NATIONAL STEEL BRIDGE ALLIANCE

AASHTO/NSBA Steel Bridge Collaboration

Fall Meeting Minutes - Combined

Virtual Zoom Meetings

October 25 – 29

The AASHTO/NSBA Steel Bridge Collaboration is a joint effort between the American Association of State Highway and Transportation Officials (AASHTO) and the National Steel Bridge Alliance (NSBA) with representatives from state departments of transportation, the Federal Highway Administration, academia, and various industry groups related to steel bridge design, fabrication, and inspection. The mission of the Collaboration is to provide a forum where professionals can work together to improve and achieve the quality and value of steel bridges through standardization of design, fabrication, and erection.

Contents

Task Group List

Group Name	Chair	Chair Company	Vice Chair	Vice Chair Company
TG 1 Detailing	Brad Dillman	High Steel Structures	Gary Wisch	DeLong's, Inc.
TG 2 Fabrication and Repair	Heather Gilmer	HRV Conformance Verification Associates, Inc.	Duncan Paterson	HDR
TG 4 QC/QA	Jamie Hilton	KTA-Tator, Inc.	Robin Dunlap	High Steel Structures
TG 8 Coatings	Paul Vinik	GPI	Jamie Hilton	KTA-Tator, Inc.
TG 9 Bearings	Michael Culmo	CME Associates, Inc.	Ron Watson	RJ Watson, Inc.
TG 10 Erection	Brian Witte	Parsons	Jason Stith	Michael Baker International
TG 11 Design	Brandon Chavel	NSBA	Domenic Coletti	HDR
TG 12 Design for Constructability and Fabrication	Christina Freeman	Florida Department of Transportation	Russell Jeck	Tutor Perini Corp.
TG 13 Analysis of Steel Bridges	Deanna Nevling	Michael Baker International	Francesco Russo	Michael Baker International
TG 14 Field Repairs and Retrofits	Kyle Smith	GPI	Jonathan Stratton	Eastern Iron Works
TG 15 Data Modeling for Interoperability	Sammy Elsayed	Skanska USA Civil	Aaron Costin	University of Florida
TG 16 Orthotropic Deck Panels	Duncan Paterson	HDR	Sougata Roy	Rutgers University
Main Committee	Ronnie Medlock	High Steel Structures	Christina Freeman	Florida Department of Transportation

TG 1 Detailing

Task Group Mission: This Task Group is specifically responsible for the creation and maintenance of guidelines and best practices for the creation of clear concise design and fabrication drawings.

Task Group Leadership
Chair: Randy Harrison - W&W|AFCO Steel, Hirschfeld Division
Vice Chair: Gary Wisch - DeLong's, Inc.
Secretary: Christopher Garrell - NSBA

1. Chairperson's Welcome (9:00 AM – 9:10 AM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.

Previous meeting minutes were approved.

2. Intent of G1.4 Guidelines for Design Details Update (9:10 AM – 10:50 AM)

Develop a standard set of drawings. Group of people shown in agenda who will look through each section and determine if and what needs to be updated.

a. Structural Steel General Notes - page 102 – Brad Dillman

Brad Dillman gave a brief update. Early in the process. Have gone through the existing notes which have been converted to a Word document and building upon the existing and adding new sections as necessary. Get Word document cleaned up before sending to TG members for comment. Randy would like to have this, and all other sections finalized for the spring meeting with drafts by the end of December. Owners will have very specific requirements, for example painting systems and testing. In those instances, the G1.4 will provide guidance for developing general notes will be provided rather that specific general notes themselves.

b. Rolled Beams – New – Brad Dillman

This is a new section and is a matter of collecting typical details first. Currently, the group is in the early stages of development. Aside, the drawings in general currently would benefit from being refined. The groups individually need to work developing the drawings for their section and will need to ensure uniformity. However, maintaining consistency will be difficult.

c. I-Girders (Parallel Flange and Haunched) – pages 103, 104 & 111 – Gary Wisch

The group is in the early stages of development and Gary has not had a chance to meet with his group yet, however he has developed a list of questions that need to be addressed. He is hoping to have a a draft developed by the spring. Regarding parabolic haunched girders, options for flange splice should be shown given different bending capabilities of fabricators.

On I-Girder sheet there is a tab plate detail shown. These are detrimental to fabrication and there is way of doing these economically. Gary asked that this detail be removed since it is not recommended and if it is not needed. Domenic mentioned that this started with concerns welding to flange, however welding a stiffener to a bottom flange is better understood and not a big deal. Gary mentioned that when they encounter this detail, they have little recourse to convert the detail from tab to welded. At this time, Tennessee DOT still has this detail in their standards. Tab plate cost are about $165 per instance now. Jason Stith mentioned that deleting the detail entirely would not entirely be beneficial since the fabricator would not have a document to reference and the G1.4 would then be silent. Guide would benefit from a section showing poor or uneconomical details. Dennis Golebeck mentioned that FDOT still uses these in very specific locations where they have large lateral flange bending stresses. However, they are not used globally. Dennis would like to see it remain and possible have the detail and cost information updated. Jihshya Lin said that MinDOT is using this type of detail, however only in tension zones. Heather reminded the group that the Collaboration documents have taken a stance on the detail as not preferred. However, having a section devoted to deprecated details allows you to go deeper on reason why they are deprecated, however the concern is now making old details that have been long forgotten come back into use. Bill Lally said that if the tab detail is included, it should be clear when it is appropriate to use these. Possibly this requires more detailed discussion either in the document or G12.1 (for example). Heather reminded the group that there probably already exists detailed discussion in one of the other Collaboration documents and the group should consider either referencing the other document or copying the text over. Jihshya Lin said that MinDOT has had cracking issues which is a reason they cite for using tab details (especially on FC bridges). Frank Artmont mentioned that the bolt location and potentially the quantity can cause distortion induced web cracking.

Christina Freeman stated that G12.1, has commentary on the bolted tab plate in C2.1.2.2, which could be referenced from this document.

Ronnie Medlock mentioned that termination details ("X" and "Y" callouts) need some consistancy. Possibly a callout that has a "+/- ¼ in". He mentiond that there was nothing wrong with taking the weld to the edge of the plate. Heather mentioned that there have been issues when fabricators are not carful enough and have resulted in under cut. Mike Grubb mentioned that the BDS commentary has been updated to allow wrapped welds around the stiffener which protects the connection during hot dip galvanizing (i.e. for sealing). Heather mentioned that this or a similar details is before AWS and any decision may impact how the Collaboration approaches the detail. The central issue is that when the 1/8in hold back is not held, fabricators have been required to grind the weld. Fabricators just do not want zero. Gerry Sova recommended "1/4in edge distance, +1/16 in & - ¼ in; or 1/4" edge distance, +1/8 in & -1/4in". Ronnie will work on language for the next meeting. Heather had a preference for the 2nd recommendation as long as no one was too worried about losing an extra 1/4" beyond current recommendation in the flange weld. Christina Freeman stated that G12.1 as far as she knows, G12.1 is silent on weld termination details.

d. Connection Plates and Transverse Stiffeners – pages 103 & 106 – Gary Wisch

The group is in the early stages of development and Gary has not had a chance to meet with his group yet.

e. Bearing and Jacking Stiffeners (Half Pipe) – page 103 – Randy Harrison

Does not recommend any specific changes to existign section. Need to add section for pipe stiffeners though. This details has come-up in a few state projects. Only problems seen is the availability of weathing material which may need to be addressed.

f. Longitudinal Stiffeners – page 104 – Bill Lally

Bill mentioned that the drawings were cluttered and the layout should be improved. He updated the drawing and will be sending out the sheet for comment from the group. Heather reccommended looking at AREMA and existign AASHTO details.

g. Lateral Bracing for I Girders – page 106 – Randy Harrison

Randy asked if the option for a fabricated tee bolted to the web (rather than the flange) should be added. Different states has different details. Brad Dillman supported this change and mentioned that he sees this detail in railroad bridges. He also reminded that bearing locations can be an issue with clearances. Grubb also mentioned including cases where they intersect stiffeners.

h. Bolted Field Splices – page 107 – (Open for lead volunteer)

Randy is still looking for a voluteer, however he does not believe that significant updates are needed right now. Offsets from welds are important. Jihshya Lin thought there should be consideration for flange and web thickness transitions at a field splice. Bill Lally reminded the group that NY does not allow filler plates. If the thicker plate is run longer to the location of the splice, the location of the but splice may be an issue. Randy suggested that the document state a preference for not changing thicknesses at splice locations. Heather asked if AISC or RCSC is considering the clearance issues with torque and angle bolts that have a spline which remains after tightening. Understanding threads included and excluded remains an issue.

i. Cross Frames – pages 108 through 111 – Brad Dillman

Work has not fully started yet.

j. Diaphragms – page 112 – Brad Dillman

Work has not fully started yet.

k. Tub Girders – pages 113 through 118 – Frank Kingston

Randy stated that this was going to be a major new section. The group has not had a chance to work on this yet.

l. Straddle Bent – New – Randy Harrison

There is a parallel effort with TG12. The group has not had a chance to work on this yet. Gerry Sova reminded the group that the three-parallel beam straddle bent, it is not just a study and that Mike Culmo designed a three-beam straddle bent that has been built in a straddle bent in

Hartford, CT. Regarding tub girders, the NSBA has an existing document titled "Practical Steel Tub Girder Design" published in 2005 that covers the topic very well. Perhaps the document needs to be updated but it is still a valid working document.

m. Bearings – New – Randy Harrison

The G9.1 has details and the G1.4 should only clarify things like aligning anchor bolts aligning sole plates that cause detailing problems and not the bearings themselves. Bearing do not always address what is happening above them.

n. Miscellaneous Details (Handrail, Drip Bars, Utility Supports, Inspection Access & Walkways, Expansion Joints) – New and page105 – (Open for lead volunteer)

Number and scope of details seems to be complete and not needing changes. Jihshya Lin mentioned that they are having issues with modular expansion joints and they are not performing well. He was wondered if there was any specific guidance in G1.4. However their issue is more of a design issue and not necessarily a detailing one. Given the number of expansion joints and that they are no longer detailed anymore (only by the manufacturer), they do not need to be addressed. This is similar to bearings.

3. Next steps and wrap up (10:50 AM – 11:00 AM)

Christina Freeman mentioned that page 117, note 4 (preferred and minimum opening sizes) is in conflict with G12.1 section 3.5 and should be updated. Domenic Coletti asked if there were any milestone dates that Randy wanted to meet. Randy would like to target the end of December for drafts of sections.

4. Adjourn

TG 2 Fabrication and Repair

Task Group Mission: This Task Group aims to achieve quality and value in the fabrication of steel bridges through standardization of steel bridge fabrication across the nation.

Task Group Leadership
Chair: Heather Gilmer - TUV Rheinland
Vice Chair: Duncan Paterson - HDR Engineering Inc.
Secretary: Christopher Garrell - NSBA

1. Chairperson's Welcome
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.

Previous meeting minutes were approved.

    c. Reminder of documents currently under the task group's scope
    d. AASHTO steel fabrication specification status update: F3148 & "combined method"
2. G2.2, Guidelines for Resolution of Steel Bridge Fabrication Errors

Task Group has two documents S2.1 and G2.2 it maintaining. S2.1 will be turned into a formal AASHTO specification and the TG2 will remain in a strong advisory role. In the future, any changes would have to be accepted by AASHTO T17. So any comments from TG2 would then filter up to T17. Future Collaboration meeting will attempt to maintain the relationship with T17 by co-hosting meetings once they return back to in-person meetings.

At this time the only document that TG2 maintains is G2.2. Maintaining the existing documents has required a lot of time, so creating new document was not always pursued.

    a. Improper preheat

Addressing this issue has been challenging. Not referring about cases where fabricator did it but was not witnessed. This topic will assume that preheat was not performed, or done improperly and not trust issues between fabricator and inspector. Alternative preheat annex in D1.5 might be a good reference for fillet welds however has been more challenging for groove welds and defining testing procedures. This is a common shop issue that would be valuable to have guidance on. The issue needs to be defined by weld type and may even extend to

particilar situations (e.g. fillet weld for a stiffener). As long as you have access to the weld, hardness values are easier to obtain.

The primary purpose of preheat is to avoid hydrogen and hard microstructure. The TG should consider defining what the concerns are in instance where preheat was not performed and then address those concerns individually. A side question raised was how effective is post weld heating while the weld is warm or hot versus starting with a cold weld in driving out hydrogen? Next, if performing hardness tests, where are the best places (easy to access and representative of the weld condition) to perform this? Karl Frank felt that hardness testing should be the primary focus (ultrasonic hardness testing). Reference AWS Annex H alternative preheat annex. Ronnie Medlock suggested making mock-ups and running hardness trials. Part of this should be the use and results of ultrasonic hardness testing equipment. Possibly contacting one of the equipment manufacturers might be a good idea. They may be willing to help with the mock-up testing.

b. Framing members too short

Addressing geometry is fairly straight forward but may still need approval by the engineer. However for more complex section (e.g. box sections) where the entire member is to short. For example, lengthening a floorbeam member. The range if instance where members are too short is broad. This section would provide guideance on what to put into an NCR since everything would be subject to review.

