

AASHTOWare Bridge Design-Rating (BrDR) Task Force Summary Meeting Minutes
January 26 - 28, 2015
Jackson Hole, WY

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General Information – Meeting of the Bridge Design & Rating Task Force

Date: Monday, January 26, 2015

Participants:

AASHTO	Judy Skeen Bruce Johnson	AASHTO Oregon DOT	Project Manager SCOJD Liaison
BrDR Task Force	Todd Thompson Joshua Dietsche Jeff Olsen Dean Teal Tom Saad	South Dakota, DOT Wisconsin DOT Montana DOT Kansas DOT FHWA Midwest Resource Center	Chair Bridge Design (BrR) Bridge Design (BrD) Bridge Design (BrD) FHWA Liaison
BrDR Contractor	Jim Duray Herman Lee	Baker Baker	BrDR Contractor BrDR Contractor
Guest	Tim Armbrecht	Illinois DOT	T-18 / T-19

Notes Taker: Tom Saad / Judy Skeen

Agenda Item 0: Review Agenda/Assign Minutes

Recorder

Todd Thompson opened the meeting at 8:00 AM. Tom Saad was assigned as the meeting minute recorder.

Todd Thompson added the following agenda items: 7d. discuss PS Design Tool, 8c. discuss strategic direction for applications, 9a. discussion with Richard Pickings on adding PG Super to catalog, 10b. follow-up for the 'we missed you' letter (attendance at the 2014 UG meeting), 15b. newsletter and topics, 15c. FAQ website, 15d. improvements to website. Todd will hold the modernization discussion until Tim Armbrecht can participate. Jeff Olsen also added the need to discuss the Madero software.

Agenda Item 1: Prior Business

1a. Review October Meeting Minutes

Minutes from the October 28 - 29, 2014 Task Force meeting in Charleston, SC were reviewed. Minutes were approved with minor editorial changes. Baker requests striking one sentence in section 2a., modify numbers in 6c., and correct typos in 8c.

1b. Review Action Items

Jeff reviewed the action items and updates were provided to the Task Force.

Agenda Item 2: Financial Overview and Work

Plan Summary

2a. Update on Phase 18 (FY2014)

Baker reviewed the budget report and budget tracking charts depicting spending vs. budget. The prestress design tool work is approximately



35-50% complete at this time. The PS Design Tool includes the framework for the steel design tool.

2b. Update on Phase 19 (FY2015)

Baker reviewed the budget report and budget tracking charts to depict spending vs. budget.

2c. Update on 6.7 Release Work Plan

Baker provided the update on the 6.7 release. Alpha testing plan should be ready next week. Items listed at 70% complete reflects the development phase for these items is complete.

2d. Update on Modernization

Baker reviewed the budget report that depicts spending vs. budget for this phase.

2e. Update on FE Engine Modernization Work Plan

Baker reports on budget for the conversion, which is 50% complete. Baker projects that the project will be completed in April, although Baker had initially had the completion in October.

Agenda Item 3: Update on BrD/BrR Licensees (FY 2015)

3a. Product Report

Judy Skeen presented a product license summary report developed from the Excel output from AASHTOWare Manager. The approach in developing the report was to minimize the data manipulation and eliminate manual data input following export from AASHTOWare Manager (to minimize the opportunity to introduce errors).

The report included licenses ordered as of 01/19/15.

Item	Quantity	Sponsoring Agency
Bridge Design - 120-Day Evaluation License	6	
Bridge Design Developer License	1	
Bridge Design Educational License	8	
Bridge Design Single Workstation Option	2	
Bridge Design Special Consultant Option	34	
Bridge Design Unlimited Option	16	
Bridge Design/Rating Service Units	16	
Bridge Rating - 120-Day Evaluation License	12	
Bridge Rating Agency Sponsored Consultant Licenses	2	
Bridge Rating Developer License	3	
Bridge Rating Educational License	10	
Bridge Rating Single Workstation Option	19	
Bridge Rating Special Consultant Option	304	
Bridge Rating Unlimited Option	30	
Sponsored Consultant Licenses (Bridge Rating) - No Fee	136	Michigan Department of Transportation
Sponsored Consultant Licenses (Bridge Rating) - No Fee	107	Virginia Department of Transportation

Judy also directed the Task Force to the full report which is posted on SharePoint under the Br Design-Rating directory. Br Design-Rating -> BrDR Licenses -> FY2015 -> BrDR EndUserDesignee 011915 with Summary The full report includes all licenses for FY2014 and FY2015.

