with the Mayvue team and Paul Cooley to finalize the draft FDS scope for presentation to the Task Force. Mark Faulhaber and Josh Lang will meet to refine the scope of the MultiMedia FDS to develop an achievable direction.



REDACTED

9d. LCCA, Bridge by Bridge Enhancement

The Illinois DOT has agreed to champion the LCCA enhancement and is willing to donate 10.0 service units to support the effort. The DCDOT has also advised that they are willing to commit 10.0 service units for the LCCA enhancement.

The Mayvue webinar to present the LCCA FDS to the user community will be the kick-off for ILDOT to begin efforts to champion the effort to fund this enhancement. The webinar will be held prior to the June Task Force meeting. The Task Force has agreed to fund up to half of the total cost for this enhancement.

9e. Miscellaneous Enhancements

No discussion.

9f. Mobile Application

Zac Boyle has been working on a prototype.

**Agenda Item 10: BrM TAG Activities**

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10a. Testing TAG

Bruce Novakovich advised the Testing TAG that the next iteration of testing for 6.2.2 will begin at the end of April. Several states have migrated to 6.0 and 6.1.

10b. Reports TAG

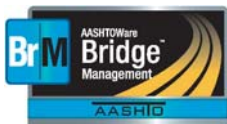
All obsolete reports were removed and existing reports were refined. Existing reports were cleaned up and the Example Inspection Report was added as a new report. The Task Force discussed the fact that pages have been added to BrM with no reports; therefore, every module should be evaluated to determine what reports are needed. However, with limited funding, the Task Force made the decision to hold off on making a decision on pursuing the development of additional new reports without input from the user community on the priority of new report development

Beckie Curtis advised that once the Task Force has identified funding to support enhancements to BrM reports, the Reports TAG is willing to move forward with identifying needed reports enhancements.

- What needs to happen next: Every module needs to be evaluated to determine which reports are needed. That is a significant undertaking. Going forward Mayvue should build the cost of new report development into all enhancement FDSs rather than considering report development as an after-thought following the completion of the enhancement work.
- We should not proceed down the path of reinvigorating the Reports TAG just yet. We should wait until after the 2019 BrMUG to determine their level of interest in dedicating funding to support reports enhancements as well as to establish a report priority list.
- Is there is a need for an online library of reports? If so, a champion would need to step up to support such an effort. An Online Library of BrM Reports would serve as a location for users to share custom reports with the rest of the user community.

10c. Database TAG

No discussion.



**Agenda Item 11: Hosting Services**

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Hosting services for BrM Production Services is currently provided by Accuweb Hosting Services. The current Accuweb Hosting services agreement expires 05/13/19. The current hosting environment includes the following.

Ultimate VPS - Emerald - HV44ACCU7526.aashtowarebrm.com (05/14/2018 - 05/13/2019)

Managed Services: Self-Managed VPS

Premium Paid Backups: No

Free Complementary Backup: Included - Weekly Backup of Your VPS

Control Panel (to manage your websites): Not required

Data Center Location: Denver, CO, USA

Operating System: Windows 2008 R2 Standard Edition - 64 bit

SQL Database: SQL 2008 Express Edition (R2) - Free

SmarterMail (for email services): No

Additional IP Address: No Additional IP Address

**Additional RAM: Additional 8 GB RAM**

Additional Bandwidth: No Additional Bandwidth

Additional Disk Space: No Additional Disk Space

Additional vCPU: No Additional vCPU

Mayvue requested approval to host the AASHTOWare BrM website moving forward in lieu of continuing to secure hosting services from AccuWeb Hosting. The Task Force approved the Mayvue hosting request and directed Mayvue to forward the hosting proposal to Judy Tarwater.

The aashtowarebridge.com domain name registration will remain with AccuWeb.

On the related subject of hosting services to support agency instances of BrM, Brian Korschgen (Project Project Manager) advised that the Project Task Force recently developed a video to promote hosting services for Project users. Brian shared the Project Hosting video with the Task Force.

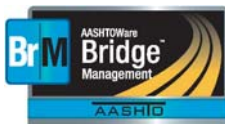
The Task Force also discussed recent revisions to the Google Maps platform and associated licensing options. Based on their new rate structure and our current usage, fees for Google Maps licensing should decrease going forward. Current license plan: Google Maps APIs Premium Plan for Internal use: 500,000 Maps API Credits; 12 month term; Billing ID: 7555-1053-1045; \$10,000/year; Expiration: 06/30/19.

