

Date & Time: Tuesday, March 21, 2017 (9:00 a.m.)

Location: SW Region Office, Mad Sauk Conference Room – Madison, WI

ITEM	DATE	DESCRIPTION	STATUS	DUE DATE	BALL IN COURT
1.10	3/21/16	Bar Steel Reinforcement Bid Items	Closed	N/A	N/A

Industry has concern that change to “Bar Steel Reinf Structures” from individual Bridges, Culverts, and Retaining Wall bid items may cause issues with contract administration. Specific concern is that projects with multiple structure types and a different prime contractor or potentially different subs, etc. will have to use blended prices (bidding complications), subsequently causing problems when quantity over/underrun issues arise. *Due to the fact that this change is just now starting to show up in plans, this item will be reviewed over the next year to see if there is cause to revise bid items to be more specific. If issues arise, this item should be brought to the Bridge Tech Committee meeting as it is a contract administration item more than a specific structural detail item.*

1.11	3/21/16	Concrete Overlays at Expansion Joints	Closed	7/2016	WisDOT/WTBA
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Standard plan detailing calls for a full-depth paving block and end diaphragm pour to be done monolithically with the concrete overlay. Historically this detail has not been constructed this way – industry has held the paving block and end diaphragm pours down to the bottom of the overlay elevation and comes through with paving equipment to pour the overlay over the joint. BOS’s concern is for the long-term maintenance of the paving block to resist spalling. Industry’s concern is with getting a satisfactory ride quality on both sides of the joint. *Industry will follow up to determine exactly why the current detail can’t be followed, particularly why the paving blocks at both ends can’t be poured full-depth. BOS will review the detail and potentially allow for the contractor to pour the end diaphragm prior to pouring the concrete overlay on the deck side of the joint (i.e., optional construction joint below the overlay on the deck side). Any updates will come in the form of Standard detail updates in the next update to the Bridge Manual.*

2016-03-21: David Stanke discussed Zenith Tech’s approach to constructing these bridge elements with BOS at the Bridge Tech Committee meeting. David indicated that the paving block located on the side of the bridge where the paving machine starts the overlay pour

is partially poured with the overlay, and the opposite end of the bridge's paving block is poured full-depth ahead of time.

2016-03-24: Dan Kowalski followed up with a phone call to BOS based on his research into how Lunda constructs this detail. Dan indicated that Lunda has historically poured the paving block to the bottom of the extrusion and finishes the paving block pour with the overlay. Dan stated that there are issues with moving batch trucks over the joint on wider pours and also that matching in the overlay pour with a previously completed paving block pour would cause the ride to be compromised. Another item of note is that field engineers/personnel have routinely told the contractors to hold the pours down to improve the ride at the joint, conflicting with the plan details.

2017-01: BOS updated the Standard Detail 40.04 to show an optional construction joint below the reinforcing steel in the paving block, and the end diaphragm poured below to allow the overlay to extend to the joint extrusion. This detailing practice should begin to show up in plans in the near future. If the old detailing is shown in a plan set, the contractor should work with the project PM and BOS to allow the now current detailing option.

1.12 3/21/16 Substructure Reinforcing Steel Conflicts Closed 11/2016 WisDOT

Contractors routinely encounter reinforcing steel in substructures when drilling for bearing anchor bolts. Designers should account for potential conflicts by bundling bar steel, utilizing or allowing for embedded blackout cans (in certain situations only as they are difficult to use in the field for industry), and providing allowable clearance details in the plans for clarification. WTBA recommended that a minimum of 4" clear for anchor bolts be used as guidance. WTBA also recommended that as much clear space as possible (5" to 6") be provided to allow for vibrating equipment, flow of concrete, etc. Zenith Tech stated that they utilized coped flanges on prestressed girders to allow for easier flow of concrete at diaphragm locations. *BOS will provide guidance to in-house and consultant designers with clearance recommendations and potential coped girder flange standard detailing in future updates to the Bridge Manual, and will mention both items at the June 2016 Structural Engineers Symposium.*

2016-07-19: BOS created a new Standard 13.08 to highlight the need for designers to address this in design as best as possible. Additionally, this topic was addressed at the June 2016 SE Symposium in the construction lessons learned portion of the agenda. Contractors should continue to be proactive in their field reviews prior to setting reinforcing steel and placing concrete in order to avoid potential conflicts.

1.13 3/21/16 Bridge Widening Design & Constructability Closed N/A N/A

Industry indicated that it is very difficult to accommodate differential deflections and falsework creep when widening bridges during deck or slab pours. The current specifications with respect to pour rates limit the flexibility industry has to pour concrete to induce the deflections and then come back and finish the deck. Industry also indicated that they work to adjust grades in the field and it is highly dependent on the field engineer on the project if those adjustments are kept or revised. Industry indicated that preferred options to improve the outcome of deck widenings or staged construction pours would be the use of different pour rates, preloading girders with concrete, adding retarders, or using closure pours and overlaying the entire deck. *At this time WisDOT is not pursuing the use of the aforementioned preferred options and no further follow-up is needed as there is no historical evidence that these staged pours are causing long-term maintenance issues for WisDOT.*

1.14 3/21/16 Cast-In-Place Parapet Reinforcing Steel Open ~~7/2016~~ WisDOT
7/2017

Industry has expressed concerns that vertical face parapet bar steel extending out of deck causes issues with paving equipment during the deck pour. This is also an issue at wing locations. *BOS is currently working on updated Standard parapet reinforcing steel detailing and will provide guidance through the next update to the Bridge Manual.*

2016-07-19: BOS has updated a number of Standard Details to address this issue. The new Standards show two separate vertical reinforcing bars similar to the sloped face parapet details. These details will not be published at this time because of impending MASH crash testing criteria verification, but will allow a field change to be made upon request.

2017-03: BOS is continuing to work on refining the detail to avoid any conflicts and also is still assessing the MASH

crash testing criteria. BOS plans on updating the Standard with the July 2017 Standards updates. Contractors may request to use modified reinforcing steel details on a project via RFI for projects that do not show the two-bar system.