Fillers are a resonable approach to but would have to be welded as opposed to a lose filler where it is prone to loss of shear capacity. Add common sense approach for small adjustments in cases where a member is too short so that project timelines are less likely to be impacted. This section (and the guide) provide a point for mutual discussion and agreement between the engineer and fabricator to facilitate the discussion and solution. If something is designed to the limits, any change (big or small) would be significant. So degree of difficulty might be affected by how the design was performed (e.g. performance ratio of 1.001). The concern was raised with fillers where they could lead to issues with pack rust. It would be useful if the guide included examples (for common issues). Also, it would be preferred if the fabricator was the

first person to suggest resolution since they would be in the best position to suggest the most expediant solution.

Given that the guide is example based, the TG2 members should be surveyed for issues they have run into along with solutions; specifically for this new section on members that are too short. They should also look back through the existing examples and suggest alternatives or additions. Dan Beck reminded the the group that realistically the guide will never capture all scenarios and that the owner will still need to make a final decision. However, the example will help facilitate the solution and negotiations that result.

Suggest sending out an email to fabricators asking for examples of repairs for past projects. However, would fabricators be willing to provide these and what format would they need to be in? Two areas lacking coverage in the guide are tub girders and box beams.

c. Exceeding maximum interpass temperature

New topic. Looking for input from group.

d. Hydrogen diffusion postheat not performed

New topic. Looking for input from group.

3. AASHTO fabrication specification (formerly S2.1)
   a. Continuing work on slip coefficients, especially regarding metallizing and combination of different coatings in same connection

There is existing reseach from Canada on combined metalized and galvanized connections. Example, metalizing girder and galvanizing the cross-frames. Feel there is enough information for commentary on this class of connections. In the last edition of 2.1 contains commentary that unsealed thermal spray should pass Class D slip. This includes reference to paper with supporting information. The Canadian specification had language proposed, however Heather is uncertain if that was ever accepted. Metalizing specification require masking of connecting surfaces. Karl Frank recommended this would be better suited for the design specification rather than the fabrication specification. It was suggested that it be add it to the existing slip

table rather than commentary. The interface is highly dependent on the roughness of the surface of the galvanizing resulting from the base metal.

b. Scribing/etching of layout marks

Primary concern is with scribe mark if transvere to primary tensile stress unless it is weleded over. Karl Frank stated that the Hirschfeld study showed that the fategue strength was not affected in instance of scribe marking, especially if the material is blasted afterwords. Letters and numbers were tested, however what affect would lines have in cases where they were used for stiffener layout. The research is does not necessarily support the position against scribing and the topic should be revisited so that it is not misrepresented and an issues is created where it is not. Scribes are typically no deeper than what is already allowed in undercut thickness limits and tolerances. The proper way to approach this may be to correlate this to undercut requirments and make reference to that. Machine versus human scribes could result in different depths. Karl Frank suggested that the group focus on plasma scribing rather than mechanical scribing. The group probably needs to better define what can and should be classified as scribing and etching.

Remaining items where not covered during this meeting.

c. Allowable gap at girder bolted splices
d. Reaming allowances & bolt hole tolerances
e. Unifying requirements for repair by grinding for various situations & combining the sections. Deferred until publication of fabrication specification
f. Applying A6 Table X4.2 (the old radii we used to have) to the 1.5t case for bending connection plates. Or maybe no ¾" limit? Compare AREMA. Deferred until after consideration by AASHTO T 14
g. Transverse members in assembly for skewed as well as curved—currently not in S2.1 or current fabrication specification draft. Deferred until after consideration by AASHTO T-14 issue first

4. Additional Topics

During the TG12 meeting, the question came up about appropriate means and methods for cambering rolled beams and this seemed like a good topic for either Fab Spec or its commentary.

5. Adjourn

TG 4 QC/QA

Task Group Mission: This task Group primarily focuses on the requirements for a Fabricator's quality control program, with emphasis on the development and implementation of a quality control plan and minimum requirements for an Owner's quality assurance program.

Task Group Leadership
Chair: Jamie Hilton - KTA-Tator, Inc.
Vice Chair: Robin Dunlap - High Steel Structures
Secretary: Jeff Carlson - NSBA

1. Chairperson's Welcome (12:30 PM – 12:40 PM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.

Jamie welcomed the group, Jeff went over the antitrust policy, and the previous meeting minutes were approved.

2. G4.2 – Guidelines for the Qualifications of Structural Bolting Inspectors (12:40 PM – 1:00 PM)
    a. Publication status

Jamie gave an update on status of this document. It has been published and is posted on the NSBA website. At the time of publishing there were still some things going on with 2020 RCSC that we were not sure if they would affect this document.

    b. Review of 2020 RCSC
        i. Conflicts with G4.2? Jamie Hilton
        ii. Any new applications from RCSC to be added to G4.2? Jeremy Rice/Heather Gilmer

- Jamie went through 2020 RCSC and didn't see anything that really conflicted with G4.2.
- There was some disscussion about ASTM F3148 Bolts and we may want to now include that in G4.2. If those bolts are included in the AASHTO Fabrication Spec, F3148 should be added to the list of references in Section 1. But any changes wouldn't take affect for a couple of years since it was just published.
- Jamie added a couple of items in the working draft in RED.

- Jon stratton had a comment on Jamie's comment from 5.1.1.1. Move the comment to 5.1.2.3.
- Ronnie added that Bob Shaw was at High steel to film training videos for RCSC. It was not discussed but adding a reference to these training videos should be considered in the future.

3. Retired S4.1 Steel Bridge Fabrication QC/QA Guide Specification (1:00 PM – 1:30 PM)
    a. Can the stripped-down version be a standalone document?
    b. G4.4 Sample Owners QA Manual – add to the stripped-down version?
    c. Can we archive the retired S4.1 to either NSBA or AISC websites with guidance of "buyer beware – this doc no longer is being updated, but might contain useful information" – Phil Dzikowski/Ray Monson/Teresa Michalk

- Jamie discussed the 3 column version of S4.1 that no longer exists and that he went through it more in depth at the last meeting.
- Heather reiterated that it isn't the intent of posting the retired S4.1 document.
- Can the stripped-down version be a standalone document? There did not seem to be any support for that.
- Heather gave an opinion that she felt combining G4.4 Sample QA Manual and Part C of the retired S4.1, and updating it for Owners to use as an actual specification for third party inspection companies. Who wants to be a part of this subcommittee? Heather wants to be a part of it, but not head it. Jamie is also going to be a part of the group and will lead it if nobody else volunteers. Phil Dzikowski said you could sign him up. If anyone else wants to join, please contact Jamie.
- Christina Freeman mentioned that Florida still references S4.1. There was a follow up disucssion about section 105. She was going to look into what FDOT might need to change in their DOT references.
- Heather suggested that there may be some overlap about certified coating inspectors in G8.1, someone should check to see if that ties into G8.1 for coating inspectors.
- G4.4 Sample Owners QA Manual – add to the stripped-down version? Not supported either.

- Can we archive the retired S4.1 to either NSBA or AISC websites with guidance of "buyer beware – this doc no longer is being updated, but might contain useful information" – Phil Dzikowski/Ray Monson/Teresa Michalk
    - Phil suggested to post it as AS4.1 and it is made clear that it is archived and to refer to current document as well.
    - May need to talk to someone at AISC if it can be archived. Heather pointed out the AASHTO does still keep archived documents online. Phil's subcommittee will investigate.
    - This item is being left open for Phil, Ray, Teresa. It is an action item.

4. G4.1 Steel Bridge Fabrication QC/QA Guidelines (1:30 PM – 2:15 PM)
    a. Review and update definitions - replace with terminology from AISC 207-20 doc – Jamie/Teresa Michalk, Heather Gilmer, Jeremy Rice

- This hasn't occurred formally yet. But Jamie intends on doing so.

    b. Address "new business" comments from previous ballot.

- Jamie went through an Excel file of proposed comments.
    - A discussion about using QA and it's definition or if it's used in G4.1. Consensus appeared to be to change the title and take out QA.
    - Comment from John Edwards – as-built drawings – There isn't much in G4.1 on as builts. Consider adding it to table in Section 9 and also consider passing it over TG1.

5. Section 10.1 - P.O. and Subcontracts
    a. Functions referenced by AISC
    b. Remove 10.1 title, keep paragraph and renumber sections accordingly (editorial)

- Jamie's red line comment on section 10 to take out first heading. Should also reference AISC 207 document? Jamie doesn't think that we need to add anything else to this section as it's covered in AISC 207. Discussion about changes that may need to be made with AISC 207.

- Chairman's note: Future meetings could include using this TG to help with revisions to AISC 207 Chapter 4 Bridge Fabricator Requirements to help tie up loose ends and maybe give it more muscle.

6. New Business (2:15 PM – 2:30PM)

- Spring meeting is May 3 – 5, 2022
- Fall meeting is October 11 – 13, 2022

7. Adjorn

TG 8 Coatings

Task Group Mission: This Task Group primarily focuses on the functions, operations, requirements and activities needed to achieve consistent quality in steel bridge coatings. At the same time the group acknowledges the need for a cooperative approach to quality, where the Owner's and Contractor's representatives work together to meet their responsibilities, resulting in efficient steel bridges coatings that meeting all contractual requirements.

Task Group Leadership
Chair: Paul Vinik - GPI Construction Engineering
Vice Chair: Johnnie Miller - Texas Department of Transportation
Secretary: Jeff Carlson - NSBA

1. Paul Vinik introduced himself, welcomed everyone to the meeting, and introduced the agenda. Paul introduced a change in TG8 leadership – Jamie Hilton has stepped down and Johnnie Miller with TxDOT is the new Vice Chair.
2. Paul motioned to approve the previous meeting minutes. The previous minutes were motioned and approved.
3. S8.3 – Specification for the application galvanizing on steel bridges is out for ballot.
4. G8.4 – Detailing for Corrosion Protection Systems
    a. Paul gave a quick summary of the difference between the S8.3 galvanizing group and the galvanizing chapter of G8.4. S8.3 is a specification for the application of galvanizing to steel bridges, whereas G8.4 is intended to cover detailing practices for all appropriate steel bridge corrosion protections.
    b. Ronnie Medlock noted that a draft of the galvanizing chatper for G8.4 is complete and he briefly reviewed the organizing of the chapter.
    c. Members of the other corrosion protection groups were identified. They are:
        i. Uncoated weathering steel/50CR – Heather Gilmer, Jason Lloyd, Jeff Carlson
        ii. Thermal spray – Paul Wagar, Heather Gilmer, Ronnie Medlock, Dave Johnson, Bernardo Duran, Kevin Irving
        iii. Liquid applied coatings – Derrick Castle, Johnnie Miller, Bill Corbett, Brian Friley (High Steel)

d. Jeff will share the galvanzing chapter of G8.4 with the other corrosion protection groups for their use as a template for their respective chapters.
e. Jeff will organize kick off meetings for the other groups including: UWS, TSC, and liquid applied coatings.

5. Update on UWS Initiatives
   a. Jason Lloyd provided a status update on UWS document being developed. Jason and Jeff (and maybe Heather) are going to get together to see if there is any overlap with TxDOT UWS info and the UWS manual.
   b. Kevin Zmetra presented on a corrosion study of UWS bridges in Connecticut.
      i. Average rating of UWS bridges was 7, even for the oldest structures.
      ii. Section loss is a better measure of corrosion.
      iii. Leaking joints and beam ends showed highest section loss.
      iv. Painting UWS mitigated section loss where joints were leaking.
      v. Conclusions: certain details perform better (eliminate joints) and painting is effective in mitigating section loss where joints leak. Overall, UWS is performing well in Connecticut that the state intends on using the system as their default system.
6. Single Coat IOZ Synthesis Update
   a. Jeff provided a status update on the use of single coat of inorganic zinc primer (IOZ) and the NSBA initiative to investigate this usage and provide a guidance document. MoDOT has the most bridges with IOZ-only. NSBA to conduct a synthesis study and assess bridges with IOZ-only coating. A synthesis study is currently being implemented (to be signed very soon) and results should be available towards the end of next year. Jeff contacted Wille Feliciano (NYDOT) of NEPCOAT to meet about joining TG8.
7. Misconceptions of Chemically Grouping Coatings
   a. Paul Vinik presented on coating chemistry mistakes.
      i. Are general chemistries equal. Reviewed general chemistries of various coatings.
      ii. Presented possible chemistries for various polyurethane coatings.
      iii. Presented chemistries for fluoropolymer coatings.
      iv. Reviewed SSPC Paint 36 and Polysiloxane product language.
      v. Reviewed difficulty in identifying coating classification from internal monomer chemistries.

vi. Good discussion followed on what agencies need to do concerning specifying coatings and approving coatings.

b. Question for the group: what, if anything, can this group do to help provide a resolution for this issue? Some states have performed research on topic and have good data. Could this group develop a guidance document for other states to consider: common requirements, etc? Perhaps a survey to the states would be a good first step.

8. Open discussion/New business
   a. Heather announced that AMPP is potentially revising S8.1 – Bill corbett was working on this document. He turned over editted document to Ramon (AMPP chair of this document).
9. Who wants to be involved in next generation of this document? (Bill corbett, Kevin Irving, Heather Gilmer, Jeff Carlson) Jeff will send these names over to Ramon.
10. Adjourn

TG 10 Erection

Task Group Mission: This Task Group develops guidelines and specifications that establish and define the basic, minimum requirements for the transportation, handling and erection of steel bridge components to ensure safe steel erection as well as quality and value in the completed bridge structure.

