



Bridge Technical Committee – MINUTES **Wisconsin DOT, Industry, and Partners**

Tuesday July 19th, 2016

1:00 – 3:30 PM

SW District office (Dane – Rock Rooms)

Subcommittee Reports:

1. Bureau of Technical Services – Ready Mix Concrete Subcommittee

- **Discussion on Meeting and Pumping Concrete for Structures**

The new Hardened Air language was published in the May CMM update to 870.

- Barry Paye indicated that no updates have been made as the group has run into issues getting FHWA buy in. Barry indicated that a rewrite is likely needed.
- Kevin McMullen stated that future focus of the conversation needs to center on the difference of concrete going into pumps vs. what comes out. Kevin stated that a lot of times the concrete going into the pump meets the specs but when it comes out it does not.
- WisDOT needs the concrete that is being placed to meet the spec, not necessarily when it goes into the pump.
- Chad Hayes inquired about why WisDOT needs to be involved in this as the issues come from contractor and concrete supplier issues in the field. If WisDOT asks for spec to be met at time of placement, isn't it on the contractor and supplier to make that happen?
- Group will continue to work towards a solution that works for all parties.

2. Subcommittee on Structure Design & Construction – (Aaron Bonk) –

- **Discussion on this new subcommittee**

Aaron updates as appropriate.

- Aaron Bonk provided an update on the subcommittee's progress on issues that were discussed at the first meeting. Of specific note are updates to standards and guidance related to substructure reinforcing/anchor bolt conflicts, vertical face parapet steel detailing, box culvert horizontal construction joints, and construction staging clearances.
- Aaron also asked for agenda topics and stated he would solicit more as the fall meeting gets closer.

Standing Topics:

- 1. Wis 441 – Aaron Bonk**
- 2. Zoo Interchange** (Laura Shadewald)
- 3. IH-39 (Illinois – Dane County)** (Laura Shadewald & Jim Lucht)
- 4. Verona Road (Madison)** (Laura Shadewald & Brandon Lamers) –
- 5. Every Day Counts – EDC-3 (Initiatives)** (Bill Oliva)
- 6. 2016 Dodge County GRS & Precast Box Girders Bridges – (James Luebke).** Two Dodge county local roads bridges were let in February together using GRS abutments and precast superstructures. Janke Contractors will be the prime. – Showcase August 2nd, 2016 in Dodge County – All are invited

7. **Wisconsin Highway Research Program (WHRP) Bridge Items** – (Bill Oliva)

- **FY2017 Projects** –

<http://wisconsindot.gov/Pages/about-wisdot/research/whrp.aspx>

Previous Meeting Carryover Topics:

- **Updates - Concrete Slope Paving Constructability and joint design and layout. (Kevin McMullen)** A few of the contractors would like to eliminate the details where the slope paving is done in layers and with keyway joints in favor of placing the entire slope and sawing or forming joints. [Draft Details \(Std. 15.03\)](#) have been developed and have been sent to Kevin McMullen for comments. The details include an “Alternative Construction Joint Detail” in lieu of keyed (cold) joint. We would like to get comments back and work to get this into the summer of 2016 Bridge Manual update.
 - Kevin McMullen indicated that he hasn’t reviewed the detail and no longer has access to it. James Luebke indicated that he would send it to Kevin for his review.
 - Depending on the timing of Kevin’s review, the updated details may or may not be included in the July 2016 Bridge Manual update.
- 1. **Court Ruling about Buy America Clause - Joe Balice (FHWA)** indicated there was a court ruling in December 2015 that struck down the 2012 FHWA guidance and requirements. The 2015 ruling stemmed from the public notice not being correct. After the February 2016 Letting, the Buy America Clause will apply to all elements in Federal Contracts subject to NEPA environmental requirements. Federal Form 4567 will be used to document material sources. – **Joe Balice put together a nice summary that should be helpful to everyone (attached).**
 - Industry indicated that the information provided by Joe Balice cleared their questions up.
 - James Luebke did bring up the issue of wire mesh in MSE walls and asked if this has still been an issue in the field. No answers were provided.