1.15 3/21/16 Pedestrian Bridge Curb Pours Open ~~11/2016~~ 7/2017 WisDOT

Industry brought up concerns that certain project staff allow separate deck and curb pours on pedestrian bridges, and other staff do not. The workmanship and efficiency are improved if two separate pours are allowed. WisDOT has historically had concern with water and deicing chemicals passing through the cold joint and negatively affecting the rate of corrosion of steel prefabricated truss members. *BOS will review this issue and determine whether alternatives can be presented to contractors for use in the field (i.e., monolithic pour vs. two pours and use of waterstop, etc.).*

2017-03: BOS has not worked on this issue since the last meeting due to the fact that very few pedestrian truss bridges are built each year. *BOS will review this issue and determine whether alternatives can be presented to contractors for use in the field.*

1.16 3/21/16 Expansion Device Anchors on Ped Bridges Closed 7/2016 WisDOT

BOS realizes that some designers are utilizing the Standard details for expansion joints without modifications on pedestrian bridges and the contractors need to field modify the anchors to fit within thinner decks on pedestrian bridges. *BOS will review this issue and provide updated guidance and potential Standard detail updates to the next update to the Bridge Manual.*

2017-03: BOS has updated Standard 28.01 to include a note to designers that they should only detail headed studs parallel to finished deck surface. This change will allow the headed studs to remain within the thickness of the deck on pedestrian bridges without requiring field modification by the contractors. This note will be included in the July 2017 Standards updates.

1.17 3/21/16 Box Culvert Construction Joint in Walls Closed 7/2016 WisDOT

Lunda brought up the fact that the horizontal construction joint located 5½" above the top of the bottom slab is routinely asked to be removed in the field, and at times is allowed. *BOS will research this history of*

this joint being placed in the plans and determine if a modification to Standards and standard detailing in plans is necessary to match current construction practices.

2016-07-19: BOS has updated Standard Details in chapter 36 to allow an alternative construction joint to be placed at the top of the bottom slab within the exterior walls of the barrel section. However, the 5½" location should be held in the apron/wingwall sections of the culvert. Additionally, rubberized membrane waterproofing may be used at this joint in the barrel section but is not required like it is at apron joint locations.

2016-08: BOS was made aware of an error in the Standard updates that required the joint at interior walls of multi-cell boxes. BOS agrees with industry that the alternate joint location at the top of the bottom slab is allowable at interior box culvert walls with the exception of pedestrian underpasses and locations where a structural haunch is present.

2017-01: BOS updated the Standard to reflect the agreed upon change as noted above. The Standard does not allow a joint at the top of the bottom slab for pedestrian underpasses due to concerns with water and deicing chemicals passing through the cold joint. Current guidance is to provide a 1% normal crown on the top of the bottom slab for drainage. A raised construction joint and 1" fillet will provide a more durable joint for pedestrian underpasses.

1.18 3/21/16 3D Models/Plan Details Closed N/A N/A

BOS asked industry for their take on whether 3D models or plan details would be beneficial. Industry indicated that getting electronic files of any type, even 2D, would be helpful. Industry also mentioned that their staff build off of the 2D plans and that they are sufficient at this point. 3D models would be useful in certain areas (beam seat elevations, etc.) if they would be able to be handed directly to industry for use (i.e., steel fabrication models to be used by steel fabricators, etc.). Industry did mention that 3D models couldn't be used to pour bridge decks similar to roadway paving use of GPS because the deck thickness and relation of top of deck to reinforcing steel is what dictates where the deck is placed. *At this point, no further follow-up is required but BOS intends to continue to look for ways of utilizing 3D in an efficient manner.*

1.19	3/21/16	Construction Staging Clearances on Bridge Plans	Closed	7/2016	WisDOT
<p>Zenith Tech brought forth the issue of construction staging clearances and the need for designers to fully assess the adequacy of the plan requirements. Staged construction joint locations on plans must physically be able to be met with some allowance for working room by field staff. Structural designers should work directly with roadway designers to make sure that adequate clearances are provided. <i>BOS will incorporate industry's concerns into the Structural Engineers Symposium to be held in June 2016 so that all designers, both WisDOT and consultants, are reminded that they should be looking at this issue during the design process.</i></p> <p>2016-06-07: WisDOT presented this issue at the Structural Engineers Symposium which was attended by 170 consultant and state SE's working on WisDOT projects. Industry to continue to inform WisDOT if improvements are not seen in the field moving forward.</p>					
2.10	3/21/17	Alternative Decking Systems for Prestressed Girder Bridges	Open	12/2017	WisDOT/WTBA
<p>BOS wants industry to provide information on alternative decking systems used on wide-flange prestressed girder bridges. It has come to BOS's attention that when tight girder spacings are utilized, the conventional Borg hanger systems are exchanged for an alternative system consisting of drilled in anchors into the sides of the wide-flanges, 2x members, and plywood spanning from girder bay to girder bay. Of specific note, BOS would like to know what necessitates this switch, what is the girder spacing where this exchange occurs, what bridges these alternative systems have been used on, what the long-term maintenance/durability has shown to date, etc.</p> <p>2017-03-21: Use of alternate decking systems provide a significant cost savings to the department according to industry. This system was first used in Marinette approximately 10 years ago on a bridge built by Lunda. ZTI indicated that they use this detail anywhere they can. The conventional Borg hanger system is not set up for 3" thick flanges – they can slip out and/or rotate. The alternate decking system carries less risk to the contractor. A demo was done with the alternative decking system on temporary bridges on the Marquette Interchange project. There was discussion in the demo to saw cut 6"-9" off of the top flanges during deck</p>					

removals, and then remove concrete over the girder for the rest of the deck removal. Contractors raised the question of why the top flange is 4' wide. ZTI stated that a 7' girder spacing becomes a candidate for alternate decking systems and 12" clear spans or less cannot use conventional forming systems. The slope of decking also causes issues between girders with conventional forming systems. The material that is being used to fill the alternate decking system connection holes in the exterior of the top flanges could make a difference in the long-term performance of the girders. Industry stated that the Borg hanger system also requires holes to be filled and the wedge shape at the bottom of the top flange still could be susceptible to spalling. *ZTI indicated that they can send a list of bridges that have used alternate decking systems. Kraemer indicated that they haven't use alternate decking systems to date. BOS will follow up with Lunda to see if they are able to provide a list of bridges where alternate decking systems have been used. Once a list of bridges has been compiled based on industry feedback, BOS will review the existing bridges and make a determination of whether alternate decking systems will continue to be allowed based on the long-term maintenance viability of the system.*

2.11 3/21/17 Rebar Detailing Topics – Bar Mark Preference Closed N/A N/A

BOS inquired with industry about their preference on bar detailing callouts in the plans. The specific issue at hand is what the preferred option is when there are two identical bars used in two different locations in a structure. Would contractors prefer that one bar mark be used in two different locations or two different bar marks (having the same bar detail) be used?