Task Group Leadership
Chair: Brian Witte - Parsons
Vice Chair: Jason Stith - Michael Baker International
Secretary: Christopher Garrell - NSBA

1. Chairperson's Welcome (9:00 AM – 9:10 AM)
    a. AISC Antitrust Policy and Meeting Code of Conduct
    b. Review action items from previous meeting

Previous meeting minutes were approved. Brian Witte went through the action items from spring meeting. Frank Russo submitted a new bearing section which was discussed later in the meeting.

2. Field Reaming (9:10 AM – 9:30 AM)
    a. Update / discussion

The group felt is was necesssary to include this. It is mentioned in the document, but nothing specifically mentioning about reaming. This would be field reaming and not shop reaming. Need to identify where it would fit in the document. Medlock suggested looking at some other similar specification to see where the topic has traditionally been discussed. It may fit with existing subsection in section 6 (e.g. abnormalities) or as its own new section. Heather Gilmer mentioned that reaming allowances are often fixed for a project, connection or specific hole. In some instances, reaming limitations can be a percentage of the field of bolt holes. If there is a reaming allowance was used up in fabrication what options are there in the field. Additionally, this information would need to be passed onto the contractor if reaming was required in the shop. The goal in the S10.1 would be to ensure that when reaming is needed, it would not cause delays. So, clear language needs to be included that defines terms like "Moderate Reaming". This would allow the erector to take action in the field without approval of the engineer.

It may also be beneficial to include language that helps the erector determin is reaming has already been performed in the fabrication shop. In the end, it is also important that the erector recognize the causes leading to the need for reaming. For example, if falsework is shifting which is then causeing fitting issues, the falseworks should be corrected first and reaming should not be done. Coordination is needed with the S2.1 regarding allowances for reaming as the definition is subject to change. Consideration also needs to be included for cases where parts have been hot dipped galvanized and holes need to be reamed.

Alternative to reaming have been force fitting of structure with drift pins, for example. Would engineers be more of less relictant to approve this process of force fitting? Additionally, the means and methods should be stated also. For example, using a torch to ream a hole. Should that be allowed?

Jon Edwards informed the group that NYS Steel Construction manual has language for field reaming (Section 14.0.3). Heather Gilmer mentioned that the Texas language for field erection section "Misfits 3.11.5". Correct minor misfits. Ream no more than 10% of the holes in a plate connection (flange or web), and ensure no single hole is more than 1/8 in. larger than the nominal bolt diameter. Submit proposed correction methods for members with defects that exceed these limits or prevent the proper assembly of parts. Straighten structural members in accordance with S2.1. Make all corrections in the presence of the Engineer at no expense to the Department.

3. Broken Fasteners Open Discussion (9:30 AM – 9:50 AM)
    a. Ronnie Medlock mentioned this a potential new topic for TG10 consideration during spring meeting for Main Committee (Tappan Zee)

The S10.1 currently does not discuss broken bolts. The issue has come-up in the news with the Tappan Zee bridge. Document broken bolt or tracing them back to the source if a large number are breaking? A new section might include reminders about checking lubrication or installation methods if the issue has become systemic. Nick Haltvick mentioned that at MnDOT, it is estimated that 99% of bolt breaking problems are due to lubrication.

    b. Do we want to include topic in G10?

Russ Jeck and Nick Haltvick will help draft language. Brian does not feel it will need more than a paragraph of text.

4. G10 & AASHTO Bridge Construction Specification (9:50 AM - 10:00 AM)

Heather Gilmer is leading the development of a fabrication specification overseen by T17 which will remove portions from the AASHTO Construction Specification that are fabrication related. The new specification will merge the fabrication language from several existign document beyond the construction specification. Transportation plan is included in the construction specification was carried over from the construction specification as it was interpreted as an instruction to the fabricator. However, it may not be the case and Heather was asking for feedback from TG10 whether this was the correct decision. When the the new fabrication specification is published, there will be a period of time when the old language (in the construction specification for example) exists at the same time. Ideally, the transportation language would exist in a single location (new fabrication specification or S10.1. Referencing from one to the other would be ideal depending on where it ends up being placed. Brian Witte mentioned that the transportation section of S10.1 was more explicit about transportation being a fabrication issue. Brian Witte will schedule a follow-up call to discuss the matter in greater detail.

Heather Gilmer raised a related question of how S10.1 was to be used and why it was developed. Is it to complement the existgin AASHTO Constrction specification or in leu of? If the later, it should take what is “good” from the AASHTO Construction specification and build upon it. Brian Witte feels that in its current form S10.1 cannot stand by itself, but only needs minor effort to do so.

5. Bearing - Section 5 rewrite (10:00 AM - 10:10 AM)
    a. Review draft language if available

Frank Russo was not present, however he recently submitted draft language to Brian Witte. Frank voluteered to update the language in the S10.1 to reflect the updates in the G9.1 which will be published next year. The question was raised as to what to do if your bearing seat has issues. Heather Gilmer recommended including it in the G14.2 for field repair and retrofit

which has a chapter on issues discovered during construction. Sounds like G14.2 should be referencing this section in S10.1 once it's published. Brian Witte reviewed the changes with the group. Brian will circulate the new section with the group for comment.

6. Transportation - Section 3 (10:10 AM – 10:20 AM)
    a. Updates complete unless further comments

See previous comments. This group, including TG2, need to decide where this information should reside; for example, AASHTO fabrication specification, AASHTO Construction specification or S10.1.

7. Wind Load on Girders during Erection – no update
8. Bolting for Bolters – no update?

Ronnie gave an update on the status of the bolting videos. They were recently recorded at High Steel. The videos will be posted to YouTube. Methods for promotion of the videos needs to be discussed. Nick Haltvick mentioned that MinnDOT has a bolter class coming-up which would benefit from viewing these videos.

9. Beam Clamp Loading (10:20 AM – 10:25 AM)
    a. Show updated graphic

Brian Witte showed new graphic which shows how the beam clamp interacts with the beam flange. This should complement the text well. Engineers can find further guidance in existing AISC specifications/guides on dealing with point loads on flanges.

10. New topics for consideration (10:25 AM – 10:35 AM)

Pulling “good” or relevant information from the AASHTO Construction specification (chapter 11) into S10.1. The group should first to evaluate the Construction specification and identify these sections. This would follow what Heather Gilmer is doing with the new AASHTO Fabrication specification which is pulling fabrication content from other documents so it is in one location. This is not intended to necessarily reduce duplication, but consoladate the information in a more meaningful location.

Brian Witte reviewed the index for the document and mentioned that he gets the sense that information is split-up amonugst several different sections. The concern might be that someone looking for guidance on bearings may not notice that it is in several sections and miss information. Domenic Coletti suggested that chapter 2 be moved to its own new document.

11. Review & assign action items (10:35 AM – 11:00 AM)
    a. Next Revision Publish Date?

Would like to get the document published in 2023. Document needs to be successfully balloted and updated by November 2022 to make that timeline. The group concensus was there was enough new content to justify moving forward with publishing in 2023.

12. Adjourn

TG 11 Design

Task Group Mission: This Task Group aims to develop and maintain consensus guidelines to assist with the design of steel bridges and their components.

Task Group Leadership
Chair: Brandon Chavel - NSBA
Vice Chair: Domenic Coletti - HDR Engineering Inc.
Secretary: Christopher Garrell - NSBA

1. Introductions (9:00 AM to 9:10 AM)
    a. AISC Antitrust Policy and Meeting Code of Conduct
    b. Approval of Previous Meeting Minutes.

Previous meeting minutes were approved.

2. Announcements and Administrative Items (9:10 AM to 9:15 AM)
    a. FDOT Steel Bridge Research Project RFP – Christina Freeman

Christina Freeman review some upcoming RFPs that FDOT is advertising.

- Half-round bearing stiffeners for skewed steel I-girders. Looking to gain better understanding of fatigue behavior; flange to web interface; attachment of stiffener to girder flange; corrosion protection. Work will include experimental and analytical work. Project to be advertised later this year or early 2022 (March). This can be awarded to a university or consultant, and they do not need to be located in Florida.
- Other RFPs – Strengthening Piers to Resist Vehicular Collisions; Bond Performance Between UHPC Substrates and Field Cast UHPC Connections.
- How to search for FDOT RFP advertisements: View RFP projects at My Florida Marketplace website:
    - http://www.myflorida.com/apps/vbs/vbs_www.search_r2.criteria_form
- Search with the following criteria:
    - Type: Competitive Solicitation
    - Agency: Department of Transportation,
    - Commodity: 80111621, Temporary research and development services
- Alternatively, sign up for electronic notification:

- https://www.myflorida.com/apps/vbs/vbs_www.main_menu

3. Presentation (9:15 AM to 9:45 AM): Don White – Gtech Skewed Bridges and Offset Cross-frames.

Synthesis of and expansion upon recommendations for cross-frame framing arrangements developed as part of the NCHRP 12-79 and 20-07/355 projects. Topics discussed included, what does the 4bf rule buy you in various straight bridges with parallel skew, what stagger arrangements work best, etc. The studies to be discussed focus on the response of composite bridges to vehicular live load in addition to constructability considerations.

Effective cross-frame arrangments for 2-span continuous bridges. Goal is to reduce cross-frame quantities and overall bridge costs. Looking at achieve this by using fewer cross-frames, and modified arrangements that can lead to smaller cross-frame forces, for example. Implement layout that limits "hard points" that can cause "spikes" in cross-frame forces. Six cross-frame layouts were analyzed at for a two span skewed bridge configuration; contiguous (97 cross-frames), parallel stagger (91 cross-frames), contiguous with generious offsets (107 cross-frames with 10% force reduction), herringbone stagger (63 cross-frames with between 25 – 33% the original forces), single spine (21 full cross-frames, 86 strut cross-frames and about half the original forces) and double spine (30 full cross-frames, 77 strut cross-frames and highly reduced forces in comparison to original). Each of these designs was based on steel dead load fit and the analysis was performed using line girder analysis given the lower degree of skew. In the future, half round stiffeners may allow for greater degrees of skew for cross-frames. Additionally, it may be of interest to look at the influence of the different configurations on the deck stresses. Would changes in the deck be reflected in the cross-frame forces?

4. Guidelines for the Design of Cross Frames & Diaphragms (9:45 AM to 10:45 AM)
   a. Review Status and path forward

Group contoniue to work through comments (250 comments in total). A few were discussed during the meeting today and the remaining will be taken off-line to find some common ground with the original reviewer. This guide document will be published as a new chapter of the steel

bridge design handbook and will not need to go through the traditional Collaboration review process.

Comment 241/242: Including or excluding threads of bolts in connections. Domenic has looked into the matter in greater detail given recent changes to RCSC specification. Reference MSC article from April 2021 by Larry Kruth which included discusses of the importance of the transition area of the bolt (https://www.aisc.org/modernsteel/archives/2021/april-2021/). Domenic proceeded to go through the research he and his team performed on the subject. Their work uncovered that the likelihood of an issue in existing or future connections is not common and not necessarily a concern. Engineers should note that calling out threads excluded may be impossible when you have short bolts which will always be fully threaded. Fabricators will calculate bolt length using the RCSC Specification Table C2.2 once they have determined the total thickness of the connection. Refer also to AISC EJ article from 1996 (https://www.aisc.org/Specifying-Bolt-Length-for-High-Strength-Bolts). The group will look at adding information related to this topic and also consider it for a new MSC article. The final location for this information will need to be carefully considered since it affects a broad range of connections (i.e. not just field splices).

Calculations: More than 65 comments related to the calculations which came from different authors. Since it will be part of the steel bridge handbook, the goal is to make them look the "same". The new plan is to remove them from the document at this time and revisit the calculations in a later update.

Remaining comments and review will take place between now and May. While not an official AASHTO Collaboration document, there may be a want to informally ballot this within the collaboration.

5. General Open Discussion (10:45 AM to 11:00 AM)
    a. Design issue discussions
    b. Other potential items for the next design TG task.
6. Adjourn

TG 12 Design for Constructability and Fabrication

Task Group Mission: This Task Group primarily focuses on addressing the questions that have been and are continually asked concerning the constructability of steel bridges according to the latest practice for steel mills, fabrication, detailing, erection, and design.

Task Group Leadership
Chair: Christina Freeman - FDOT
Vice Chair: Russell Jeck - Tutor Perini Corp.
Secretary: Brandon Chavel - NSBA

Welcome (10 minutes)
The AISC Antitrust Policy and Meeting Code of Conduct were read. Christina reviewed the task group mission. Meeting minutes from the previous meeting were approved.

FDOT Research Opportunities (5 minutes)
Christina Freeman review some upcoming RFPs that FDOT is advertising.