- Licenses are sorted by Agency Name and then by Fiscal Year to allow comparison of what is licensed this year vs what was licensed last year (by agency).
- All FY2014 licenses are shaded in yellow
- FY2015 licenses are shaded by license type



3b. Service Unit Report

The Service Unit report was provided and reviewed by the Task Force. Ohio has a service work request pending, which will need Task Force approval.

3c. Licensing Options

Discussion deferred to agenda item 14b.

3d. Evaluation Software Report

The Evaluation Software report was provided and reviewed by the Task Force.

Agenda Item 4: Support and Maintenance Report

4a. Incident and Support Summary

Baker presented the Incident and Support Summary report. Baker said the new bug policy was initiated at the beginning of this year. Incremental defects jumped by 49. The Task Force agreed to hide rows that categorize bugs, in this report, so as not to be confusing. The TF agreed that the Beta TAG should be given access to JIRA. Postpone discussion on ‘bugs’ information that will be exposed to users to agenda item 15d.

4b. Progress on Bug Resolution

Baker reviewed the Maintenance Progress reports for the 6.7 release. The reports reflects that twenty bugs need to be corrected prior to the 6.7 release and 2 unresolved bugs need to be corrected prior to the 6.8 release.

4c. Enhancement List Update

The Testing TAG Enhancement Buckets and BrDR Enhancement lists were reviewed. Eight items were added to the Enhancement List in the past quarter and the Buckets List reflects which items will be included in the 6.7 release.

4d. Maintenance Issues

Postponed discussion to agenda item 7d.

4e. Bug Policy

Dean provided a proposed bug policy that requires the consultants that have ‘agency sponsored licenses ‘to submit bugs through their respective State and proposes that access to JIRA information to those that have an account. If a consultant has a ‘full’ license (\$10K) they have a JIRA log-in. Dean suggests that a consultant with a full license should use their account when utilizing the Support Link, rather than using the State account.

Agenda Item 5: Update on 6.7

5a. Progress and Schedule Review

Baker indicates that the alpha-build and alpha testing begins today and is scheduled to be completed by the end of February. The beta-build will commence the first of April with a tentative date for the Beta TAG meeting to be the week of April 27.

5b. TAG Update

Dean has prepared a list of all items that are included in the 6.7 release for TAG testing, and will share with the Beta TAG upon approval by the TF.

Agenda Item 6: Update on Modernization

6a. Architecture Document

The audience for this document is the Baker team and the Bridge Task Force. Draft 2 of the Architecture and Design Document was provided to the Task Force on January 8, 2015. Diagrams within the document flow chart the various components of the software. The document also provides physical views of the proposed architecture.

The document is not yet complete. Additional experiments are desired. The biggest gain anticipated is the decision to get rid of the COM level. Anthony Lattanze provided feedback to Baker to suggest that they document the entire domain. Baker isn’t sure that documentation of



the entire domain is necessary. Detailed documentation on the API will be developed at a later date.

6b. Finite Element Engine

Work on this project is 50% complete. The engine development should be completed by the end of April 2015. Once complete, Baker will incorporate the engine into the Prestressed Concrete Design Tool deliverable. The FE Engine Work Plan did not include funding to implement the FE Engine with the current software.

6c. Solicitation document draft/status

Baker walked the Task Force through the draft of the solicitation document. An assumed schedule of four years was documented based on Baker's assumption on how/when funding might be available.

Baker presented four approaches for tackling the modernization effort.

Agenda Item 7: Enhancements

7a. JIRA 253 - LFR live load distribution factor for culverts with over 2 ft. of fill - 2015-BrDR-081

The current estimate reflects only LFR, and Baker believes this work can be added to the 6.7 release without affecting the schedule. The TF agrees to add this revision to the 6.7 release.

7b. PCI Stress-Strain Curve for Strands/Tendons - email Todd 01/15

Baker provides several recommendations and estimate for revising the existing strain compatibility analysis method in BrDR which has been questioned by Illinois and California. The TF agrees with Baker's recommendations.

7c. Splice Enhancements - requested by TAG 11/20

Baker discusses the estimates for splice/bolt evaluation in BrDR. These items cannot be included in the 6.7 release without affecting the release schedule. These enhancements were

requested by the TAG when they reviewed the mockups and will be included in the spreadsheets as a placeholder so the Bridge Task Force can recommend when they should be implemented.