2017-03-21: Industry indicated that it is preferable to simplify bar details as much as possible.

2.12 3/21/17 Rebar Detailing Topics – Parapet Reinf. Plan Location Preference Closed N/A N/A

BOS inquired with industry about their preference on the location of reinforcing steel locations in the plans when bars protrude from one element into another. For example, does industry have a preference on what sheet the vertical bars protruding from the structural approach slab to the parapet above are shown (i.e., the structural approach slab sheet, the parapet sheet, other)? Also should the same bar mark be used for bars that have the

same length and shape but are located in multiple locations?

2017-03-21: Industry indicated that rebar gets shipped to the project site at the time that it is needed. Preference is to show rebar where it will get tied. As long as it is not shown on more than one bar list, it isn't a problem that it is shown in multiple locations on different plan sheets. If one bar mark is used for all bars of the same length and shape, bar tables should indicate how many at each location.

2.13 3/21/17 Filler/Cork Material Under Girders Open 1/2018 WisDOT

BOS would like to get more information from industry on what materials are being utilized for the '3/4" PREFORMED FILLER' that is shown to be placed on top of substructures and below the bottom flanges of girders. In some rare instances, specifically where the grade is steep, field engineers have noticed that the material isn't compressing and the girders end up bearing on the filler material instead of on the 1/2" elastomeric bearing pads. Potential options may include reducing the thickness of the filler material or changing the material type.

2017-03-21: ZTI indicated that they use a felt under girders and cork on retaining walls. They also asked why is it needed at all? More of an issue with partially poured diaphragms where the felt doesn't have enough weight on it, girder may actually bear. Some inspectors ask the contractor to seal the joint with mono, others won't allow the contractor to seal the joint. WisDOT would want whatever is used to remain in place and not hold water (for example, an open celled foam that the water would run out of, not a closed cell foam). *BOS will review the current Standard detailing practice and material requirements, and will update Standards and specs to improve performance at this location in the field.*

2.14 3/21/17 Box Culvert Apron Constructability Closed N/A N/A

The conventional detailing practice on box culverts calls for the apron and end of box culvert to be poured level. On box culverts with skews, BOS would like to get insight from industry on how this is accomplished in the field.

2017-03-21: Industry indicated that the elevations are currently being blended in the field. The header is set to the elevation that is called out in the plans, but it may not be level due to the culvert skew. If BOS has strong

opinions about what the elevations should be, we should ask that the designers add more information to our plans.

2.16 3/21/17 MSE Panel Wall Detailing Closed N/A N/A

BOS would like to know the optimal extent of detailing required on MSE panel retaining walls. Specifically, should designers be detailing walls to a 5' or 10' increment? Other?

2017-03-21: Industry indicated that they do field surveying and detailing of the wall for coping layout, railing layout, etc. in order to make sure that all components work together. Designers should detail the start and end of a wall, including kinks and engineering constraints, and leave it to the contractors to complete the details of assembly from there.

2.17 3/21/17 Precast Structural Approach Slabs Open 1/2018 WisDOT

BOS inquired with industry on what concerns or impediments are present to industry which limit/hold back the use of precast structural approach slabs.

2017-03-21: Industry indicated that one issue discussed was the Z-bar protruding from the back of the abutment. The contractors asked what the purpose of the Z-bar is. Additionally, contractors asked if sleeper slab cure time is an issue. David Stanke (ZTI) believes that it would be better to spend more time figuring out how to pour the structural approach slab integral with the bridge deck. Contractors also wondered if standard spec language/details have been cleaned up to not require a 14 day wet cure on abutment diaphragms and whether sleeper slabs need to be HPC or not. BOS commented that designers include a note on our plans (and this is also noted in the Standard for structural approach slabs) that the structural approach slab footing is not required to be HPC. *BOS will review whether the specs have been fully updated to remove the wet cure limitation on these elements.*



AGENDA

Bridge Tech Committee – Design & Construction Subcommittee Meeting

2017-03-21

9:00 AM – 11:30 AM

SW Region Office – Mad Sauk Conf Room

Agenda topics

5 min	• Introductions	All
5 min	• Review of Subcommittee Background, Purpose, & Outcomes	Bonk
20 min	• Action Item Review from Previous Meeting	Bonk
45 min	• Alternative Decking Systems for Prestressed Girder Bridges	Bonk/Dreher
15 min	• Rebar Detailing Topics <ul style="list-style-type: none">○ Bar Marks for Same Shapes in Diff. Locations○ Parapet Reinf. Steel Plan Location(s)	Shadewald
15 min	• Filler/Cork Material Under Girders	Bonk
15 min	• Box Culvert Apron Constructability	Shadewald
10 min	• New Action Item Review	Bonk

Bridge Technical Committee Structures Design & Construction Subcommittee

March 21, 2017



BUREAU OF
STRUCTURES

Agenda

- ▶ Introductions
- ▶ Review of Subcommittee Background, Purpose, & Intended Outcomes
- ▶ Action Item Review from Previous Meetings
- ▶ Alternative Decking Systems for Prestressed Girder Bridges
- ▶ Rebar Detailing Topics
- ▶ Filler/Cork Material Under Girders
- ▶ Box Culvert Apron Constructability
- ▶ Action Item Review

Background, Purpose, & Outcomes

- ▶ Group comprised of WisDOT structural design engineers and industry representatives
- ▶ Recent design and construction issues highlighted need for pointed discussions
- ▶ Desire to improve constructability of structures designs/plans
- ▶ Rapid adjustments to designs and policies while maintaining structural integrity of designs

Bridge Technical Committee
Structures Design & Construction Subcommittee

Subcommittee Purpose

The Bridge Technical Committee (BTC) is a statewide industry meeting held between various WisDOT business areas including Bureau of Structures (BOS) staff; FHWA; WTBA personnel and industry representatives; materials and products fabricators; and consultant structural engineers. While the BTC serves its role in addressing large scale policy issues, there is a need to hold in depth discussions related to structures design and detailing issues, and how they affect the constructability of structures in the field. The main purpose of the BTC Structures Design & Construction Subcommittee is to be able to have a standing meeting at which industry can provide insight to improve the constructability of the designs that are produced by WisDOT BOS staff.