- Half-round bearing stiffeners for skewed steel I-girders. Looking to gain better understanding of fatigue behavior; flange to web interface; attachment of stiffener to girder flange; corrosion protection. Work will include experimental and analytical work. Project to be advertised later this year or early 2022 (March). This can be awarded to a university or consultant, and they do not need to be located in Florida.
- Other RFPs – Strengthening Piers to Resist Vehicular Collisions; Bond Performance Between UHPC Substrates and Field Cast UHPC Connections.
- How to search for FDOT RFP advertisements: View RFP projects at My Florida Marketplace website (http://www.myflorida.com/apps/vbs/vbs_www.search_r2.criteria_form)
- Search with the following criteria:
    - Type: Competitive Solicitation
    - Agency: Department of Transportation,
    - Commodity: 80111621, Temporary research and development services
- Alternatively, sign up for electronic notifications here: https://www.myflorida.com/apps/vbs/vbs_www.main_menu

Presentation on Weathering Steel Rolled Plate Stiffener for FDOT Wekiva 8 Project, by Ben Boss, DRMP (20 minutes)
The focus of the presentation was on a 4-span curved girder bridge project with an approximate radius of 700 ft, max span of 280', and some highly skewed piers, up to 57 degrees, 4 girder typical section.

Cross-frames placed along the skew and used discontinuous radial cross-frame lines around the skewed supports. Still found high forces in the skewed cross-frames. Design team was

concerned with the bending in the connection plate and stiffener caused by the loading eccentricity.

Investigated using a half-round stiffener, and found the loading was acceptable. ASTM 1085 HSS Pipe was selected, but there was no qualified welding procedure for welding A1086 to A709 weathering steel.

Instead, incorporate a rolled plate bearing stiffener. Stiffener is cold rolled into a semi-circle cross section out of weathering steel plate. Photo from Randy Harrison, W&W|AFCO:

Fatigue category for the tension flange was a concern. The question was whether the detail category E' or C' at a highly skewed stiffener to the flange. FDOT required a bolted tab plate required to improve Detail Category B, which resulted in a reduced section due to the bolts in the tension flange.

For the half round stiffener, there was an opening (like a normal stiffener clip) left at the bottom to access in the inside.

After presentation discussion:

Mike Grubb noted that the commentary for 2023 ASHTO LRFD BDS will suggest to weld and seal the half-round stiffener. The premise is that if there is no oxygen, then the steel can not have corrosion inside the half-round stiffener.

Frank Russo also noted that the category for the obliquely orientated stiffeners will be addressed in the 2023 AASHTO LRFD BDS as well, based on studies completed by Rob Connor.

Comments for Next Version of G12.1 (75 minutes)

a. Comments from Heather Gilmer:

. Section 1.3: "increased corrosion resistance durability" Why is "durability" there?

0. Wording seems extraneuous and not needed. Discussion about the entire paragraph. Suggest: “For welded construction, certain minimum requirments for material thickness are nornally recommened to reduce deformation and to imporive handling in the fabrication shop.”

i. C1.4.1: "encouraged to be aware" seems odd. Hard for them not to be aware once we've pointed it out. "Should be aware" or "encouraged to consider"
    0. Group agreed, change to should consider

ii. In general, delete “note that” from various locations in document
    0. Will remove “note that” wherever we can remove it. Russ Jeck volunteered to go through the document.

iii. Section 2.1.1.2 technically those aren't "connection stiffeners". "Connection plates and intermediate stiffeners".
    0. Christina noted that AASHTO LRFD BDS uses “connection plates”. Group noted it needed be consistent with AASHTO. Group decided that Christina could decide on the change.

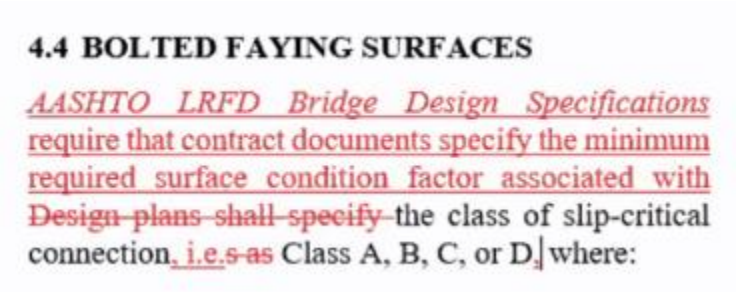
iv. Section C2.1.2.6: not editorial; please consider as new business (I assume too late for this edition so next time): if you're going to mention FC in the context of stiffeners (2nd bullet), please note that typically bracing members are not considered FC. Wouldn't want anyone to interpret this to mean FC bearing stiffeners should be a thing!!
    0. Some suggested keeping it, but add statement that bearing stiffeners are not typically FC members. But some made the arguyment for striking completely. Will table this, and address at the next meeting.
    1. Frank Russo – this is like specfying design guidelines for a unicorn.

v. Section C3.7: as new business for next edition, consider explaining why WTs are preferred and maybe have a figure illustrating the weld access.
    0. Mike noted AASHTO LRFD BDS C6.11.11.2; WT provides a higher stiffness. This is really a design preference, not a fabricator preferrence.

1. Frank proposed “if you need them, AASHTO LRFD Article C6.11.11.2 notes WTs are a more efficient section.”
2. Heather - Might want adjust the figure to show a WT, and not what looks like a fabricated T shape. Christina showed a sketch, and the group suggested including the sketch in the commentary. Also, move the second sentence (14”) to the guideline from the commentary.

vi. Section 4.4: This is a guide and shouldn't have "shall". If it's required in AASHTO. note that AASHTO requires it.

0. Christina revised as follows:



4.4 BOLTED FAYING SURFACES

AASHTO LRFD Bridge Design Specifications require that contract documents specify the minimum required surface condition factor associated with ~~Design plans shall specify~~ the class of slip-critical connection, i.e.~~s as~~ Class A, B, C, or D, where:

1. Group agreed with Christina’s revison, but a comma should be added after “i.e.”.

b. Comment from Jon Edwards:

. Section 2.1.1.1, the second paragraph is commentary and should be moved there.

0. Group agreed it should be moved to the commentary side.

c. Comment from Russ Jeck:

. Section 1.1 (Rolled vs Plate Girders): consider recommendations or suggestions for proper camber of rolled girders

0. Heather - This should probably be included in TG2 work, as it is more related to fabricator means and methods.

d. Any miscellaneous comments

. Section 1.1. verify the span lengths noted for rolled beams. Check with SSSBA guidance. Christina suggested one may want to change to consider the plate girder option if one to any of the criteria.

Adjourn: Meeting ended at 3:50 PM (ET).

TG 13 Analysis of Steel Bridges

Task Group Mission: This Task Group focus has been the development of guidance on the issues related to steel girder bridge analysis and to educate Engineers so that they can better make decisions for their own projects.

Task Group Leadership
Chair: Deanna Nevling - HDR
Vice Chair: Francesco Russo - Russo Structural Services
Secretary: Brandon Chavel – NSBA

Introductions (11:30 AM to 11:45 AM)
The AISC Antitrust Policy and Meeting Code of Conduct were read.

General Announcements (11:45 AM to 12:10 PM)
Deanna reviewed the meeting minutes from the fall virtual meeting. There were no outstanding items for discussion from the last meeting, and meeting minutes were approved by the task group.

FDOT RFP – Christina Freeman reviewed some upcoming RFPs that FDOT is advertising.

- Half-round bearing stiffeners for skewed steel I-girders. Looking to gain better understanding of fatigue behavior; flange to web interface; attachment of stiffener to girder flange; corrosion protection. Work will include experimental and analytical work. Project to be advertised later this year or early 2022 (March). This can be awarded to a university or consultant, and they do not need to be located in Florida.
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- Search with the following criteria:
    - Type: Competitive Solicitation
    - Agency: Department of Transportation,
    - Commodity: 80111621, Temporary research and development services
- Alternatively, sign up for electronic notifications here: https://www.myflorida.com/apps/vbs/vbs_www.main_menu

NSBA Update – WSBS is in March, www.aisc.org/nascc. There are several Steel Bridge Forums being planned for 2022, hopefully all in-person, www.aisc.org/nsba/steel-bridge-forum/ . There are also several on-going initiatives: Streamlined Design Guide; Coatings Performance Study; New Construction Market Pricing Study; Steel Bridge Design Handbook Update; Steel Bridge Design Class; Guide to Executing and Effective Bridge Project; Reference Manual for the

Design, Detailing, and Maintenance of Uncoated Weathering Steel in Bridges; Standardization of Steel Bridge Design.

TRB AKB20 Update – The January 2022 meeting will be in-person. Workshop on Sunday – Steel Bridge Corrosion protection. Session – Innovative Steel Research. Research Needs Statements to be issued soon. The Committee is always looking for Research Needs Statements (due December) as well as looking for Synthesis Statements (accepted any time). RNS and Synthesis Statements should align with AASHTO CBS needs.

FHWA Update – Dayi noted a few items that FHWA is working on related to Steel Bridge Research at Office of Bridges & Structures. Four projects through the FHWA HIBS-10 BAA-2020 (Broad Agency Announcement) have been awarded:

- Assessment of Ultra-High Toughness Steel for Highway Bridges
- Evaluation of Large-Format Metallic Additive Manufacturing (AM) for Steel Bridges
- Improving the Manufacturability of EC RFP Connections for Orthotropic Steel Decks
- Improved Detailing in Steel Bridge to Prevent CIF

On-going work through the FHWA ID/IQ is shown below. Many of these will be wrapping up by early 2022:

- Intersecting Welds in Steel Bridges
- Bridge Geometry Manual
- Manual of Heat Straightening and Cold Forming of Bridge Members
- Standardized Modular Orthotropic Steel Deck

AASHTO T-14 meeting – Frank Russo noted the recent items that passed at the virtual meeting of AASHTO CBS that will be incorporated into the 10th edition of the LRFD BDS. The one item that mainly affects analysis are the results from NCHRP Report 962, improved cross framed design for load estimation, strength, and stability.

Presentation (12:10 PM to 12:40 PM)
"Quick and Easy Three-Dimensional Finite Element Modeling of Trusses" Terry Cakebread and Andy Taylor – LUSAS. Presentation included a demonstration by Andy on modeling and analyzing a 3D truss. And reviewed the input requirements, buckling/eigenvalue analysis, frequency analysis, as well as static loadings.

G13.2 Guidelines for Steel Truss Bridge Analysis (12:10 PM to 1:30 PM)
a. High Level Comment Review

Section 2.2 - Need photos of the following: Through truss, deck truss, pony truss. Email Deanna photos you may have and be able to share.

b. Benchmark Models

Existing Benchmark models. No one knew of any published resources available in the literature. Deanna asked if the TG should create the benchmark models. Frank Russo asked if we want benchmark models, or if we want to show how to verify/get a comfort level with a model. Frank Artmont suggested that we give procedures on items to check with hand calculations, stress sheets, or other kinds of checks – i.e. Sanity Check. Sougata noted that there is always the method of sections and joints.

Frank Artmont will draft a section on how to verify modeling results and share with others. Sougata noted he can add to the section. Nick Cervo will help to draft the section as well.

c. Working Meetings

There will be a G13.2 Small Group meeting on 1pm to 2pm on December 1. This meeting will be to discuss topics, and address review comments. If you would like to attend this meeting, please let Deanna know and she will include you.

Adjourn
Meeting ended at 1:30 PM (ET).

TG 14 Field Repairs and Retrofits

Task Group Mission: This Task Group primarily focuses on providing practical solutions for design and implementation of field repairs and retrofits of existing steel bridges.

Task Group Leadership
Chair: Kyle Smith - GPI
Vice Chair: Jonathan Stratton - Eastern Iron Works
Secretary: Jason Lloyd - NSBA

1. Chairperson's Welcome (11:30 AM – 11:40 AM)
    a. Introduce Existing and Welcome New Members
    b. AISC Antitrust Policy and Meeting Code of Conduct
    c. Approval of Previous Meeting Minutes
2. G14.1 Approval and Release date (11:35 PM – 11:40 PM)
3. Presentation: Joel Javier & Matt Hebdon, PhD, PE - "Experimental Study of Corroded Beam Ends" (11:40 AM – 12:05 PM)
4. Presentation: Jason Stith, PhD - "I-40 DeSoto Bridge" (12:05 PM – 1:00 PM)
5. Quick Break
6. Comments from Review Requiring Discussion
    a. Document Wide
        i. Need document-wide editorial ruling on whether we can use imperative mood (HG) i.e. Shall vs. Should Consider: This is using language such as seen in G12.1-2020, "Use minimum ½" plate" (imperative mood) vs. "½" minimum plate thickness should be used" (indicative mood). We will use imperative mood in G14.2. **ACTION: All authors need to sweep their draft sections to utilize more direct, imperative mood before they will be put into the Master Draft.**
        ii. Confirmation on graphics - Photos to be 600 dpi. May get by with 300 dpi. Each photo will require the photo release form?; public domain? sourcing requirements? Group decided to add release forms for any images where permissions are required to use an image will be saved in the same folder as the image. As a reminder, authors should be saving

image files for their sections as separate files in a draft section sub folder for later access during publication with AASHTO.

iii. How do we handle heat straightening? Section 8.2 Truss repair has some photos. Will be already covered in D1.7 and WSP FHWA Study: The WSP-FHWA document includes heat straightening and cold bending and will be finished early 2022. The new D1.7 will also beat G14.2 to publication. Dayi said that Ronnie can share the unofficial for-information-only copy for alignment purposes. **ACTION: Ronnie will talk to Wagdy about potentially sharing within G14.2.**

iv. Reference formatting? Use Section 1 as an example: Example provided without objection. No discussion

b. Section 1 - Introduction

i. Do we have a note at the beginning saying that all D1.5 section numbers are per the 2020 edition?' How is this handled when referencing dated resources? Based on other Collaboration documents will not make a note in the beginning, but will include dates or edition numbers in the references, as applicable. And we will exclude specific article numbers to avoid future numbering conflicts.