**Agenda Item 12: Marketing Activities**

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The Task Force discussed upcoming presentations for the COBS meeting in June.

- T-19 Presentation – information on BrM hosting and details included in the 2019 Bridge Products Newsletter.
- T-18 Presentation – Content suggestions include the following:
  - Article content from the 2019 newsletter.
  - High level information relevant to state bridge engineers
  - BrM direction on life cycle cost analysis
  - Requirements for TAMP and how BrM can assist



**Agenda Item 13: Miscellaneous**

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13a. 2019 Newsletter

The Task Force identified the following topics for the 2019 Bridge Products Newsletter.

- Letter from the Vice Char – Eric Christie
- Inspection Scheduler – Mayvue
- Component Deterioration - Mayvue
- Scheduled Processes - Mayvue
- Results Comparison Tool (Show / Demo the Results) - Mayvue
- Tunnel Candidates – Mayvue
- Web Hosting, “why it’s a good move for your agency” – Mayvue
- Pavement (i\*if we get started early enough) – Mayvue
- Mayvue announcement? - Mayvue

Newsletter Schedule

Contributor	April 26, 2010	Mayvue Draft Newsletter Articles to the Task Force
Contributor	May 10, 2019	Newsletter Articles to Judy Tarwater
Judy Tarwater	May 17, 2019	Post Newsletter for Task Force Review and Comment
Task Force	May 24, 2019	Deadline for Comment
Judy Tarwater	May 31, 2019	Forward to Akeia Carter for Publication

13b Michael Baker BrM Super Site License Request

Michael Baker International is requesting approval to secure the BrM Super Site license support a project for the SCDOT.

- 1) HDR has been hired to support enhancements to their implementation of BrM to include updating their bridge inspection manual. SCDOT is working on a project to dedicate SCDOT SPR funds to support enhancements to the following BrM core product features.
  - critical findings
  - inspector certifications
  - tracking of inspection equipment

The development would begin with a SCDOT service unit project with the possibility of moving to the core product at a later date. The SCDOT needs to be able to show significant progress by April 2020 as a component of their corrective action plan.
  
- 2) Michael Baker has been tasked with capturing load rating data for 9300+ bridges. Philip Quillin (Baker, Greenville, SC) advised that the SCDOT previously initiated a contract with HDR to upgrade their current version of BrM and to customize it for the state at some point in the near future so they will be ‘up to date’ with their bridge asset management capabilities. Further, Philip advised that through FHWA metric directives the SCDOT is venturing to meet several extremely accelerated load rating deadlines, and require consultants to provide sufficient management and production manpower to reach the goal. Through a load rating contract recently awarded to Baker, Baker needs to quickly stand up a portal of some sort to handle the volume and schedule.



**REDACTED**

BrM is their recommended platform; however, the HDR BrM development is running on a different schedule and track than what Baker can use to get started. To support their project Baker needs to either develop an interim solution, or best case scenario be given permission to start up with a load rating 'project-specific' BrM capability that can later be merged into HDR's efforts, which also covers inspections, etc.

The Baker load rating contract, plus five other consultants contracted separately under similar scopes, includes field assessments of all structures. So this additional major feature multiplies the need for coordinated data management to efficiently and carefully deliver a successful program for South Carolina. The SCDOT is reliant upon the consultants to provide the manpower to deliver; therefore, the ability to coordinate through the SCDOT is limited as well.

Mehrdad Ordoobadi (Baker, Alexandria, VA) advised that the general scope of work for this contract consists of the determination of the load capacity ratings for 9364 structures, for state owned, county owned, and other municipality owned structures within the state of South Carolina. In addition, the work may also include the partial or complete inspection of certain structures to support the load rating calculations, including traffic control if needed. Site Assessments and inspections shall be used as a mechanism for data correction with the SCDOT structure inventory.

Six consultants including Michael Baker International (MBI) are selected to perform these load ratings. MBI has a lead role in this effort and is tasked to provide a "Project Portal" as a central application to support the project. We are considering to use BrM plus some customizations as the project portal. The project portal will include bridge inventory and inspection data from SCDOT's BrM application. Bridge plans, as-built drawings, inspection reports, site assessment reports, BrM bridge XML files, .... will be added for each bridge as attachments in the project portal. Several custom pages will be added to BrM application to store bridge data that is needed but not supported by BrM. A load rating engineer will use this system as a central location to access all the information that he/she needs to be able to perform his/her assigned bridge load ratings. All project deliverables will be stored in the project portal and packaging and submission of bridge load rating deliverables will be facilitated through the proposed project portal.