Scope and Intended Subcommittee Outcomes

The BTC Structures Design & Construction Subcommittee will initially meet annually in conjunction with the summer BTC meeting. The summer meeting time has been chosen to allow a portion of the given construction year to occur, allowing industry to be able to assemble current issues to bring to the subcommittee to be discussed. While the initial scope will involve one meeting per year, adjustments can be made as the subcommittee deems necessary.

Issues addressed by this subcommittee are intended to be directly related to structures designs and plans. The intent is to get industry's feedback pertaining to specific details routinely encountered within structures plans that cause issues or are regularly adjusted in the field. As these topics are discussed and addressed by the subcommittee, the objective is to be able to rapidly adjust designs and policies to meet the needs of industry while maintaining the structural integrity of the design. It is anticipated that adjustments will be made to Bridge Manual policies and BOS Standard Detailing guidance, in addition to specifications as necessary.

Meeting minutes will be taken by WisDOT BOS personnel and will be available for viewing through the WisDOT BOS webpage.

Intended Attendees / Subcommittee Members

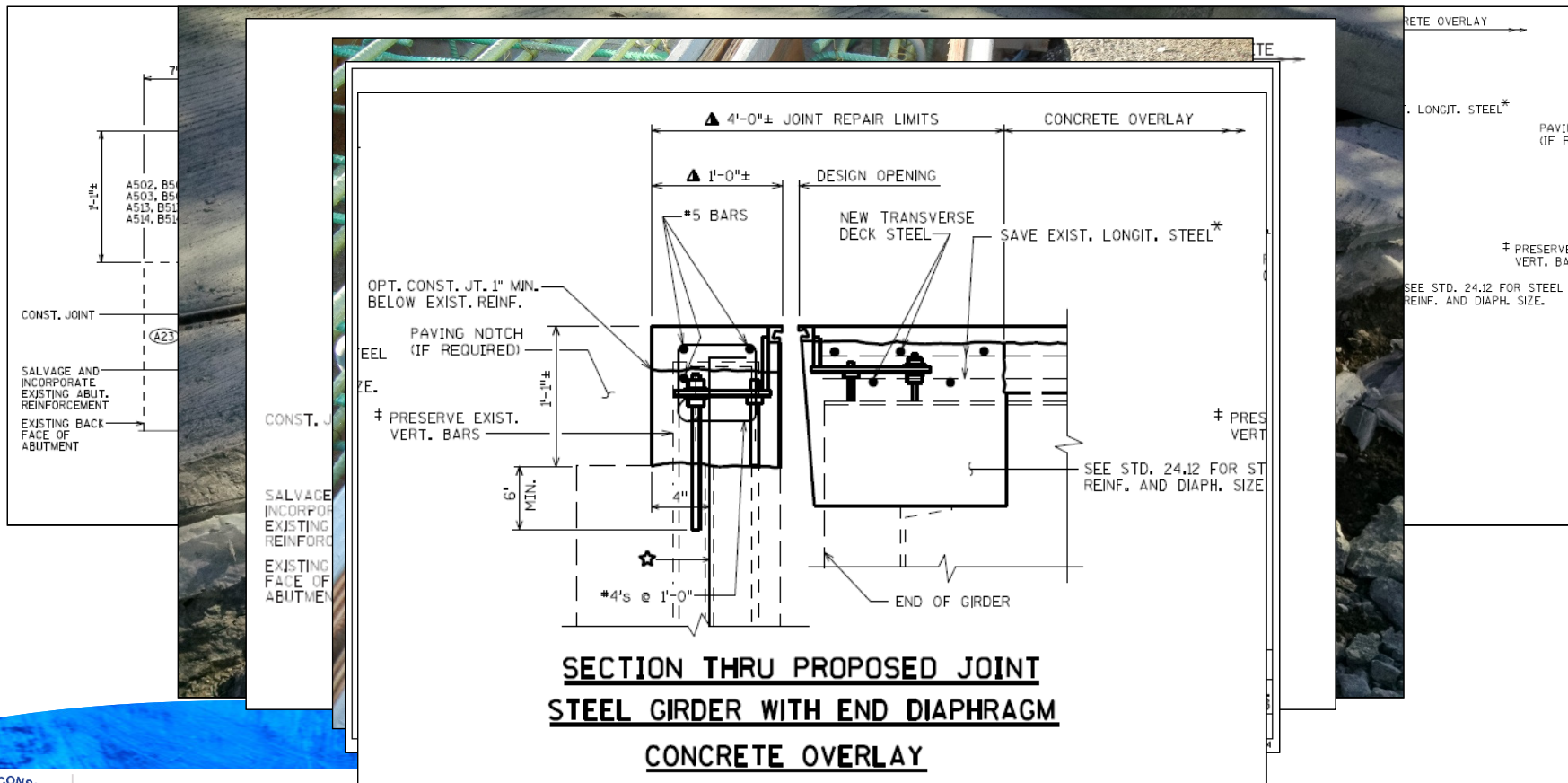
The intended subcommittee members are primarily WisDOT BOS structures design engineers and WTBA bridge contractors. Aaron Bonk, BOS Design Unit Supervisor, will act as the subcommittee chair and WisDOT BOS will provide 5-7 other staff at each annual meeting. It is the goal of the subcommittee to get representatives, both field project managers and contractor management, to partake in this subcommittee as well. In order to keep the meeting productive and targeted, the target industry representation is 7-10 persons.