ii. Consider blanket reference to D1.7

iii. BDS as well

c. Section 3 -

i. A discussion on Lateral-Torsional Buckling in I-Girders. When adding a diaphragm to strengthen for LTB, AASHTO BDS would require attachment of the stiffener plates to both flanges. However, if the deck remains in place, this can be problematic if that stiffener cannot be welded. I am wondering if other owners have successfully used either a partial depth stiffener or only connected to the bottom flange (assuming the issue is in the negative moment region): This may be dependent on the specific requirements of the owner, but generally a partial depth connection

plate will perform very well without generating a distortion induced fatigue problem. Doug mentioned research demonstrating that partial depth connection plates are effective for LTB applications. He will forward that reference to Kyle and Nick.

ii. Are there other strengthening details/needs for I-girders based on Code changes, not section loss? I covered the typical MnDOT issues, but wondering if there are others: Frank Artmont said that inflection points on stringers shouldn't be used as "bracing points", which is frowned upon in some states. This may be an example of this.

d. Section 4 - Impact Damage

i. What level of analysis should be recommended for partial member replacement? Frank Artmont suggested that whatever level was used to design the bridge would be appropriate for this application. Jason Lloyd suggested G13.1 Appendix B as a reference to point readers to for determining this in cases where they don't know what level of analysis was used in the original design. This question pertains to the design of the temporary components required to remove load or restore deflections in order to make the repair. Another consideration is the design of the horizontal web splice for a partial depth member...Discussion led to suggesting that we use "qualified engineer" instead of "PE" or "Licensed Engineer" so that it can be applied to any state. Also, it seemed agreed that we will keep to general recommendations without getting too far into the design calculations, for example, and keep more "high level" recommendations.

ii. 4.5.1.3 is there value in keeping? 4.5.2 and 4.5.2.1? BW needs more images looking for other agency input.

e. Section 5 - Bearing and Anchor Rods

i. *"New anchor rods are recommended with bearing replacements to ensure quality and avoid trying to match existing rod locations."* Really? We want to go digging them out of the concrete if we don't really have to? They

can be cut and abandoned. But "recommended" may be strong. Let's discuss. (JO & HG): Perhaps we make them “considerations” and not recommendations based on the site-specific conditions.

ii. *“Anchor rods often have exposed threads deformed after the nut is installed to prevent loosening….”* It seems to be an industry standard. Are some against it? Discuss further? (JO & HG): Thread galling…do we want to endorse this practice? We will wrap this into the bullet point above.

iii. *“Design the bearing replacement to utilize anchor rods that are in new locations whenever possible.”* I'm still not understanding why putting in new ones is preferred. The issues in the next two sentences seem to me to be problems CREATED by the use of new anchor rods, not a reason to use them. (JO & HG): This can be wrapped into the considerations of the first bullet.

iv. *“Bridge jacking should be designed and performed only by those knowledgeable and competent. It is prudent to use locking collar jacks where possible. It is also prudent to situate the work such that a portion of the superstructure would not collapse if a jack or temporary support were to fail. The designer should specify all requirements associated with carrying live load during bearing replacements.”* Should go without saying. Maybe flavor this in terms of prior experience? Is this something we need to tell people? Maybe something more like "consider the potential of collapse"? (JO & HG): Maybe move this into considerations, as for previous bullets.

f. Section 7 - Construction Considerations

i. Shop Drill vs. Field Drill: Consider things like connection angles connected by rivets where rivet heads may not be centered on holes. So field conditions need to be closely considered and probably more a means and methods approach. We should provide some baseline of understanding on how long it takes to remove a rivet, as well.

7. Milestones and Goals (2:25 PM – 2:30 PM): See attached slides in Appendix. Possible TG vote on draft document around January timeframe. TG sends the documents to Chris to vote through Spec Builder.

8. Adjourn

TG 15 Data Modeling for Interoperability

Task Group Mission: This Task Group's primary focus is on facilitating the development of bridge industry consensus standards for data description, modeling, and interoperability for integrated design, construction, and lifecycle management of bridges (i.e. BIM).

Task Group Leadership
Chair: Aaron Costin - University of Florida
Vice Chair: Jonathan Stratton - Eastern Steel Works, Inc.
Secretary: John Hastings - NSBA

1. Chairperson's Welcome (10:30 AM – 10:40 AM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.

Aaron welcomed everyone and John read the AISC Antitrust Policy and Meeting Code of Conduct. Previous meeting minutes were approved. Attendees introduced themselves. Approximately 18 attendees.

2. US Data Dictionary (10:40 AM – 11:30 AM)
    a. Overview
    b. buildingSMART USA Chapter vision

Aaron gave an overview the US Data Dictionary, bSDD, and IFC. Marina gave an update on what she is working on. She also went through the data dictionary for a girder to show how the information is brought in from the data dictionary spreadsheet.

3. Bridge Data Dictionary (11:30 AM – 12:30 PM)
    a. Overview
    b. Updates
    c. Working session on updating
    d. Next steps

Jon Stratton asked that we update his empoyer to Eastern Steel Works, Inc.

Aaron asked attendees to let him know if they have an interest in joining the task group and other groups.

4. Adjourn

TG 16 Orthotropic Deck Panels

Task Group Mission: This Task Group aims to establish an Orthotropic Steel Deck (OSD) panel design that can be cost effectively produced in the United States for the bridge market.

Task Group Leadership
Chair: Sougata Roy - Rutgers University
Vice Chair: Frank Artmont - Modjeski & Masters, Inc.
Secretary: Jason Lloyd - NSBA

1. Chairperson's Welcome
2. Attendee Introductions – Adjusted for online meeting (chair, VC, and Secretary)
    i. Introduce Existing and Welcome New Members
    ii. The reading of AISC Antitrust policy
    iii. Review and Approval of previous minutes: Motion to approve passed.
3. General updates and announcements review of mission statement:
4. "This Task Group aims to establish an Orthotropic Steel Deck (OSD) panel design that can be cost effectively produced in the United States for the bridge market."
5. Presentation from Justin Dahlberg ISU: FHWA Orthotropic Standard Panel project update
    i. Submitted first draft of the guide last month for FHWA review, and revisions are underway for second draft. In 99% review and final details are being worked through before completing the guide.
    ii. Carl Redmond asked for draft copy. Dayi invited him to become an external reviewer of the draft to provide comments on final guide.
6. Presentation from Qi Ye, Chi Consulting Engineers on "Bridging the Gap on the Manhattan Bridge"
    i. Ronnie: Is there a need for guidance on the weld penetration. Did you find much guidance in your literature review? There are new processes like pulse MIG that can drive penetration well. Perhaps a MSC article discussing these things would be helpful… Qi: Could only find the one paper he mentioned during the presentation.

ii. *Karl: Are you relying on the paper results and the root gap to ensure you get the penetration needed? Qi: Yes. Fatigue was not a concern, primarily strength. The weld landing was small, as well. Karl: why not leave that up to the fabricator and let them determine how to get the necessary penetration? It would be better to let the fabricator use his/her knowledge to get a specified penetration. Qi: He spoke to a local fabricator and made sure he understood the preferred welding process.*

iii. *Russel Jeck: Did you consider the channel composite with the deck plate? Qi: Yes, this was modeled and designed as a composite unit, but did not consider fatigue. They used shell elements in the FEM.*

7. 10 min break (optional)

8. Discussion on Fabrication Tolerances

   i. *Presentation by Christian Haberle*

      i. *6-panel in-shop assemblies ~ 120' long and ~27' wide*

      ii. *Ronnie: Flatness has been discussed before to make the joints work...What was that flatness tolerance? Christian: ¼" overall and ⅛" at joints*

      iii. *Carl Redmond: Any NDT? Christian: full mockup in beginning with UT of splice joints, lots of macro-etched locations as well. 100% UT of CJPs, some on certain repairs, 20% MT of each long. weld, 20% MT of diaphragm welds.*

      iv. *Karl Frank: Coated panels? Christian: 3-coat paint system. All material is blasted prior to going into fabrication of T. Then blasted again. So most things are blasted twice and the profile is there. So then just cleaning is required to painting. Hand blast of whole panel is done just prior to paint.*

      v. *Ronnie: Is there a way to use a WT and make the haunches? Christian: Maybe, but it might require additional splices and xray. For retrofit the height restrictions are constraints on the possibilities. In new design the WT might be a more feasible option. Qi: The haunch was necessary based*

on clearance constraints of the existing bridge. It was not a preferred detail for new design.

vi. *Carl Redmond: Is this open T working better than a closed rib would have? Christian: There are pros and cons to both. Compared to other designs, this one has been easier to fabricate. The welding processes are easier, but in this case there is more of the welding. Flatness has not been influenced by the volume of welding.*

ii. Presentation and discussion led by Sougata around tolerance document started by fabrication tolerance sub-task group:

i. ⅛ inch in 10 ft:

1. *Carl Redmond - adjustability built into the design, such as oversized holes, can help in the field installation and joint tolerance.*
2. *Karl - when is tolerance measured and is it a problem handling them without distorting them. Christian - lifting lugs are used, or frames to move them. Specifications say when flatness is measured and it was defined in the contract.*
3. *Ronnie - should we make a recommendation for panel support conditions when measuring flatness? Christian - it might not make sense to do for multiple bridges. Sougata - perhaps some general recommendations can be made. Ronnie - something like quarter point supports could be the right way (close to no-load fit condition).*
4. *Terry - be careful using lifting lugs in these flatness checks too. Carl R - this depends on the fabricator's operations and flow of work. Transport and storage are also concerns to preserve flatness. Owners shouldn't get into means and methods, but specify performance.*

5. *Carl Redmond - they specify flatness and straightness so that fabricator and contractor know what to expect.* ***Terry Logan will share some information from one of our existing specifications****.*
6. ***Subtask Group will further consider support conditions for fit up and add to this recommendation****.*

ii. *Squareness tolerance:*

1. *Christian pointed out that to enable shop and field welding, the squareness is established inherently in the fit up for these welds so the squareness tolerance doesn't need to be specified.*
2. *No objections from TG*

iii. *Panel length and width tolerance*

1. *This is inherently taken care of by the fit up process so no tolerance provision is necessary*
2. *Carl R - Throgs Neck Bridge project uses ⅛" deviation tolerance after trimming on longitudinal dimensions of panels. Field adjustments can be made, but it's obviously not preferred.*
3. *Ronnie - What about an accumulation of the ⅛" tolerance? This could create problems. The real concern is overall fit up. Carl R - Contractor in the field will be concerned with the fit up of all joints for this reason. Methods for the field joint should be considered in this, as well. You want to optimize the edge prep, joint control, and fit up. Terry - this is why the trial assembly in the shop is so important.*
4. *Sougata - should we make a tolerance recommendation based on past projects? Terry - No, it doesn't seem necessary.*
5. *No objections from TG on the proposed commentary.* ***However, group agreed to add commentary on shop assembly verification.***

iv. *Deck joint alignment of ¼" in the unclamped condition*

1. *Carl R - ¼" tolerance might be outdated; TBTA using following: after welding not to exceed ⅛" for 90% measurement at 1' on either side of the joint. Terry - shared general comment used in TBTA spec that emphasizes communication throughout the fabrication process and that adjustments are well understood.*
2. *Carl R - overlay should also be considered in the tolerance. For example, very thick and stiff overlays can make up for some higher tolerances and still maintain a good level of rideability.*
3. *Karl - we should note deviations in tolerances with D1.5*
4. ***Subtask group will expand this commentary to include some of these tolerances and provide more guidance.***

v. *Welded field joint backing*

1. *Karl - we may not need to remove the backing bar to improve fatigue performance. The fatigue resistance of the overall panel should be considered and it might make sense to allow for the backing bar to be left in place for longitudinal welds too. Sougata - This might be an issue considering that the stresses in the transverse direction are critical in the deck plate, and fatigue cracking from weld root of details with the backing bar left in place might be a concern. Karl - Tests performed by Peter Keating show this detail to be better than thought. Qi - left transverse backing bar in place during some testing at Lehigh and it seems it performed well. Sougata - Transverse backing bar was left in place for the testing of Williamsburg, Bronx-Whitestone, Verrazano and Wittpenn prototype testing, without any issues. The longitudinal splice was back-gouged and re-welded. Attempts to use ceramic backing were not successful. The details were implemented as such in the field for Williamsburg, Bronx-Whitestone and*

Verrazano. Ian confirmed that it was left in place for the Throgs-Neck prototype testing. Results will be reviewed.