7d. PS Design Tool

Discussed funding for the PS Design Tool. The PS Design Tool work plan will be included in the SCOJD presentation and the contract executed for April 1, 2015 through September 30, 2016.

PS Design Tool will be developed as a separate module but will be included in subsequent BrD releases. The software interface between BrD and PS Design Tool will be included in the 6.8 release.

Agenda Item 8: Miscellaneous Topics

8a. BrDR Performance Parametric Study Summary - 2014-BrDR-088

Some of the analysis results may reflect poorly on BrDR. It is not clear on what 'necessary' output should be selected, as suggested in the Best Practices, to speed the analysis. The Bridge Task Force requests that Baker perform runs I and K for Test Cases 5 and 6 with the base (least) output option to illustrate potential runtime improvements.

8b. FY2016 Catalog - BrDR Entries

Judy discussed the suggested revisions she has made for the FY16 catalog. The Bridge Task Force liked the updates. Josh would like to be sure that consultants who use an agency sponsored license only utilize the license in the sponsoring State.

Agenda Item 9: Third Party Issues

The Task Force discussed issues related to third party vendors.

TA&A recent survey found that mobile apps are a priority topic and are interested in seeing if



mobile apps are useful for each of the AASHTOWare products. The Task Force agreed that mobile apps are not a priority topic, at this time, for BrDR.

Agenda Item 10: User Group

10a. Summary Minutes from October Meeting

Baker provided a summary of the meeting minutes from the Traverse City Task Force meeting for review and comment.

Agenda Item 11: Work Plan

11a. FY 2016 Draft Work Plans

- **6.8 Project Work Plan** - Michigan (3.8 SUs) and Illinois (1.0 SU) have agreed to fund FP5-LFD DF 1994 Guide Spec. Beckie Curtis will confirm Michigan's commitment. Louisiana (7.6 SUs) has agreed to fund FP7-Substructure LRFR Rating R/C Caps only. The Stress-Strain Computation for PS Strain Compatibility fixed price task (\$24,000) was moved from the proposed 6.7 contract mod to the 6.8 work plan. With the addition of the Stress-Strain Computation task and the correction to the chart on page 17, the Task Force approved the 6.8 Work Plan.
- **FY16 MSE Work Plan** - Baker provided an MSE Budget History to document MSE contract values for FY13, FY14, FY15 and proposed contract value for FY16. The Task Force approved the FY16 MSE Work Plan.

11b. FY 2015 Draft Amendment 1

- **FY15 MSE Work Plan Modification** - The Task Force approved the FY15 MSE Work Plan.
- **6.7 Work Plan Modification** - The contract was discussed.

11c. Planning Estimates

Dean Teal will update the planning sheets to record the items discussed today. The updates should be completed early next week.

11d. Future Work Plans

Baker presented two proposed enhancements:

- Reinforced Concrete Rating Tool
- Regression Comparison Tool

While funding to support these efforts is currently not available, the Task Force discussed the possibility that states may be willing to commit service units to secure funding.

Agenda Item 12: FHWA Update

Rulemaking - NPRM Assessing Pavement and Bridge Condition

The MAP-21 *Pavement and Bridge Condition Performance Measures Notice of Proposed Rulemaking* is now on view at

<https://www.federalregister.gov/>. This NPRM proposes rules for assessing pavement and bridge condition, target establishment and reporting. The public is encouraged to review the NPRM and submit comments to the docket (FHWA-2013-0053) beginning January 5, 2015. The proposed rules for MAP-21 implementation are being published in three phases. The first phase —NPRMs related to Safety Performance Measures, the Highway Safety Improvement Program, and the Statewide and Metropolitan/Non-Metropolitan Planning provisions of MAP-21—were published last year. Comment periods have closed on those proposed rules. FHWA intends to publish final regulations next summer and fall. In the next few months, FHWA will publish an NPRM on asset management plans. The third and final phase will follow, with an NPRM related to system performance measures, congestion, on-road mobile source emissions, and freight movement. These rules collectively advance the vision of Congress to transform federal-aid programs to provide more efficient investments by focusing on national transportation goals; increasing accountability and transparency; and improving transportation investment decision-making.