Please note that the intent is to not include consultant structural design engineers in this subcommittee initially in order to keep the group size reasonable to remain effective in meeting the intended goals. BOS will transmit information gained through these subcommittee meetings through updates to design policies and memorandums sent to all of WisDOT's consultant engineering partners.



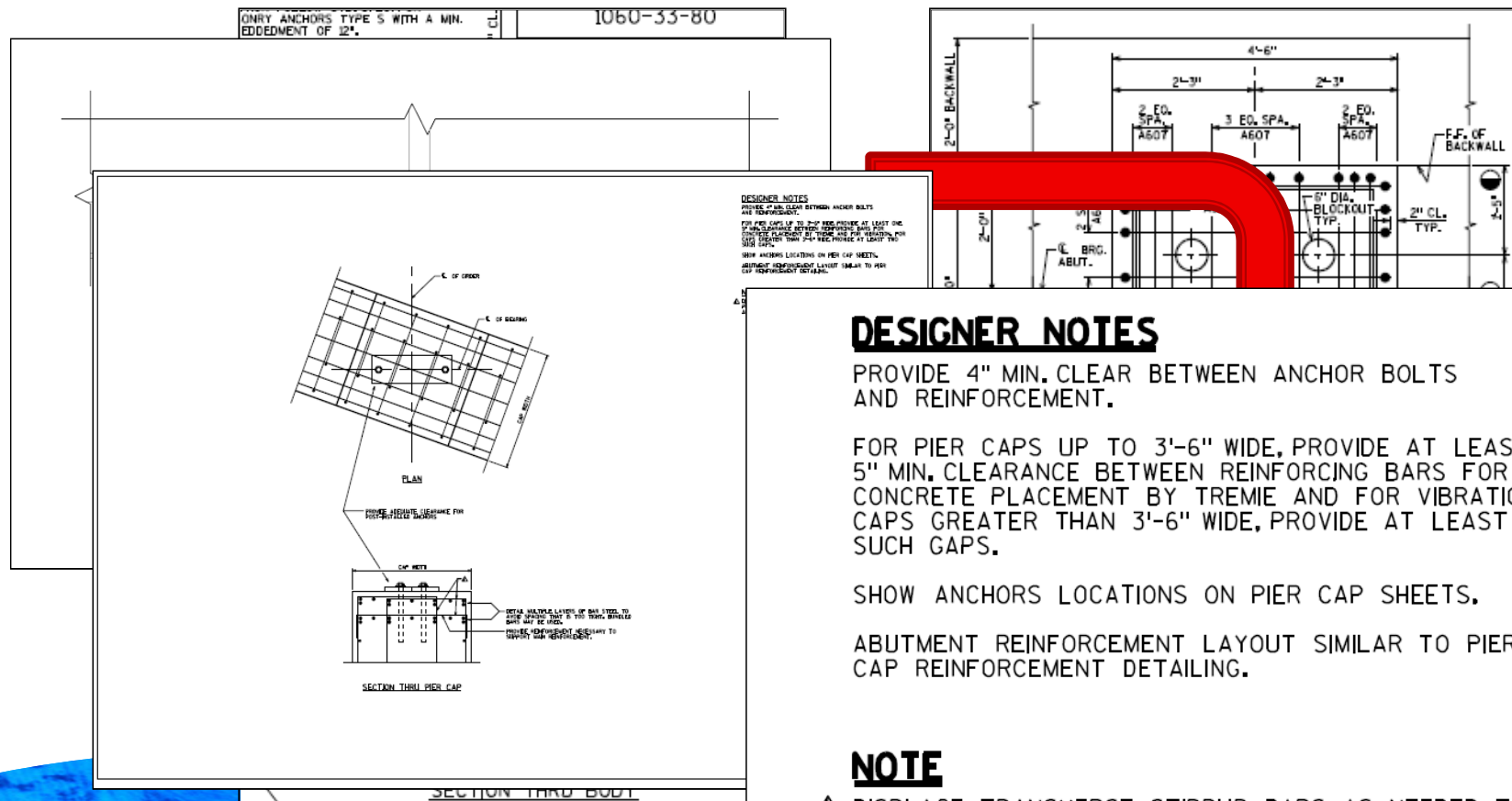
Action Item Review

- ▶ Open Action Items Following Last Meeting
 - Concrete Overlays at Expansion Joints