2. *Carl R - TBTA attempts to give allowances for field welding for contractor operations and focus specification requirements around adhering to D1.5 and the NDT requirements.*
3. *Justin Ocel - collected data to have the fatigue classification relooked through AWS.* ***he will provide that information to Sougata.***
4. ***Subtask Group will do a little more work on this commentary to take into consideration the points made.***

vi. *Rib to Deck Joint Undercut*

1. *Terry - wheel loads during lane changes might cause a problem with this. We should consider this further before using language such as "Do not use…"*
2. *Ronnie - tension undercut tolerances within D1.5 are currently in discussion for changing (to increase tolerance), but has not yet been balloted.*
3. *Karl - if we use "tension" then engineers will apply any loading condition they can find that produces tension and might not be reasonable for the intent of this commentary. Terry - added that fabricators are using good processes to avoid undercut. Carl R - noted that this is a pretty fatigue tolerant weld condition even if hot cracks are present the cracks don't necessarily propagate. It doesn't seem to be a problem to become overly concerned about.*
4. ***Subtask group will consider this commentary further based on comments from the group and modify accordingly.***

vii. *Discussion ended at this spot in the draft document.*

9. Review Committee Goals

i. Standardized Panel Design - Closed and Open Ribs

ii. Topic not discussed

10. Task Group updates
    i. State of Practice Synthesis Document - *topic not discussed*
        i. Review sections
        ii. Review author assignments
    ii. Monthly webinar meetings schedule
        i. Every other month for routine meetings moving forward
    iii. White Paper "Tolerance for Tolerance" (working title) – Terry Logan
        i. Terry is continuing this work. Has feedback from several folks to incorporate
    iv. Short Span Orthotropic Update (SSSBA) collaboration
        i. Efforts are intended to promote use of OSD for short span applications
11. Old business and additional discussion
    i. Floorbeam and diaphragm details
    ii. Other:
        i. *Dayi mentioned that Lehigh is currently working on project to make recommendations for topics related to manufacturability of OSD and Ian could be invited to present to TG16 in future meeting*
12. Adjourn

TG 17 Steel Castings

Task Group Mission: The mission of this Task Group will be to develop and disseminate resources specific to the US steel bridge community to support the increased and effective use of castings in steel bridges. The targeted community includes design engineers, DOT professionals, steel fabricators, steel erectors, inspectors, general contractors, and detailers.

Task Group Leadership
Chair: Jennifer Pazdon - CAST CONNEX
Vice Chair: Jason Stith - Michael Baker International
Secretary: Devin Altman - NSBA

Chairwoman read the mission statement to the group which states "The mission of AASHTO/NSBA TG 17 is to develop and disseminate resources specific to the US steel bridge community to support the increased and effective use of castings in steel bridges." Introductions were made by those present (shown below). Antitrust policy was shown and gone over with the group. Spring 2021 AASHTO/NSBA Collaboration meeting minutes were approved. Jennifer presented the folder structure in the Steel Castings Google Drive folder to the group and went over activities and happenings with the group since the previous meeting in March 2021. Jennifer gave a short synopsis on the Frances Appleton Pedestrian Bridge and how this might be a good example for some of the controlling code and specification requirements for bridges in the USA. The activities since the last meeting included continued work relating to AWS D1.1 and D1.5, a case study development of a network tied arch bridge, bearing shoe, cross-frames, and tainter gates. A white paper which could become the introduction for the example specification and could be published to collect answers to the challenges in using steel castings on US steel bridges.

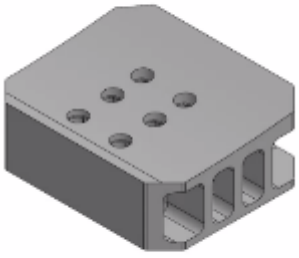
Attendance:
Chair - Jennifer Anna Pazdon - Cast Connex
Vice Chair - Jason Stith - Michael Baker
Secretary - Devin Altman - AISC/NSBA
Carlos de Oliveira - CAST CONNEX
Diana David - Steel Founders Society of America (SFSA)
Christina Freeman – Florida Department of Transportation
Jamie Hilton – KTA - Tator, Inc
Frank Artmont – Modjeski & Masters
Keith Griesing – Hardesty & Hanover
Jason Lloyd – AISC/NSBA
Sri Kotha - PGH Wong Engineering, Inc.
Cathleen Jacinto – SSTI

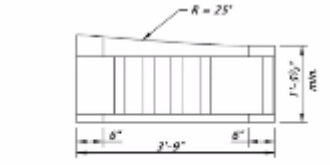
Justin Ocel – FHWA
Ronnie Medlock - High Steel
Karl Frank – Consultant
Phil Sauser – US Army Corps of Engineers
Dayi Wang – FHWA
Ryan Sherman – Georgia Tech University
Heather Gilmer - TUV Rheinland Industrial Solutions

Steel Castings Case Studies (12:00 PM to 12:40 PM)

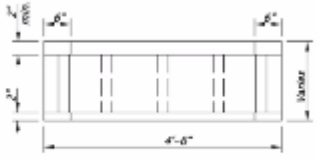
Carlos gave a presentation on cross-frames and how those could be reinvented with steel castings, showing tubular cross-frame members with a steel casting at the center of the X-frame and end member connection steel castings that takes the tubular section and flatten it out to be bolted to the transverse stiffener plate. Angles could also be used instead of tubular sections. Karl mentioned how University of Texas at Austin had looked at steel castings for cross-frames and Carlos was aware of this work and that tubular sections can be more expensive to fabricate than angles and WT members. Ronnie agreed with Karl that in general tubular sections are more expensive to fabricate, but perhaps there is some potential for the tubular cross-frame fabrication. The cross-frame drops and configuration can vary for every cross-frame on a bridge (camber, vertical profile, superelevation, etc.) and the amount of repeatability was questioned with each unique setup. Ronnie offered for Carlos and others to come to High Steel and see more of the typical bridge fabrication for generating more ideas of steel casting applications for bridges in the US.

A bearing shoe was next shown to the group and discussed further for simplicity with a steel casting which is typically a high welding effort





BEARING SHOE TRANSVERSE VIEW
Scale: ½" = 1'-0"



BEARING SHOE LONGITUDINAL VIEW
Scale: ½" = 1'-0"

that has limited weld-access. Frank Artmont thought this is more of the easy and practical application for steel castings on bridges to start with initially. Keith also mentioned the bearing shoe application for steel castings would be advantageous for rehabilitation bridge work and projects. The CJP welding of bearing shoes along with the restricted weld access makes this a great application for steel castings. Machining was discussed further with regard to typical steel bridge fabrication of bearing shoes and how steel castings do not require as much welding in general.

What is Your Diablo? (12:40 PM to 1:20 PM)
Jason started the discussion for "what is your devil" or what are the pitfalls or challenges with using steel casting for steel bridges such as the following:

- Require special skills or training and certification
- Labor Intensive
- Inspection Intensive
- Often Result in Field Fixes
- Geometry Complexity requiring mitered cuts, overhead welds, confined space-welding with respect to building the connection in the shop as well as making field connections.
- Where you artificially increase connection dimensions/extents in the interest of weldability, fit-up or access.

Ronnie suggested visiting Valmont fabricator that already uses steel castings. Karl agreed that Valmont would be a great place for the group to visit to collect further applications and information for the guideline and specification since they already utilize steel castings for utility poles. Ronnie also mentioned visiting a steel foundry would be a good group field trip to help everyone understand how steel castings are developed and made for projects. Jason mentioned that really trying to develop the boundary conditions (size, tonnage, number of castings for a project, etc.) for steel castings to be used for US steel bridge projects would be best to first categorize for their validity. Karl mentioned that really getting steel casting design methodology and criteria to get into AASHTO LRFD BDS is where we should start. Heather voiced that both AASHTO LRFD BDS and the AWS D1.5 are equally important for them to be implemented practically for use in the US market.

Diana gave an overview of their typical methodology for steel casting production and what specifications they use such as the ASTM grades and specifications used and AWS D1.1. The proposed cast grades are similar to other AWS D1.1 prequalified base metals. The steel foundry needs to meet all the NDE and testing and inspection requirements that are outside of AWS D1.1, sometimes these are project specific. Diana said that they are isotropic and used in oil and gas, buildings, bridges, US Army, and other applications. Steel castings are similar to ASTM A516 grade. Some expressed quality concerns to Diana of steel castings which were

outside of their typical scope as a foundry. The inspection still needs to be addressed more with steel castings as this is not typically done for inspections and the steel castings can vary even in the granularity compared with typical plate steel or rolled shapes. Diana's goal is to have the proposal for all of this for the steel sub-committee for AWS D1.5 and her goal is to have this implemented by 2025. Diana's focus is currently on AWS D1.1 and she recommended we could take what comes from these efforts and use them for AWS D1.5. Ronnie thought we should try and perform these efforts with both AWS D1.1 and AWS D1.5 in parallel with one another. Starting with the ASTM grades for steel castings could perhaps be a good starting point with efforts to get this into AWS D1.5.

Karl mentioned the toughness requirements are more stringent in AWS D1.5 compared with AWS D1.1. Heather said not only that, but there are no tubular welds that are prequalified in AWS D1.5. The Charpy V-Notch testing requirements could be applied for the base metal. How one reconciles the CVN requirements with the variability in size and shape of steel castings is going to need to be addressed in the strawman specification. Heather mentioned developing some standard joint PQR details for the AWS D1.5 code could also be a good initial starting point for the beginning dialogue with AWS D1.5 committee. Diana asked for clarification where these tests are performed, and Heather explained as tension components of main load carrying members and fracture-critical designated members or components. Carlos mentioned that the foundry can accommodate this in development of the steel casting and the CVN testing, and recording could be achieved at elevated states by adjusting the chemistry and the heat treatment. Ronnie thought this would also be great to discuss this in the white paper, perhaps in Modern Steel Construction. Heather brought up how do you take a specimen from the steel casting and give confidence to the inspector that the entire steel casting is covered by a smaller sample size. Carlos went into the specifics of how the coupon is taken and the keel block has the same chemistry and heat treatment as the rest of the casting and there is research and findings that have agreed that this covers the entire steel casting by utilizing the keel blocks during fabrication and throughout the entire development of the castings. Heather voiced that this should be discussed in the white paper as well.

Closeout (1:20 PM to 1:30 PM)

Jennifer went over the outline for the white paper for the introduction to the strawman (example) specification. Ronnie has developed a first pass at the strawman and Jennifer would like to start going through that in more detail and starting to develop the guide specification for steel castings further. Jennifer will send out a doodle poll to meet more regularly but has tentatively set the next TG 17 meeting for Tuesday November 30th, 2021.

Combined TG 1 Detailing, TG 11 Steel Bridge Handbook, TG 12 Design for Constructability and Fabrication

Task Group Mission: This group is focused on the development of guidance for the detailing, fabrication, design and construction of steel straddle bents.

Task Group Leadership
Chair: Christina Freeman - FDOT
Secretary: Brandon Chavel - NSBA

Introductions (10 minutes)
The AISC Antitrust Policy and Meeting Code of Conduct were reviewed. Meeting minutes from the previous meeting were approved.

Design and construction of a complex steel straddle bent cap for the FDOT I-4 Ultimate project by David Konz (30 minutes)
The presentation focused on the I-4 Ultimate Bridge 279, Church St. to Livingston, and specifically Pier 9 straddle bent. Designed the bent cap so that the bottom flanges would be in the same plane.

The bent cap carries two sperate roadways that later merge into one. Bent cap has a cantilever portion that carries 2 main longitudinal girders. The top of the pier cap matched the slope of the two roadways which resulted in some bent/kinked top flange plates.

Access holes placed in the jacking diaphragms.

Longitudinal girder flange connections plates connected to the pier cap girder with 7' long fill pen welds. Plate was 2 1/8" thick.

David noted it was best to simplify the flow of forces, and they tried to do so in this design.

Steel vs. PT concrete saved about 2 months of MOT.

Update on Progress of Guidelines for Straddle Bents and Planned Future Work (15 minutes)
Christina noted that we have 90% of the sections fully written. Document is 58 pages long.

The next plan of action is to edit the document. Editors will work over the next three months. Editors will check for flow and how the overall document reads.

Section	Editor
Literature Review	Allan Berry
Use, Applicability and Alternatives	Tom Eberhardt
Analysis and Rating	Jerry Sova
Design Considerations	Brandon Chavel, Tom Eberhardt, Dusten Olds
Preferred Details	Brad Dillman, Randy Harrison, Frank Kingston
Erection and Construction Issues	Brian Witte, Steve Percassi
Overall Readers	?

Christina checked to verify that the above members can do the editing. All agreed, expect that Christina will reach out to Jerry, Randy, and Brian as they were not in attendance.

Overall readers are needed to read entire document and look for overlap/repetition problems between the different sections. Volunteers are: Russ Jeck, Ronnie Medlock, Tony Ream.

Christina will send out doodle poll to schedule meetings with the Editor team.

Christina asked for photos that could be used on the cover.

Schedule

Potential schedule could allow for publication in 2023. As for Collaboration balloting, the members of each task group (1, 11, and 12) would be the voting members and that would occur all at the same time. Once it passes the joint group balloting it would move on to balloting by the Main Committee.

Adjourn

Meeting ended at 5:00 PM (ET)

Combined TG 1 Detailing, TG 15 Data Modeling for Interoperability

Task Group Mission: This Joint Task Group's focus is to produce the data requirements needed for the development of Model View Definitions (MVDs) related to steel bridge detailing and fabrication that will be used in the Industry Foundation Classes (IFC).

Task Group Leadership
Chair: Aaron Costin - University of Florida
Secretary: John Hastings - NSBA

1. Chairperson's Welcome (1:00 PM – 1:10 PM)

   Aaron welcomed everyone and John read the AISC Antitrust Policy and Meeting Code of Conduct.

