



Bridge Technical Committee Meeting Minutes

Date: Wednesday, July 24, 2024

Time: 9:30 am-12:00pm

Location: HF S149

Introductions

10 min

Online attendees: Andrew Nussbaum, Brian Boothby, Brent Freeman, Brian Rowekamp, Carolyn Brugman, Chad Halverson, Cherish Schwenn, Eric Heitman, Salim Guiró, Chad Hayes, Tirupan Mandal, Matt Grove, Mike Delemont, Mike Ryan, Dave Pantzlaff, Pat Wiseley, Cami Peterson, Jason Roselle, Scott Stroud, Ann Thielmann, Jonathan Thomas, Krissy VanHout, Craig Webster, Mark Zander

In-Person attendees: Laura Shadewald, Josh Dietsche, Leah Rhodes, Bill Dreher, Craig Pringle, Chris Frederick, Aaron Bonk, Isaac Groshek, Kevin Weber, Leslie Ashauer, Luke Haun, Tim MacLaughlin-Barck, Kyle Busch, Joe Balice, Brandon Lamers, Mark Mutziger, Julie Slota, James Luebke

Subcommittee Report(s)

5 min

5 min

Design & Construction Subcommittee Update

Aaron Bonk

No specific requests came in from the contracting community since this last BTC meeting. Subcommittee will remain in place on an as-needed basis. No current plan in place for a meeting of this group.

Standing Topics

20 min

10 min

Wisconsin Highway Research Program Bridge Items

James Luebke

James Luebke provided updates on the Structures WHRP studies that are active and one that is expected to be moving forward in the near future. Active projects include Deck Thermography, Concrete Patches (Vertical and Overhead included), Practice for Specifying and Repairing MSE Walls, and MSE Wall Corrosion reviews. The upcoming project referenced involves the Investigation to Removing Existing Abutment Expansion Joints.

10 min

Bridge Manual Updates

James Luebke

James Luebke discussed the latest updates to the Bridge Manual that are being published at the end of July (within the next week). This review included updates to Standard details and Bridge Manual text/chapters. Some of the different updates that James highlighted included Standards updates for precast box culverts, aggregate gradation requirements on some of the backfill specs, notes to designers for bid items that need to be included for different joint repair projects, etc.

**5 min****In-Stream Barge Spud Pile Restrictions**

Aaron Bonk

Aaron Bonk discussed the fact that WisDOT and WDNR staff met after the last BTC meeting to discuss this item. The definition of “in-stream disturbances” is as it sounds – “any work that is disturbing the streambed of water bodies” is an in-stream disturbance. Technically, anything that does this falls under WDNR’s regulatory purview under the WisDOT/WDNR cooperative agreement.

WDNR indicated in this discussion that they are open to discussions and granting waivers through their liaisons and the coordination process for projects. WisDOT BOS will be finding ways of communicating the need for designers to more closely coordinate their specific project with WDNR liaisons during the design phase to potentially lower the restrictions that are in place (BOS Consultant Review process, etc.).

Tim MacLaughlin-Barck stated that the restriction windows are getting smaller and smaller, and was asking WisDOT/WDNR whether we are reviewing the costs/exposure risks related to these restriction windows. Tim also indicated that there are situations where the practical reality of certain streams are dry runs, and he was questioning whether different mindsets are taken to approach restriction windows on a case-by-case basis. Cami Peterson indicated that the water quality biologists/fish experts within WDNR have worked diligently to set the windows appropriately, but that they also have the purview to review waiver requests from contractors to do work falling within those restriction windows.

Kevin Weber indicated that the consistency of implementation amongst different Regions isn’t there (referenced different projects where some Regions hear the contractor’s requests to work outside of the windows and others don’t). Continued communication with construction staff to engage BOS and BPD in these types of different requests will happen to try to improve upon this issue.

Brandon Lamers stated that WisDOT/WDNR will continue to work on making sure that our project schedules are set up appropriately, but there is also a need for contractors to add pre-bid questions in order to alleviate the issue of potential bidding issues (i.e., if the winning contractor asks to change schedule on day 1 after award, how does that impact bidders 2/3/4 and did they incorporate those schedule issues into their bids causing them to potentially lose the contract, etc.). Tim MacLaughlin-Barck asked the question of whether advertisement windows could be extended in order for



contractors to have the time to review the projects in more depth so they can avoid those post-award questions. Matt Grove stated that he doesn't see specific things that are being done to lengthen the construction season windows. The impact of construction cost vs. impact on wildlife/waterways should be considered diligently as the impact on the contracting community is significant.

5 min

False Decking

Aaron Bonk

Aaron Bonk has scheduled a meeting for Monday, August 5th to discuss this topic with a smaller working group from within the BTC including both state and contractor staff. Isaac Groshek inquired about whether the railroad requirements for false decking will be included in this working group, and Aaron Bonk indicated that it would be.