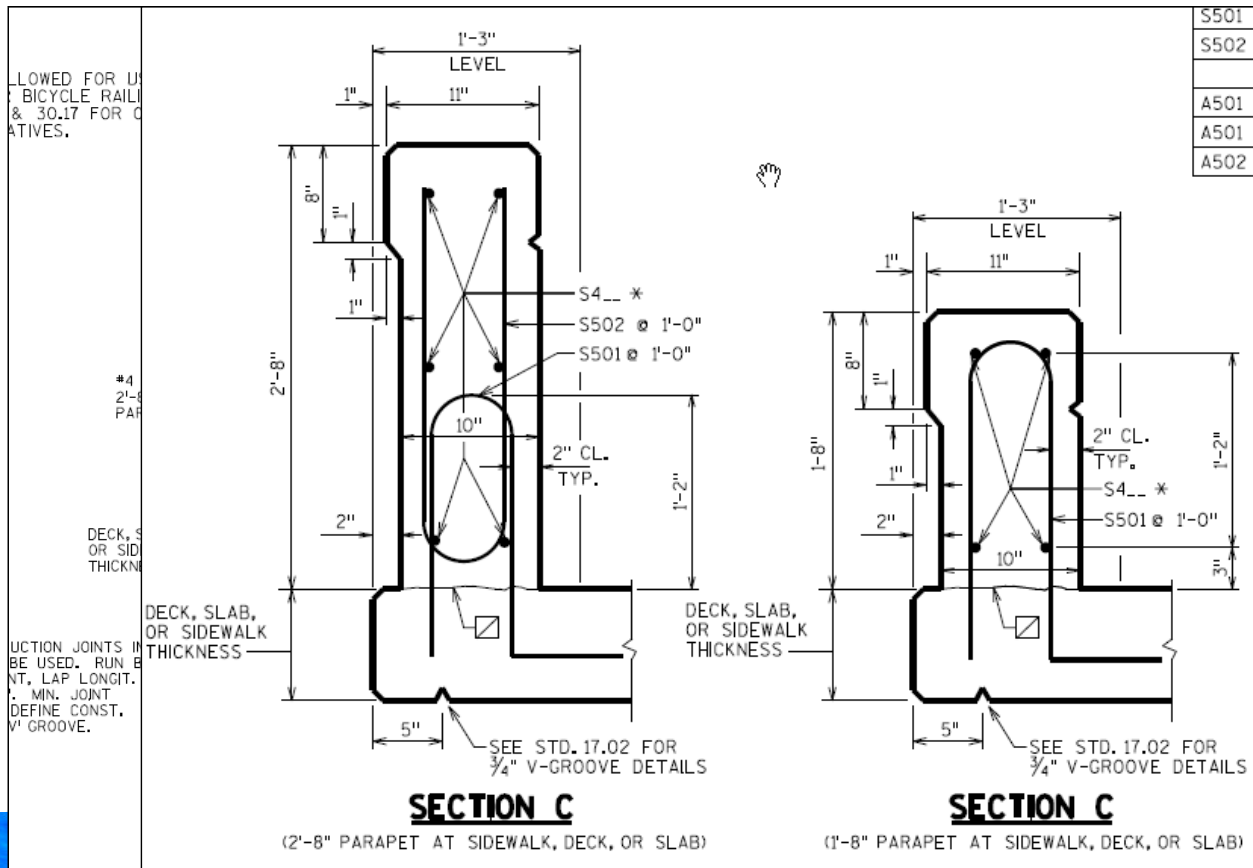
Action Item Review

- ▶ Open Action Items Following Last Meeting
 - Substructure Reinforcing Steel Conflicts



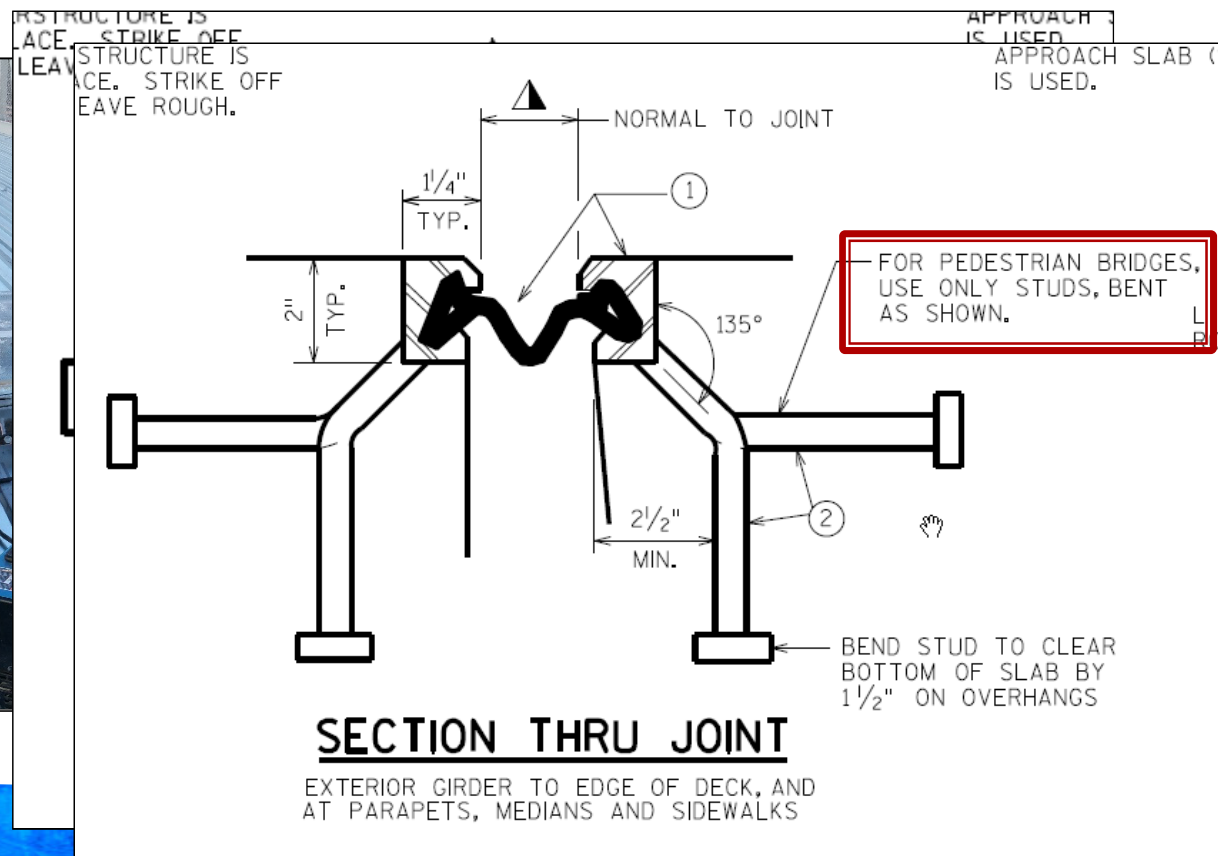
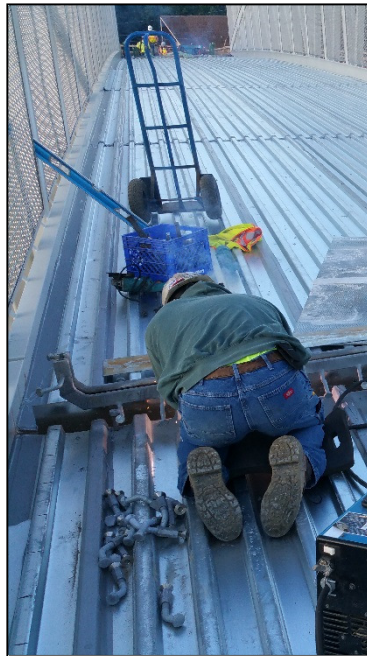
Action Item Review

- ▶ Open Action Items Following Last Meeting
 - Cast-In-Place Vertical Parapet Reinforcing Steel



Action Item Review

- ▶ Open Action Items Following Last Meeting
 - Expansion Device Anchors on Pedestrian Bridges



Action Item Review

- ▶ Open Action Items Following Last Meeting
 - Box Culvert Construction Joints in Walls

OPTIONAL CONSTRUCTION JOINT. OMIT 1" FILLET IF OPTIONAL CONST. JOINT IS USED.