From a technical perspective, Baker advised that will need full access to the folder where the BrM application is installed so they can install customizations (adding files such as: .DLL, .html, .aspx, .js, .cshtml, .css, and .xml) They may also need to edit web.config or other configuration files. Baker will also need full access to the BrM database to add new tables, views, stored procedures, to edit data in tables, etc. Baker will have over 10 TB of Bridge attachments at the beginning of the project and this need will grow during the course of the project. Security of this data (e.g. backup and recovery) is a big concern since these files are the main deliverables for the project. Finally, Baker has stated that they will also need information on how BrM 6.0 customizations are addressed (i.e. a BrM 6.0 demo website that provides access to the new form designer, a lightweight version of BrM that can be installed to see how custom pages are implemented, video training on how to create forms using the form designer, access to the BrM 6.0 user manual and web service documentation).



**REDACTED**

Mayvue suggested a super site license Mayvue-hosted site to support a copy of the SCDOT BrM data. However, the model described above is not an option under our license agreements. The AASHTOWare Bridge Management Super Site license cannot be used for a third party to establish and support a production environment for a bridge owner. The Super Site license does however permit a bridge owner licensee to contract consultant services to provide support or customizations for their instance of the software (i.e. their Super Site license). Under this arrangement, the consultant is allowed to work under the DOT's license on their instance of the software. The software cannot be installed on the consultant's servers / workstations.

A conference call was held with Emily Berry (SCDOT) and Tinika Fowlkes (AASHTO) at 9:00AM on 04/04/19 to discuss the details of the two SCDOT bridge-related initiatives. Emily Berry provided an overview of their planned initiatives and responded to Task Forces questions. The Task Force / Mayvue advised that they are concerned that a disparate approach to the two SCDOT initiatives could result in major changes to BrM to support the load rating initiative which would present a monumental effort to feed the data into the SCDOT BrM instance. SCDOT should focus on consistency across the board. Further, any BrM customizations made in the Baker-led initiative could seriously limit SCDOT's ability to upgrade BrM in the future. Mayvue hosting for the load rating project would allow Mayvue and the Task Force to effectively monitor and report BrM edits to the SCDOT as-needed.

With a clear understanding of the planned interaction between to two SCDOT efforts, the Task Force suggested that it would be in the best interest of the SCDOT to have their planned inspection enhancements / customizations incorporated into the core product to ensure ongoing support is a component of core product maintenance. Mayvue advised that the SCDOT enhancements are planned to be accomplished via a service unit project.

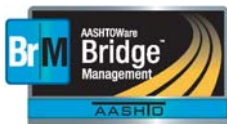
Emily Berry advised that the proposed SCODT solution must be in place by April 2020. If plans move forward with the SCDOT project(s), a contract modification to the FY2020 MSE will be required to increase the current combined service unit projects limit.

13c DCDOT Support – Wood PLC Contractor Agreement

The DCDOT licenses the Asset Tier 2 license (max of 500 assets, \$10,600). DCDOT has recently entered into a support agreement with Wood PLC and wish to allow Wood PLC access to their Asset Tier license via the Appendix A Contractor Agreement. Wood PLC is performing modeling for DCDOT using Mayvue's test site to complete modeling parameters.

**Contractor access to an Asset Tier Licensee**

The AASHTOWare Catalog states that under the BrM Super Site license "AASHTO member agencies wishing to exercise this option will be required to register the names and contact information for all contractors/consultants using the AASHTOWare Bridge Management product(s) via their Site License and will be responsible for protecting AASHTO's intellectual property rights to the AASHTOWare Bridge Management product by having each contractor execute the Contractor Agreement in the form specified in Appendix A of the Supplemental License Agreement, and providing a copy of the executed Contractor Agreement to AASHTO." However, the catalog is silent on such an arrangement for the BrM Asset Tier licenses.