New topics:

1. **Do the contractors foresee any problems going to 3/4” cork filler, instead of 3/4” preformed filler, along the edge of full-depth diaphragms and beneath girders? (Dave Kiekbusch)**

This is being done to alleviate the problem of girders not bearing on the bearing pads.

 - Matt Coupar inquired with industry regarding what types of materials could be used below girders on top of substructure beam seats. The issue with the 3/4” preformed filler is that at times it does not compress enough to allow the girders to bear on the bearing pads or rotate as is the design intent.
 - Phil Ciha stated that using a 1/2” preformed filler and caulk may be a good solution to the issue. Industry and WisDOT personnel agreed that this warrants more investigation for potential use.
 - Julie Brooks indicated that cork materials tend to degrade over time in the field and from a maintenance perspective, she would go away from that option.
 - Designers should also consider the effect that the profile grade will have on this issue.



2. FYI on Structural Backfill Item. (James Luebke).

Going forward with the Dec '16 bridges, we should be using Structure backfill type A, and not including the additional note about conforming to the gradation of granular grade 1. Additionally, it has been recommended that the TON bid item be used in lieu of CY, unless directed otherwise by the Region. Please note: "Structural backfill type B" is "structural backfill" per 2016 specifications gradations.

The unit change from CY to Tons will facilitate easier measurement in the field, and bring our unit of measure in line with the units more commonly used on the roadway side of the plans. Gradation misunderstanding will be eliminated and granular specifications can be more in line with structure needs.

- James Luebke provided background on the update to the Standard Specifications and guidance on how designers are to handle structural backfill moving forward.
- Matt Grove had concern related to using the bid item with units of "TON" and how it effectively turns into a pay plan quantity if it is based on a yardage conversion. Matt also indicated that conversion factors are a large source of conflict between the Department and industry in claims.

3. Stabilizing girders prior to deck pour (Aaron Bonk)

Projects have had some issues with structure placements on bearings during the construction phases of a project. It is important that structure's elements are located and maintained in place during construction operations prior to finalization of the structure.

- Phil Ciha and industry felt that designers should place one option for stabilizing girders during construction in the plans and if contractors wanted to vary from that, they should inquire with the Department.
- Aaron Bonk indicated that he felt that putting this type of information on the plans gets into the means and methods of construction, and that BOS likely would not want to go this direction.
- Industry asked whether the lower pours of concrete diaphragms could be placed in advance of the 14 day requirement that is currently shown in the Standard Details.
- Aaron Bonk stated that he would take this issue back to BOS for further investigation and consideration.

4. Discussion on deck forming with tight prestressed girder spacing (Dave Kiekbusch)

- Aaron Bonk inquired with the committee about the use of the alternate deck forming system where contractors drill in anchors into the side of the top flanges and span shorter flange-to-flange gaps with plywood in lieu of using conventional borg hangers. Aaron also indicated that feedback from the North Central States group as well as Region Bridge Maintenance engineers is that they don't feel comfortable with this system.
- Industry stated that this system has been used for more than a decade on any project where the centerline of girder spacing is 6 feet or less.
- There are alternatives to this system (i.e., concrete planks spanning between girders, etc.) but there is a cost component that limits the use.

- Industry asked whether WisDOT could go back and review the early uses of this alternative system in the state to see if there are any negative maintenance repercussions associated with the use.
- *This issue should be discussed further within WisDOT and potentially remain as a topic for further discussion at future Bridge Technical Committee meetings.*

5. Removing Old Structure over Waterway with Minimal Debris (Leah Rhodes)

Recently we have been asked by the DNR on a few different smaller bridge projects to use the “Removing Old Structure over Waterway with Minimal Debris” specification for the removal of a slab span or a cast-in-place girder bridge. Per the STSP guidance, these structure types cannot be removed without dropping the structure, or a portion of it, into the waterway. Therefore, the appropriate bid item would be either “Removing Old Structure over Waterway” or “Removing Old Structure over Waterway with Debris Capture System”. The DNR doesn’t like the idea of dropping the structure into the sensitive waterway, but they also don’t want to require a costly debris capture system.

Are there any current removal techniques that would allow the contractor to meet the “minimal debris” specification for a slab bridge or a cast-in-place girder bridge? Could it be done with saw cuts? These are smaller (25’ to 35’) span bridges.