1'-6" MAX. DISTRIBUTION STEEL CLASS 'C' LAP 1'-6" MAX.

T. CONST. STEEL LAP 1'-6" MAX.

DESIGNER NOTES

SEE BRIDGE MANUAL SECTION 36.2 FOR ADDITIONAL REQUIREMENTS FOR PEDESTRIAN UNDERPASSES AND CATTLEPASSES.

⊗ **DETAIL NOT ALLOWED WHEN HAUNCHES ARE REQ'D OR FOR PEDESTRIAN UNDERPASSES. OMIT 1" FILLET IF ALTERNATIVE CONSTRUCTION JOINT IS USED.**

◆ † = 1'-0" MIN. FOR PEDESTRIAN UNDERPASSES AND SLABS WITH DEPTH OF FILLS < 2'-0"
 † = 6 1/2" MIN. OTHERWISE

★ **TOP BARS FOR TOP SLAB:**

- FOR † < 10" WITH DEPTH OF FILLS ≥ 2'-0": BARS NOT REQUIRED
- FOR † ≥ 10": #4 AT 1'-6" MAX. EACH DIRECTION
- FOR PEDESTRIAN UNDERPASSES: #4 AT 1'-6" MAX. EACH DIRECTION
- FOR SLABS WITH DEPTH OF FILLS < 2'-0": #4 AT 1'-0" MAX. EACH DIRECTION
- USE CLASS 'C' LAPS

18" MIN. WIDTH RUBBER MEMBRANE WATERPROOFING IN WALLS AT CONST. JOINTS. EXTEND 6" MIN. BELOW THE BOTTOM SLAB.

RUBBERIZED WATERPROOFING FILLS AND ACROSS AT VERTICAL JOINTS. EXTEND 6" MIN. ABOVE THE TOP OF THE SLAB.

CONST. JOINT
 ALT. CON. JOINT

SECTION THRU BOX

RU BOX

STANDARD 36.03


BUREAU OF STRUCTURES

Bill Oliva

DATE: 1-17

Alternative Decking Systems Discussion

▶ Request to Discuss Sent to WTBA 9/19/2016



Division of Transportation System Development
Bureau of Structures
PO Box 7916
Madison, WI 53707-7916

Scott Walker, Governor
Mark Gottlieb, P.E., Secretary
Internet: www.dot.wisconsin.gov

Telephone: 608-266-8489
E-mail: willem.strobel@dot.wis.gov

DATE: 9/14/2016

TO: WTBA AND STRUCTURES INDUSTRY

FROM: AARON M. BONK, P.E.
STRUCTURES DESIGN SUPERVISOR
BUREAU OF STRUCTURES

SUBJECT: DECKING OF PRESTRESSED GIRDER BRIDGES

At the July 19, 2016 Bridge Technical Committee (BTC) meeting, preliminary discussions occurred related to the topic of deck forming on prestressed concrete girder bridges. WisDOT Bureau of Structures (BOS) inquired with industry about the use of alternative deck forming systems (i.e., not the conventional Borg Adjustable Joist Hanger System – see below for a few of the alternative systems WisDOT is aware of) on WisDOT projects. The intent of this discussion was to obtain more feedback from industry about all of the alternative systems being used, what superstructure configurations they are used for, how long these systems have been used, etc. The industry feedback received at the July BTC meeting indicated that most contractors have used the drilled-in anchor alternative decking system for many years on WisDOT projects and have been successful in using it.

BOS requested and obtained feedback from the WisDOT Region bridge maintenance engineers and also from counterparts in other states in the north central part of the country, and the overwhelming majority of respondents indicated that they either do not allow that type of system or are not comfortable with the long-term durability of it.

BOS has concerns with the impact that the alternative decking systems pose to the thin top flanges of prestressed concrete girders. Some of the main concerns are as follows:

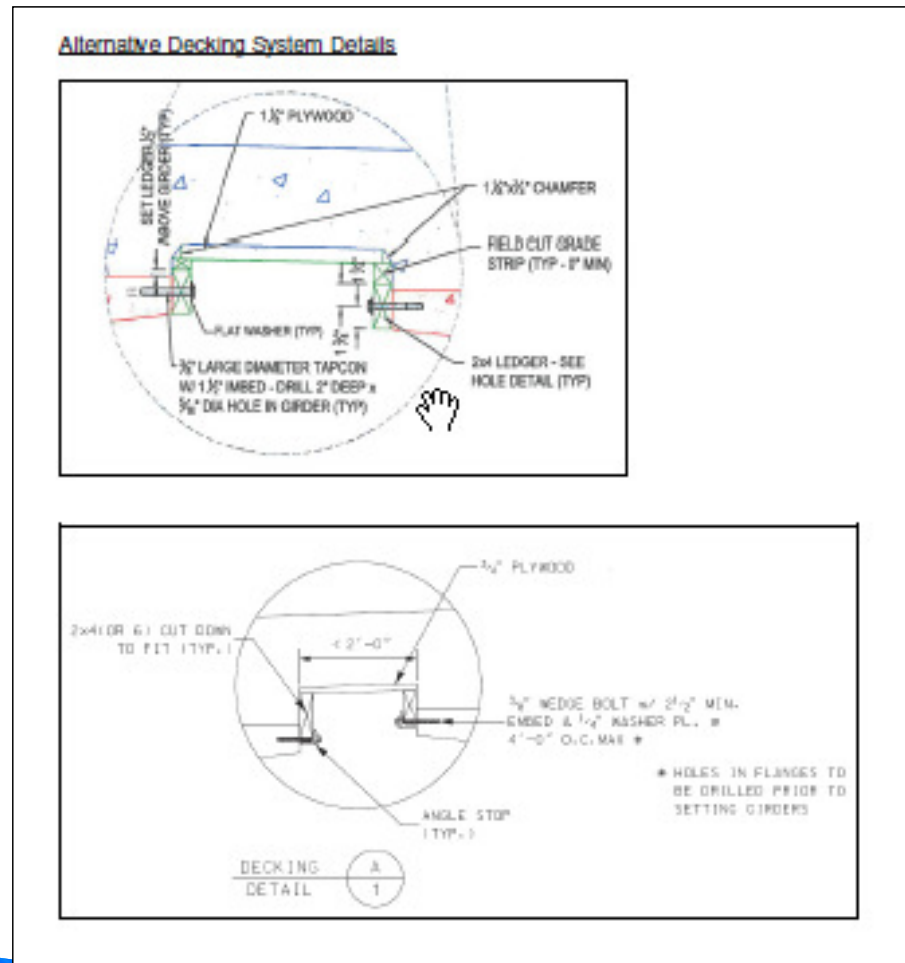
- Potential increased susceptibility to damage of prestressed girder flanges in the future when removal of deck occurs for redecking projects
- Potential spalling of top flanges, which in turn causes safety risks to the traveling public below
- Potential structural capacity issues if full top flange of girder section is not present due to damage