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The Task Force made the decision to allow contractors to have support access to an asset tier licensee agency site via execution of the Appendix A Contractor Agreement. **However, if support hours exceed the basic support hours provided via the asset tier license (i.e. 5 hours), additional support must be secured via the purchase of enhanced asset tier support or BrM service units.**

### Use of hosted licensee test sites

- The DCDOT test hosting site was established by Mayvue in the initial stages of bringing the DCDOT on board with their BrM hosted environment.
- Mayvue needs to document and convey explicit expectation up front with hosted clients that a test site will be set up for a defined period (e.g. a few weeks before an upgrade and for a week after). Once the upgrade is complete and the one week post-upgrade has passed, the test site will be deactivated. There is no expectation that Mayvue will provide an ongoing test environment for licensees who chose to host their BrM instances.

The Task Force discussed the fact that the level of contractor support for asset tier licensees has not proven to be substantially less than the support required for Super Site licensees. Both current asset tier licensees (DCDOT and Richmond MTA) use Mayvue hosting services to support their BrM implementations. Mayvue recommended to the Task Force that a revision to the Asset Tier licenses be made in the FY2020 AASHTOWare Catalog to require Mayvue hosting for all asset tier licensees going forward. The Task Force approved this direction.

### 13d Element Manual Update

New pages from the new element manual will need to be incorporated into BrM.

## **Agenda Item 14: User Group**

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### 14a. 2019 BrMUG Agenda

The Task discussed the following potential topics for the 2019 BrMUG agenda.

- Pending license fee increases
- Component Deterioration
- Priority of reports

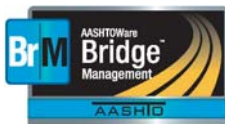
The Task Force also discussed whether or not future BrMUGs should incorporate an additional day for training before or after the User Group meeting. No decision was made.

### 14b. 2019 BrM End User Survey

The Task Force was presented with the 2018 BrM End User Survey, asked to review the questions, and provide feedback on what should be included in the 2019 survey.

A couple of suggestions were discussed during the meeting.

- What is preventing you agency from considering and/or moving forward with contractor hosting of BrM, if anything?
- Are you interested in adding an extra day for training to the 2020 BrMUG? If so, what type of training would you like to see?



REDACTED

14c. Updated BrM Product Brochure

The BrM product brochure will be updated following the release of BrM 6.2.

14d. BrMUG SWAG Suggestions

- Knit skull cap
- BrMUG beer mugs
- Umbrella

**Agenda Item 15: Draft Quarterly Status Report Content**

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15a. FDS Workflow Diagrams

The Task Force reviewed and minor changes were made to the FDS workflow diagram as follows.

- State Driven Diagram – Added a step for a user review. Modified to have another step before development begins for a Task Force review/evaluation to incorporate the enhancement/customization into the core product. This is sometimes needed if a state only wants to pursue if the customization will eventually be added to the core product before committing money. The second Task Force review would be to perform a compliance check to make sure it followed the FDS and therefore can be included in core.
- Task Force Driven Diagram - State \$\$\$ Commitments were documented as 'optional'.
- TRT Driven Diagram - Just because the user group prioritizes an item as a high priority, it doesn't automatically lead to establishing a TRT. The TRT portion of the diagram is optional.

An idea to publish all enhancements / FDSs on a SharePoint site for any agency review was brought up as an idea to engage the user community to weigh-in on what's going into the product.

The following items will be included in the April BrM Quarterly Report.

- Summary of the BrM 6.3 Work Plan
- FDS Workflow Diagrams
- Remind the BrM user community that BrM 5.2.1 will no longer be supported effective June 30, 2019.
- Remind the BrM user community that end user support for Super Site licensees must be funneled to Mayvue through the licensees BrM End User Designee

The Task Force made the decision to meet for two and a half days during the June 2019 Task Force meeting in Traverse City, MI.

**Agenda Item 16: Review Action Items**

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Judy Tarwater reviewed the action items recorded during the meeting.

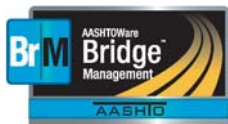
**Agenda Item 17: Executive Session**

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The meeting adjourned at 4:45pm.



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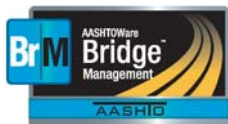
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**BrDR Modernization TAG**

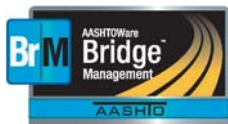
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