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6. Concrete Overlays (Krissy VanHout)

We’re often getting asked to allow (contractors to pour the second half on the following day. Subsection 509.3.9.4 does not allow traffic on the completed overlay for a minimum of 3 days after placement, without regard to compressive strength. Whereas 502.3.10 is based on strength or equivalent curing days and also lists exceptions for timing of specific subsequent operations. Jim Parry has mentioned he’s had similar requests from another contractor.

- See notes below on #2 of “Additions to the Agenda”.

7. R/R Flagging - We have all been struggling with flagging as it varies drastically from R/R Company to R/R Company. What (IF any) can central office help with this issue? Additionally, when the designer is putting together the train counts in the proposal and the structure is near a switching location (train stops for a period of time) the designer should include the said information in the proposal as this has become an issue on a few of our projects. (Joe Larson/Matt Grove). *Matt Grove is planning to meet with Dave Simon and the new Rail Road Commissioner on this. One of the issues is that spec language varies from project to project. Matt noted that there is also a lot more 3rd party flagging going on. Greg Baer was not able to attend the March 21st meeting, however, he would also like to have a one-one one discussion with some contractors to discuss case specific flagging and coordination issues.*

- *Matt Grove has talked with Dave Simon about this issue. Matt’s desire is to have up front, clear expectations in the specifications. Matt also stated that the contractor does not have control over this issue and that third party flaggers have caused more problems.*
- *Darrin Stanke indicated that if a bid item is included in the plans or it is treated as an administrative item, there are less issues in encountered in the field. Darrin also stated that this is not near the issue in other states that it is in Wisconsin.*
- *Per Matt Grove, this agenda item can be taken off of future Bridge Technical Committee meeting agendas due to the fact that this group has limited ability to change the process involved with the issue. (agreed, and Thanks Matt, WLO)*



8. Specification Changes / Updates – Discussion (Mike Hall)

Addition to the Agenda:

1. 32” Concrete Parapet on Bridge Decks (David Stanke)

- David Stanke of Zenith Tech inquired with WisDOT as to why 32” parapets are specified on plans when they don’t meet the OSHA 42” railing height criteria. There are concerns that on brand new railings, the contractors need to drill in “railings” to meet the minimum height criteria. Additionally, industry noted that when performing inspections or maintaining existing bridges; more often than not railings aren’t present and thus safety criteria aren’t being followed.
- Aaron Bonk indicated that the BOS Development Section is working on updating our railing guidance due to the new MASH testing requirements, and that those would likely discount the use of 32” parapets moving forward.
- Aaron stated that he would pass along the information brought by David to the BOS Development Section for their use in developing future railing guidance.
- *This issue should be addressed again at the next Bridge Technical Committee Meeting pertaining to updates from the Development Section.*

2. Overlay Construction Timing (Joe Larson/Dan Kowalski)

- Dan Kowalski discussed that historical practice on multi-pour overlays was that the contractors could finish one pour and immediately move to the adjacent pour which induces some construction loading onto the newly placed overlay. However, it has now come up that field engineers are making the contractors wait 72 hours to perform the second pour.
- Within the Standard Spec there is language pertaining to waiting 72 hours prior to opening new overlays to traffic. The group believes that the intent of that spec relates to vehicular traffic and not construction process loading.
- Krissy VanHout indicated that she had discussed this with Jim Parry on a NE Region project, and Jim felt that a 1 day waiting period was sufficient.
- The group discussed the possibility of asking for a strength test (i.e., break cylinders and check that they meet a specified strength) prior to moving onto a second pour for an overlay.
- *A follow-up is required with the Bureau of Technical Services to see if spec updates are required or if outreach to field staff is needed to make sure the intent of the spec is known.*

3. Pile Overruns/Underruns (Jeff Horsfall)

- Jeff Horsfall inquired with industry if they had seen a change since the new guidance has been provided.
- Dan Kowalski indicated that they have asked about swapping out the old criteria for projects with the new criteria, but project staff have not allowed that to this point.
- Other members of industry indicated that the new specs haven’t taken effect enough to see widespread use and get a feel for how the new guidance is working.