   Previous meeting minutes were approved.

   Attendees introduced themselves. Approximately 22 attendees.

2. Design to Fabrication Model View Definition (MVD) project update (1:10 PM – 1:20 PM)

   Have completed the initial draft of manual and has been through reviews. He also showed the group the process map.

3. Detail to Fabrication IDM Development (1:20 PM – 1:40 PM)
   Aaron gave an overview to new members of what the group is doing.
   Working on fabrication planning model. Items were identified as mandatoy, optional, or not needed so things could be passed on.
4. Working Group- Assign Data Requirements (1:40 PM – 3:00 PM)

   Updated B6.1 notice to proceed.

   Had some items that were blank. Those items were discussed and updated.

   Discussed lot numbers for washer and heat number for plates. These will be placed under general properties.

   DTI are added as a physical element.

Worked on the Contractor's Planning Model and the Detailing Model Requirements Model to finish out the meeting.

5. Adjourn

Main Committee

Task Group Mission: The Collaboration Main Committee provides oversight and guidance for all Task Groups. A meeting of the Main Committee will take place at the end of each Collaboration meeting.

Task Group Leadership
Chair: Ronnie Medlock - High Steel Structures, LLC
Vice Chair: Christina Freeman - FDOT
Secretary: Christopher Garrell - NSBA

1. Chairperson's Welcome (2:00 PM – 2:10 PM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.

Previous meeting minutes were approved.

2. Task Group Reports - Approximately five minutes each (2:10 PM – 4:50 PM)
    a. TG 1 - Randy Harrison (W&W|AFCO Steel)

Randy was not present. See notes from earlier for update.

    b. TG 2 - Heather Gilmer (TÜV Rheinland)

Discussed the AASHTO Fabrication Specification which is replacing the S2.1. A potential new item is achieving proper camber for rolled sections and the means and methods. It was thought there should be discussion of different methods for cambering and their results. Portions of the new AASHTO specification are being extracted from existing specification like the construction specification which will overlap for a period after the new fabrication specification is released. Then specification like D1.5 will refer to the fabrication specification (both will cross reference each other). This document and the related will need consideration by AASHTO T4 and T17 committees. Mike Culmo mentioned that the AASHTO construction specification is used by almost half of all DOTs and will be going through a major rewrite which will be let through NCHRP. At least 3 years before any update is made available. There could be some hesitancy in making smaller updates in the interim. However, the rewrite is favored over abandoning the document.

TG2 has been playing an advisory role in the development of the AASHTO specification but is now returning to the development and update of the TG's own documents (e.g. G2.2). For the G2.2, the group is currently looking at addressing improper pre-heat, members that are "too short" and depth tolerances where the flanges do not align. The TG is looking for additional use

cases for the document including safe cosmetic repairs, for example a case where a hole cannot be filled with a bolt. Lastly, the group is reviewing slip coefficient research from Canada on metalizing hot dipped galvanizing interfaces.

c. TG 4 - Jamie Hilton (KTA-Tator, Inc.)

Meeting update on G4.2 guide for qualifications of bolting inspectors was published in September. The group is looking at minor updates and additions that came from RCSC that were still in development at the time G4.2 was finalized. G4.1, looking to update and include new business. People still see some value in the S4.1 as an archival copy. Maybe it can be watermarked and posted to the NSBA website. Any archived document should have a cover page added that explains what the document is. Lastly, TG4 is considering the development of a new document focused on qualifications for 3rd party inspection firms.

d. TG 8 - Paul Vinik (GPI Construction Engineering)

TG8 has a new vice chair, Johnnie Miller from Texas DOT. The S8.3 hot dip galvanizing ballot is wrapping up. A new document S8.4 detailing for corrosion protect has been started. A chapter on galvanizing has been drafted and chapters on weathering steel, thermal spray and liquid applied coatings will come next. TG8 is looking for more support from member fabricators on details for liquid applied coating systems.

AMPP (formally SSPC) is looking to refresh the S8.1 as a collaborative effort with TG8. AASHTO T14 is fine with the Collaboration developing the S8.1 as a specification rather than a guide specification.

The group had an update on the weathering steel guide from Jason Lloyd and presentation on the weathering steel research from Connecticut. Lastly, Jeff Carlson provided an update on the single coat IOZ (SIOZ) synthesis study that the NSBA will be working on over the next few months. This will look at performance of existing SIOZ bridges.

e. TG 9 - Michael Culmo (CME Associates, Inc.)

TG9 did not meet this week. G9.1 has been completed and will go to T2, T3 and T14 for consideration at the AASHTO CBS meeting next year.

f. TG 10 - Brian Witte (Parsons)

The group discussed field reaming of bolt holes and misalignments. There are states with various guidance and the TG10 wants to coordinate this information and add it to an updated S10.1. Another new topic was regarding broken fasteners, tracking and remediating the issue. More discussion took place to help coordinate with the new AASHTO Fabrication specification with respect to the transportation section. Currently there is related information in the AASHTO Construction specification covering the subject. A updated section on bearing was submitted by Frank Russo and is currently being reviewed by TG10. Ronnie Medlock reported that the bolting for bolters training videos have been produced and may be posted on YouTube next year. S10.1 introduced a new image for a bridge clap. Brian plans on reviewing the AASHTO Construction specification to determine if there is any overlap or sections that should be moved to the S10.1. The group also discussed the overall document layout and might consider breaking the document into one for the erection engineering and another for the field related information. TG10 is planning on balloting S10.1 in 2022 in hopes of publishing it in 2023.

g. TG 11 - Brandon Chavel (NSBA)

Don White gave a presentation on cross-frame layouts looking at different arrangements for a skewed 2-span bridge. He summarized the resulting number of cross-frames and forces and how there differed. Next, the group discussed the cross-frame guide which is in the final stages of development. The group is addressing the last few comments. The new guide will not be an official AASHTO document but rather a new chapter of the steel bridge handbook and available later next year. The examples will be added after the initial guide is published. One items that came up in discussion was determining when bolt threads are included or excluded in connections and revisions to the RCSC specification. This revision could lead to greater chance that threads could be included. Short bolts that are fully threaded was another point of interest which may not be well known by designers. Domenic Coletti and his team at HDR have looked at in great detail and might be good candidates to write an MSC article on the subject.

h. TG 12 - Christina Freeman (FDOT)

Started with a presentation on half round bearing stiffeners. FDOT had a recent project where a designer recommended their use. There was a lot of interest in the topic and there could be changes necessary in the G12.1. Afetr that, the group looked through comments from the previous G12.1 ballotting which were not addressed in the current version. Christina Freeman and Russ Jeck will go through the comments separatly. The group is currently considering publishing an update in 2023 which would include the new splice section.

i. TG 13 - Deanna Nevling (HDR)

The meeting started with industry updates and included an overview of FDOT RFPs. A presentation by Lusas on modeling 3D trusses. The group continues work on the new G13.2 truss design guide. The guide will include language on how to sanity check models rather than a single benchmark problem. TG13 will restart monthly calls to help reenergize the guide development work.

j. TG 14 - Kyle Smith (GPI Construction Engineering)

TG14 started with a update on the publication status of G14.1 followed by a presentation on beam end repair. Heat straightening. Handle references to other codes, Questions about strengthening details such as adding cross-frames with full depth connection plates. Impact damage and the level of analysis for girder replacment. Bearing and anchor rod replacement (new rods versus reuse). The meeting concluded with a path to publication discussion for G14.2.

k. TG 15 - Aaron Costin (University of Florida)

TG15 has not met since the last collaboration meeting and has been focused on the joint task group. Move data dictionary from Excel, and collaborating with BuildingSmart.

l. TG 16 - Sougata Roy (Rutgers University)

The group was attended by more than 50 people. The meeting started with presentations on orthotropic deck projects in NY and a new guide for standardized modular orthotropic decks being developed at Iowa State. Christian Haberle gave a presentation on their fabrication facility that is currently fabricating an orthotropic deck. The group then discussed the creation

of a uniform description of tolerance. The group met in September to discuss standard orthotropic deck panel designs focused on an open rib design. They plan on meeting again some time in December.

m. TG 17 - Jennifer Pazdon (CAST CONNEX)

Started meeting with a recap of activities since last March meeting. This included presentation on the subject since that time. Outreach through these presentations has help increase the interest in the subject including from the steel tube institute. Opportunities for castings. Gaps in existing specifications and codes. Erection. Cross-frames and bearings. The task group is looking to publish a white paper outlining key considerations prefaced with bridge applications have a viable solution in castings and then going deeper into how to best decide when a casting is appropriate. This will help broaden the exposure of castings to designers and fabricators and act as a jumping off point for future work by the task group. Members of the task group are also working on updates to D1.5 to include castings. The group plans on getting back to more regular monthly meetings. Jennifer reminded the group that the guide they are working on is more targeted to the specifier and not the designer of castings.

n. Joint TG 1 Detailing, TG 11 Design, TG 12 Constructability – Christina Freeman (FDOT)

This group is working on a new guide for straddle bents. The meeting started with a presentation on a complex straddle bent in Florida on I40. The project demonstrated some benefits of steel over concrete in straddle bents. The new guideline document is currently 90% completed and editors have been identified to review it. The group is hoping to publish this in 2023.

o. Joint TG 1 Detailing, TG 15 Data Modeling for Interoperability – Aaron Costin (University of Florida)

Developing an IDM for detailing steel bridges. Last fall the group submitted a ballot which was approved by the Collaboration but eventually pulled from the AASHTO CBS ballot. Of the 15 exchanges, the group has about 6 described. The group is looking for more input from contractors and bridge owners. Other groups have stopped at the contract level and TG15 has

gone beyond that to fabrication. Aaron is going to work with ACI to develop a similar definition. That feedback/work is necessary regardless as there is often interaction between steel and concrete on bridge projects.

3. Other Business (4:50 PM – 5:00 PM)

Jason Provines proposed creating a new task group on duplex steel. Jason laid out the scope and volunteered to chair the group. Building off VDOT's experience with Grade 50CR and looking into the future to account for the possible use of duplex. The group would work on create a specification (coverage would span material through fabrication and erection) for the use of duplex in bridge applications. The new AISC 370 would be used as a starting point and extend it to the bridge market. Ronnie Medlock polled the group whether to form a new task group for stainless steel (TG18). There were no descending views.

The next two meetings will take place May 3 – 5 and October 11 – 13. Christina Freeman recommended a cinco de mayo theme for the May meeting.

4. Adjourn

Appendix A – Attendee Registration List

First Name	Last Name	Company
Devin	Altman	NSBA
Raj	Anand	Heath Lineback
Tom	Anderson	Atema, Inc.
Frank	Artmont	Modjeski & Masters, Inc.
Brian	Atkinson	HNTB
James	Ault	Elzly Technology/KTA Tator
Dom	Bagley	Lusas, Inc.
Karl	Barth	West Virginia University
Vin	Bartucca	NSBA
Mark	Bauers	Stinger Bridge and Iron
Shane	Beabes	AECOM
Dan	Beck	Maryland Department of Transportation
Caroline	Bennett	University of Kansas
Frederic	Bergeron	Canam Bridges
Randall	Bernhardt	Bernhardt Forensic Engineering LLC
Allan	Berry	RS&H
Ben	Boss	DRMP
Art	Bustos	AISC
Travis	Butz	Burgess and Niple
Terry	Cakebread	Lusas, Inc.
Jeff	Carlson	NSBA
Nicholas	Cervo	HDR
Benjamin	Chan	Biggs Cardosa Associates
Brandon	Chavel	NSBA
Domenic	Coletti	HDR
Rich	Collins	Voigt & Schweitzer
William	Collins	University of Kansas
William	Corbett	KTA-Tator, Inc.
Aaron	Costin	University of Florida
Doug	Crampton	Wiss, Janney, Elstner Associates, Inc.
Michael	Culmo	CHA Consulting, Inc.
Justin	Dahlberg	Iowa State University
Diana	David	Steel Founders Society of America
Carlos	de Oliveira	Cast Connex
Donn	Digamon	Georgia Department of Transportation
Brad	Dillman	High Steel Structures
Jason	Dreyer	Oates Associates
Robin	Dunlap	High Steel Structures
Bernardo	Duran	International Zinc Association
philip	dzikowski	Wood Environment & Infrastructure Solutions
Tom	Eberhardt	HDR
Jon	Edwards	DOT Quality Services