Action Item(s): Future updates on this topic will be brought forward at the next BTC meeting and potential updates to specs, procedures, etc. will be considered and implemented as the working group sees fit.

10 min

Maturity Method

Tirupan Mandal/Laura Shadewald

Laura Shadewald discussed different inquiries that have been made on the Department's side of this topic, and specific outreach to FHWA experts on the topic, since the last BTC meeting. The following is the Department's current understanding of the maturity method process:

- Mix design is batched, and cylinders are made
- These cylinders are broken over time to determine the maturity method curves for that mix, with specific materials
- Concrete is batched and poured in the field – both the structure element and verification cylinders (3)
- Probes are placed in the field-poured structure element, and one of the verification cylinders
- Verification cylinders are field cured per WisDOT spec
- When field-poured structure element reaches maturity, hypothetically the forms can be stripped
- When verification cylinder reaches maturity, the other 2 cylinders are tested to verify strength to verify maturity curve

Leslie Ashauer indicated that industry has concerns with the difference between lab cured cylinders to set the curves vs. the fact that field-cured cylinders poured with the structure element. Laura Shadewald agreed that there is has been an issue with the way that construction teams have implemented this tool and that more education on this needs to be done in order to make it a viable tool. Laura also indicated that if contractors are working on a project where the construction



team does not seem to understand the process, the contractor should ask that BOS and BTS staff get involved to clarify the construction administration requirements to the field staff.

New Topics

55 min

5 min

Project Schedule Issues

Laura Shadewald

There have been numerous discussions in the past within the BTC meetings related to project schedules and the inability to complete the work given the way the contracts are set up. BOS doesn't always have purview over schedules and is looking to generate a list of work items and elements that cause schedule issues on structures projects, in order for BOS to work with others within the Department to work on updating schedules. Some that have been discussed previously include adhesive anchor cure time, wet cure time on abutments/diaphragms/approach slabs, etc. Additional items brought up by the group include:

- Structure painting
- HPC curing for multiple elements (parapets, approach slabs, etc.) – also applies to standard concrete elements
- Staining for underwater pours, (cure time and cofferdam removal)
- Protective surface treatment
- Backfilling abutments when the backwall and/or abutment is taller
- TPO's on new superstructures (needing to wait for cure of deck)
- Prefabricated bridge procurement
- Bridge element procurement – i.e. bearings
- Railroad review periods
- Bird netting

Action Item(s): Attendees should continue to send different elements that affect schedules to Laura and Aaron Bonk. BOS will take this list of items back internally within WisDOT and coordinate with those staff that are charged with setting project schedules to try to improve on awareness of the time constraints/requirements on structures projects.

10 min

IRI Ride Roadway Spec Application to Bridges

Dan Kowalski/Luke Haun

This item was deferred to the next meeting when Dan is present and can provide the background on this topic.

10 min

Box Culvert Joints

Dan Kowalski/Luke Haun

Luke Haun stated that the need to pour barrel sections as opposed to be able to pour the entire length of a box culvert in one pour. The ability to pour box culverts full length would



save significantly on construction schedule for these structures (likely in the 4-5 day range for the typical box).

Tim MacLaughlin-Barck also asked that the details for the alternate cutoff wall be updated in order to be clear on sheet piling embedment, where does the cutoff sheeting start, etc. BOS will review this and update the Standards prior to the next update to the Bridge Manual.

Action Item(s): BOS will review this issue and bring thoughts, historical perspective, and the intent moving forward on this inquiry related to pouring box culverts.

10 min	Girder Deflection/Rebound on Redecks This item was deferred to the next meeting when Dan is present and can provide the background on this topic.	Dan Kowalski/Luke Haun
10 min	Deck Slab Joint Locations Relative to Girder Flanges on Deck Widenings This item was deferred to the next meeting when Dan is present and can provide the background on this topic.	Dan Kowalski/Luke Haun
10 min	Bird Netting Kevin Weber stated that there is significant variability between regions about what is allowed or not allowed. The specific example given was one Region paid time and materials to pressure wash the bird nests out of the structure and then on a subsequent project in another Region the field team did not allow pressure washing at all. Krissy VanHout discussed the specification requirements as they are currently configured. Tim MacLaughlin-Barck indicated that for jobs where counties are installing the netting, the quality of that installation has often not been good and the bridge contractors are having to replace it so that their projects don't get held up. Additionally, Tim made the point that netting material requirements would be good to know and get clarified in the spec as the costs vary significantly.	Kevin Weber



Bridge Technical Committee Meeting Sign-In Sheet

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<u>Name</u>	<u>Company</u>	<u>Email</u>
Laura Shadewald	WISDOT - BOS	laura.shadewald@dot.wi.gov
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JOSIA DIETSCH	WISDOT BOS	-

Wisconsin Highway Research Program (WHRP)

Bridge Items – Active Projects

S23-04 Bridge Deck Thermography

- On Schedule – TOC is reviewing the Draft Report. Final report expected Fall 2024

S24-05 Concrete Patches

- Behind Schedule – Finalizing testing matrix
- Testing Matrix Variables: Thin no anchors, thin with anchors, thick no anchors, formed and trowel applied, and vertical and overhead conditions



Wisconsin Highway Research Program (WHRP)

Bridge Items – Active Projects

S24-06 State of Practice for Specifying and Repairing MSE Walls

- On Schedule
- Next Task - Evaluate WisDOT's MSE wall policies, practices, and standard specifications.