Based on these concerns, BOS would like industry to provide more detailed information related to alternative decking systems at the upcoming November 11 Bridge Technical Committee – Structures and Construction Subcommittee meeting. Of specific note, BOS would like more information on the following:

- Exact reasons requiring contractors to use alternative decking systems
- Details of the alternative systems used
- Locations of the bridges where alternative decking systems were used (in order for WisDOT to perform a field review/inspection of these locations)

BOS intends to gather this information in order to more adequately set policies for whether alternative decking systems may be used, and if so, where. We intend to set a policy in the near future and the intent of the policy will be to not allow the use of forming systems that require holes in the top flanges of girders unless enough information is provided to BOS that clears up the concerns that are present with alternative decking systems at this time.

Thank you for your attention to this matter and BOS looks forward to discussing this with you at the next Bridge Technical Committee – Structures and Construction Subcommittee meeting on Friday, November 11.

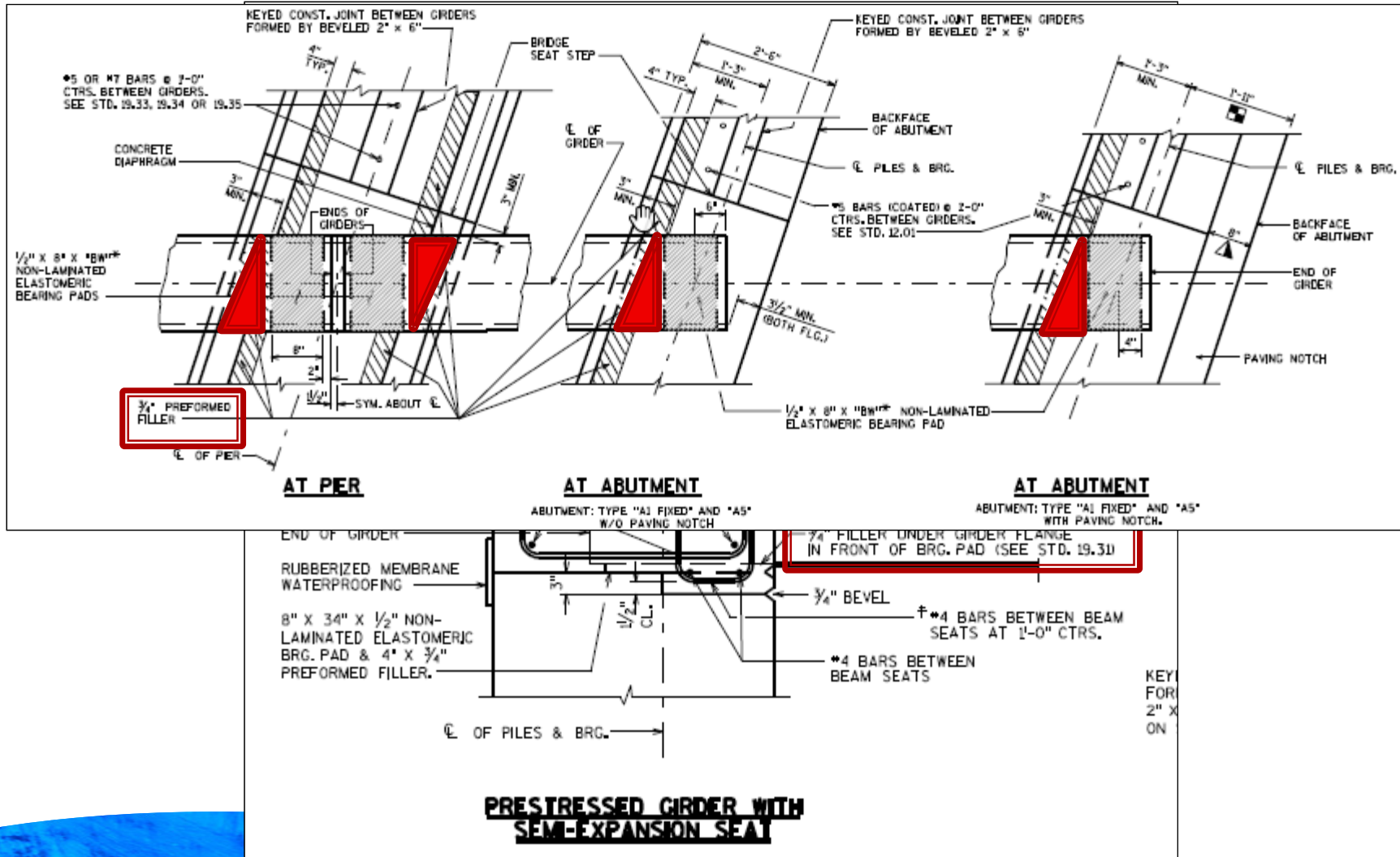


Rebar Detailing Topics

- ▶ Bar Mark Preference
 - When the exact same bar is used in multiple locations in a given structure, should that bar:
 - Have one callout and be used in multiple locations?
 - Or
 - Have multiple callouts, each being used in one location?

- ▶ Parapet Reinforcement Plan Location Preference
 - When bars protrude from one element into another, where should those bars be placed in a plan set?

Filler/Cork Material Under Girders



Review of New Action Items