The Federal Highway Administration (FHWA) held two webinars, on January 8th and January 22nd to provide information to our partners on the NPRM. Each webinar provided the same content. There was also a session at the 2015 TRB annual meeting in Washington, DC to present the proposed rule and to take any questions. The session (#620) was held on Tuesday, January 13th from 1:30-3:15 in the Convention Center, Room 201.

Progress Report for NBIP - PY 2014

On January 6, FHWA disseminated the Progress Report for the NBIP for PY2014 across FHWA. Overall, 83 percent of the metrics were assessed to be at the Satisfactory performance level, a 4 percent improvement over PY 2013, and a 12 percent increase from the baseline assessment. In general, Metric assessment demonstrates that the program is performing well and improving (trending in a positive direction). However, two metrics are more challenging and will continue to be an emphasis for FHWA in the coming year:

- Metric 13, Load Rating, is at 33% satisfactory
- Metric 18, Scour Critical Bridges, is at 63% satisfactory

Plans of Corrective Action (PCAs) for both metrics typically require a relatively long time period (years instead of months) to complete due to the level of effort and cost associated with conducting load ratings and scour assessments. The specialists within the Office of Bridges and Structures and our Division bridge Engineers stand ready to support your State to identify issues and successfully construct, execute and complete PCAs that will result in Metric assessment at a Satisfactory performance level, in reasonable timeframes.

NHI LRFR Training

WVDOT hosted NHI course no. 130092, *LRFR for Highway Bridges* in December, 2014. The Kansas DOT will be hosting the same 4-day course in April, 2015. If you are interested in signing up for this course or hosting a course in the future, please register at the National Highway Institute website.

LRFR Webinars

On December 17, 2014, a webinar on practices for overweight permit load rating was delivered. A second webinar on overweight permits showcasing Wisconsin and Virginia practices is scheduled for March 25, 2015. Recordings of all of the LRFR webinars hosted by the FHWA can be reviewed at <http://www.fhwa.dot.gov/bridge/loadrating/>.

Agenda Item 13: Five Year Projection for BrDR

Discussion was deferred.

Agenda Item 14: Licensing Issues

14a. International Licenses

No discussion.

14b. Special Consultant Option Licensees

Given the financing needed to move forward with the Modernization Project, the Task Force made the decision to begin preparations for a solicitation to the member agencies. In addition, the consultant option licensing fees were also revisited and the decision was made to increase the Special Consultant Option from \$2,700/year to \$3,600/year. In conjunction with this consultant fee increase, the licensing fee schedule for the Agency Sponsored Consultant License was proposed to be revised as follows:

	FY2015	FY2016
10 Copies	\$25,000	\$33,000
20 Copies	\$50,000	\$60,000
30 Copies	\$75,000	\$81,000
40 Copies	N/A	\$96,000



50+ Copies	N/A	\$120,000
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Final discussion and approval of the revised licensing fees will be deferred until the April Task Force meeting.

14c. Third-Party Add-Ons

Discussed topic of 3rd party add-ons earlier, but the Task Force is concerned about adding products to the catalog that may compete with BrDR. This discussion will be on-going.

14d. Future of Bundling Modules (Post-Modernization)

The contractor was not aware of any issues with bundling modules. They needed some time to investigate and report back.

Agenda Item 15: Marketing Activities

15a. Review the Marketing document

Dean developed a document on marketing ideas for the AASHTOWare bridge products and will maintain and update this list, as needed. Jeff would like to see industries that benefit from the implementation of BrDR, by supporting industry products-to-market, would aid in the marketing of BrDR.

15b. Newsletter Topics

New features to include in newsletter: splice and gusset plate analysis, PS Design Tool. Chair update should include discussion on need for modernization and successful solicitation. Also include dates for sunseting versions. Dean will ask his supervisor to prepare an article on Kansas's new routing tools.

15c. FAQ Information

Dean asked the Task Force and TAG to forward frequently asked questions and answers to him by February 5. Dean will compile these and forward to Baker for posting on the website.

15d. BrDR Website

The Task Force is of the opinion that the more information available on the website the better. A majority of the information existing on the website is generally available through other avenues. A user ID and password are required to access software downloads.

Agenda Item 16: Review Action Item list from this meeting

Tom Saad reviewed the action items recorded during the meeting.

Agenda Item 17: Task Force Executive Session (as needed)

Executive session held 8:00 - 10:30am on Tuesday, January 27.

The meeting was adjourned on Wednesday, January 28, 2015 at 12:00PM.