G24-02 Investigation of MSE Wall Corrosion in Wisconsin

- On Schedule



Wisconsin Highway Research Program (WHRP)

Bridge Items – **Expected** Project

S25-02 Investigate Removing Existing Abutment Expansion Joints

- Pre-Contract
- October 2024 Kick-off
- Objectives:
 - Examine the forces and movements that develop in the structure.
 - Define practical limits of substructure conversions.
 - Prepare recommendations for converting substructures.



Bridge Manual Updates

July 2024 - Standards

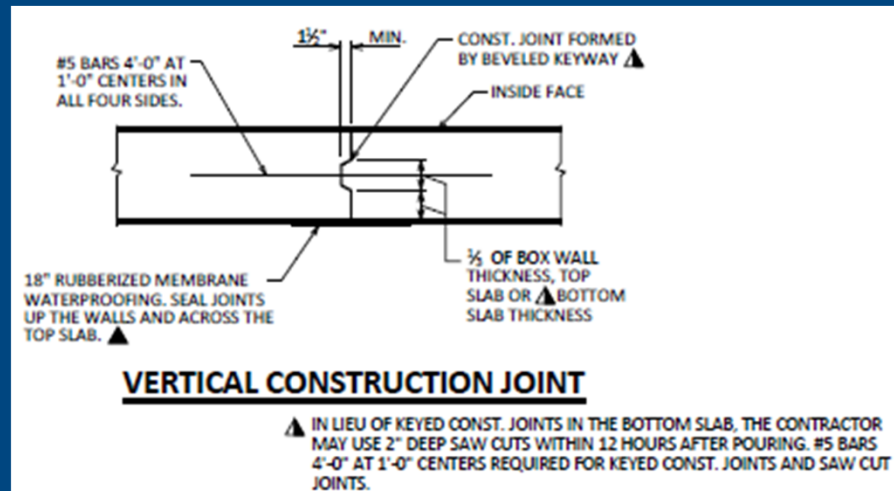
- #1 Concrete Coarse Aggregate → Coarse Agg. AASHTO No. 67
 - Gradations: 2025-Std Spec. 310-Open Graded
 - Usage: Box culvert base substitution/Modular Block Wall/Gravity Wall (Drainage Blanket)
- #2 Concrete Coarse Aggregate → Coarse Agg. AASHTO No. 4
 - Gradations: 2025-Std Spec. 604 – Slope Paving
 - Usage: Box culvert base substitution



Bridge Manual Updates

July 2024 - Standards

- CIP Box Culvert - Updated note stating #5 bars required for keyed and saw cut joints in bottom slabs.



Bridge Manual Updates

July 2024 - Standards

- Precast Box Culverts - Provided 3/4-inch maximum joint opening between box sections
- Precast Box Culverts - Changed joint seal requirement from AASHTO M198 Type B on 3-sides to ASTM C990 on all sides.
- Precast Box Culverts - Added Designer Note regarding joint ties



Bridge Manual Updates

July 2024 - Standards

- Std. 40.04 - Added Designer Note: "For joint repairs (and deck replacements) with steel girders, include bid item "Preparation and Coating of Top Flanges (Structure)."



Bridge Manual Updates

Miscellaneous - STSP Crack Sealing Updates

- Clarified Designer Notes with minor revisions

Use this special provision for concrete crack sealing on bridge decks.

stp-502-018 Bridge Deck Crack Sealing, Item 502.0180.S.

502-015 Crack Sealing Epoxy, Item 502.0717. – item is now obsolete.

509-20 DELETE ALL DESIGNER NOTES FROM YOUR SPECIAL PROVISIONS

Use this special provision for concrete crack sealing where structural repair is not necessary.

114. stp-509-020 Epoxy Crack Sealing, Item 509.9020.S.

509-025 DELETE ALL DESIGNER NOTES FROM YOUR SPECIAL PROVISIONS

Use this special provision for concrete crack repair where structural repair is necessary.

**115. stp-509-025 Epoxy Injection Crack Repair, Item 509.9025.S;
Cored Holes 2-Inch Diameter, Item 509.9026.S.**

stp-509-025 (20240703)