First Name	Last Name	Company
Austin	Emrich	
Jamie	Farris	Texas Department of Transportation
Alana	Fossa	American Galvanizers Association
Karl	Frank	Consultant
Christina	Freeman	Florida Department of Transportation
Michael	Garlich	Collins Engineers, Inc.
Chris	Garrell	NSBA
Heather	Gilmer	TUV Rheinland Industrial Solutions
Dennis	Golabek	WSP
George	Gorrill	Michael Baker International
Keith	Griesing	Hardesty & Hanover, LLC
Michael	Grubb	MA Grubb and Assoc., LLC
Christian	Haberle	Haberle Steel
Nick	Haltvick	Minnesota Department of Transportation
Randy	Harrison	W&W|AFCO Steel, Hirschfeld Division
Greg	Hasbrouck	Parsons
John	Hastings	NSBA
Iana	Headley-Kroll	CHA Consulting, Inc.
Matthew	Hebdon	University of Texas at Austin
Michael	Hemann	Contech Engineered Solutions
Nate	Hicks	HDR
Jamie	Hilton	KTA-Tator, Inc.
Ian	Hodgson	Lehigh University
Dongzhou	Huang	Atkins
Tim	Huff	Tennessee Technological University
Kevin	Irving	International Zinc Association
Cathleen	Jacinto	FORSE Consulting, LLC
Matthew	Jarrett	Wiss, Janney, Elstner Associates, Inc.
Eulogio	Javier	Virginia Polytechnic Institute
Russell	Jeck	Tutor Perini Corp.
David	Johnson	Industrial Steel Construction, Inc.
William	Johnson	Idaho Department of Transportation
Joseph	Kauzlarich	Michael Baker International
Zane	Keniston	Structural Steel Parts, Inc.
Adil	Khan	Wood Environment & Infrastructure Solutions
Frank	Kingston	abs Structural Corporation
Scott	Kingston	abs Structural Corporation
David	Konz	Atkins
Sri	Kotha	PGH Wong Engineering, Inc
Brian	Kozy	Michael Baker International
Bill	Lally	Tensor Engineering
Jason	Lewis	Alfred Benesch & Co
Alex	Lim	Oregon Department of Transportation

First Name	Last Name	Company
Jihshya	Lin	MnDOT
Roger	Liu	Florida Department of Transportation
Xuejian	Liu	Texas Department of Transportation
Jason	Lloyd	NSBA
Terry	Logan	Atema, Inc.
Timothy	Lyvers	Atkins
Michael	Marks	EIC Group
Natalie	McCombs	HNTB
Natalie	McCombs	HNTB
Ronnie	Medlock	High Steel Structures
Teresa	Michalk	Texas DOT Material and Tests Div.
Justin	Mickens	Parsons
Johnnie	Miller	Texas Department of Transportation
Ahmed	Mongi	West Virginia Department of Transportation
Marina	Muller	University of Florida
Thomas	Neal	KTA-Tator, Inc.
Joseph	Neeley	West Virginia Department of Transportation
Deanna	Nevling	HDR
Justin	Ocel	Federal Highway Administration
Dusten	Olds	HDR
Duncan	Paterson	HDR
Jennifer	Pazdon	Cast Connex
Stephen	Percassi	Bergmann Assoc.
Taylor	Perkins	Stantec
Jason	Provines	Virginia Department of Transportation
Lourdes	Rapp	Heath & Lineback
Ryan	Rapp	HNTB
Eric	Rau	HDR
Tony	Ream	HDR
Carl	Redmond	MTA Bridges and Tunnels
Phil	Roth	CHA Consulting, Inc.
Sougata	Roy	Rutgers
Frank	Russo	Russo Structural Services
Andres	Sanchez	Advanced Structural Engineering
Phil	Sauser	US Army Corps of Engineers
Grant	Schmitz	HDR
Ryan	Sherman	Georgia Institute of Technology
Kunjan	Shukla	Atkins
Kyle	Smith	GPI Construction Engineering (GPI)
Robert	Smith	Texas Department of Transportation
Dan	Snyder	Steel Market Development Institute
Mohit	Soni	Stantec
Gerard	Sova	Hardesty & Hanover, LLC

First Name	Last Name	Company
Daniel	Stancescu	Inventive Bridge Inc.
Jason	Stith	Michael Baker International
David	Stoddard	SSAB Americas
Jonathan	Stratton	Eastern Steel Works, Inc.
Brad	Streeter	Scougal Rubber Corporation
Jeff	Svatora	HDR
Andy	Taylor	Lusas, Inc.
Richard	Tegatz	WSP
Tevfik	Terzioglu	Parsons
Paul	Vinik	GPI Construction Engineering (GPI)
Paul	Wagar	Grillo Group
Vikas	Wagh	Metropolitan Transportation Authority
Dayi	Wang	Federal Highway Administration
Jordan	Warncke	Hardesty & Hanover, LLC
Brian	Watson	HDR
Don	White	Georgia Institute of Technology
Douglas	Whittaker	Michael Baker International
Gergis	William	AECOM
Gary	Wisch	DeLong's, Inc.
Brian	Witte	Parsons
Brian	Wolfe	MDTA
Matthew	Yarnold	Texas A&M University
Qi	Ye	CHI Consulting Engineers
Kevin	Zmetra	CHA Consulting, Inc.

Appendix B – Document Release Schedule and Status

Document	Status	Year Completed/Targeted	Task Group	Task Group Name	Document Title
G1.3.2002	Released	2002	1	Detailing	Shop Detail Drawing Presentation Guidelines
G1.2.2003	Released	2003	1	Detailing	Design Drawing Presentation Guidelines
G1.4.2006	Released	2006	1	Detailing	Guidelines for Design Details
G1.1.2020	Released	2020	1	Detailing	Shop Drawings Approval Review/Approval Guide
G1.3	Update - In-Progress	Unknown	1	Detailing	Shop Detail Drawing Presentation Guidelines
G1.4	Update - In-Progress	2024	1	Detailing	Guidelines for Design Details
S2.1.2018	Released	2018	2	Fabrication and Repair	Steel Bridge Fabrication Guide Specification
G2.2.2016	Released	2016	2	Fabrication and Repair	Guidelines for Resolution of Steel Bridge Fabrication Errors
G2.2	Update - In-Progress	Unknown	2	Fabrication and Repair	Guidelines for Resolution of Steel Bridge Fabrication Errors
G4.4.2006	Released	2006	4	QC/QA	Sample Owners Quality Assurance Manual
G4.1.2019	Released	2019	4	QC/QA	Steel Bridge Fabrication QC/QA Guidelines
G4.1	Update - In-Progress	2023	4	QC/QA	Steel Bridge Fabrication QC/QA Guidelines
G4.2.2021	Released	2021	4	QC/QA	Guidelines for the Qualification of Structural Bolting Inspectors
G4.2	Update - In-Progress	2024	4	QC/QA	Guidelines for the Qualification of Structural Bolting Inspectors
G4.4	Update - Not Started	Unknown	4	QC/QA	Sample Owners Quality Assurance Manual

Document	Status	Year Completed/Targeted	Task Group	Task Group Name	Document Title
S4.X	New - Not Started	Unknown	4	QC/QA	Specification for Steel Bridge Third Party Quality Assurance
S8.1.2014	Released	2014	8	Coatings	Guide Specification for Application of Coating Systems
S8.1	Update - In-Progress	Unknown	8	Coatings	Guide Specification for Application of Coating Systems
S8.2.2017	Released	2017	8	Coatings	Thermal Spray Coating Guide
S8.3	Passed Collaboration Ballot	2022	8	Coatings	Galvanizing Guide Specification
G8.4	New - In-Progress	Unknown	8	Coatings	Detailing for Coatings and Weathering Steel
G9.1.2004	Released	2004	9	Bearings	Steel Bridge Bearing Design and Detailing Guidelines
G9.1	Passed Collaboration Ballot	2022	9	Bearings	Steel Bridge Bearing Design and Detailing Guidelines
S10.1.2019	Released	2019	10	Erection	Steel Bridge Erection Guide Specification
S10.1	Update - In-Progress	2023	10	Erection	Steel Bridge Erection Guide Specification
G11.1	New - In-Progress	2021	11	Design	Guidelines for the Design of Cross-frame and Diaphragm Members
G11.2	New - In-Progress	2023	11	Design	Guidelines for Straddle Bents
G12.1.2020	Released	2020	12	Design for Constructability and Fabrication	Guidelines to Design for Constructability and Fabrication
G12.1	Update - In-Progress	2023	12	Design for Constructability and Fabrication	Guidelines to Design for Constructability and Fabrication
G13.1.2019	Released	2019	13	Analysis of Steel Bridges	Guidelines for Steel Girder Bridge Analysis

Document	Status	Year Completed/Targeted	Task Group	Task Group Name	Document Title
G13.2	New - In-Progress	2024	13	Analysis of Steel Bridges	Guidelines for the Analysis of Trusses
G14.1.2021	Submitted to AASHTO Publishing	2021	14	Field Repairs and Retrofits	Maintenance Guidelines for Steel Bridges to Address Fatigue Cracking and Details at Risk of Constraint Induced Fracture
G14.2	New - In-Progress	2023	14	Field Repairs and Retrofits	Guidelines for Field Repairs and Retrofits of Steel Bridges
G14.3	New - In-Progress	2024	14	Field Repairs and Retrofits	Database of Sample Field Repair and Retrofit Details for Steel Bridges
G15.10	On Hold	Unknown	15	Data Modeling for Interoperability	BrIM Process Model Definition for Steel Bridge Erection
G15.1	On Hold	Unknown	15	Data Modeling for Interoperability	Designer/Fabricator Exchange
G16.1	New - In-Progress	Unknown	16	Orthotropic Deck Panels	Guidelines for the Manufacture of Orthotropic Decks and State of Practice
G16.2	New - Not Started	2023	16	Orthotropic Deck Panels	Cost Effective Orthotropic Decks

Appendix C – Meeting Schedule and Agendas

Schedule Overview

NOTE: All times are shown as Eastern Time Zone

Monday, October 25

Meeting	Secretary	Chair	Vice Chair	Start (ET)	End (ET)
TG 1 Detailing	Christopher Garrell	Randy Harrison	Gary Wisch	9:00 AM	11:00 AM
TG 14 Field Repairs and Retrofits	Jason Lloyd	Kyle Smith	Jonathan Stratton	11:30 AM	2:30 PM
TG 8 Coatings	Jeff Carlson	Paul Vinik	Johnnie Miller	3:00 PM	5:00 PM

Tuesday, October 26

Meeting	Secretary	Chair	Vice Chair	Start (ET)	End (ET)
TG 2 Fabrication and Repair	Christopher Garrell	Heather Gilmer	Duncan Paterson	9:00 AM	11:00 AM
TG 15 Data Modeling for Interoperability	John Hastings	Aaron Costin	Jonathan Stratton	11:30 AM	12:30 PM
Combined TG 1 Detailing, TG 15 Data Modeling for Interoperability	John Hastings	Aaron Costin		1:00 PM	3:00 PM

Wednesday, October 27

Meeting	Secretary	Chair	Vice Chair	Start (ET)	End (ET)
TG 16 Orthotropic Deck Panels	Jason Lloyd	Sougata Roy	Frank Artmont	9:00 AM	12:00 PM
TG 4 QC/QA	Christopher Garrell	Jamie Hilton	Robin Dunlap	12:30 PM	2:30 PM

Thursday, October 28

Meeting	Secretary	Chair	Vice Chair	Start (ET)	End (ET)
TG 10 Erection	Christopher Garrell	Brian Witte	Jason Stith	9:00 AM	11:00 AM
TG 13 Analysis of Steel Bridges	Brandon Chavel	Deanna Nevling	Francesco Russo	11:30 AM	1:30 PM
TG 12 Design for Constructability and Fabrication	Brandon Chavel	Christina Freeman	Russell Jeck	2:00 PM	4:00 PM
Combined TG 1 Detailing, TG 11 Steel Bridge Handbook, TG 12 Design for Constructability and Fabrication	Brandon Chavel	Christina Freeman		4:00 PM	5:00 PM

Friday, October 29

Meeting	Secretary	Chair	Vice Chair	Start (ET)	End (ET)
TG 11 Design	Christopher Garrell	Brandon Chavel	Domenic Coletti	9:00 AM	11:00 AM
TG 17 Steel Castings	Devin Altman	Jennifer Pazdon	Jason Stith	11:30 AM	1:30 PM
MC Main Committee	Christopher Garrell	Ronnie Medlock	Christina Freeman	2:00 PM	5:00 PM

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 1 Detailing

Task Group Mission: This Task Group is specifically responsible for the creation and maintenance of guidelines and best practices for the creation of clear concise design and fabrication drawings.

Task Group Leadership

Chair: Randy Harrison - W&W|AFCO Steel, Hirschfeld Division
Vice Chair: Gary Wisch - DeLong's, Inc.
Secretary: Christopher Garrell - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/85771041664?pwd=Y0RzRmhBSGhpU1dCS3VDWnJRMFMzUT09
Zoom Meeting ID: 857 7104 1664
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/25/2021 (9:00:00 AM - 11:00:00 AM ET)

5. Chairperson's Welcome (9:00 AM – 9:10 AM)
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
6. Intent of G1.4 Guidelines for Design Details Update (9:10 AM – 10:50 AM)
   a. Structural Steel General Notes - page 102 – Brad Dillman
   b. Rolled Beams – New – Brad Dillman
   c. I-Girders (Parallel Flange and Haunched) – pages 103, 104 & 111 – Gary Wisch
   d. Connection Plates and Transverse Stiffeners – pages 103 & 106 – Gary Wisch
   e. Bearing and Jacking Stiffeners (Half Pipe) – page 103 – Randy Harrison
   f. Longitudinal Stiffeners – page 104 – Bill Lally
   g. Lateral Bracing for I Girders – page 106 – Randy Harrison
   h. Bolted Field Splices – page 107 – (Open for lead volunteer)
   i. Cross Frames – pages 108 through 111 – Brad Dillman
   j. Diaphragms – page 112 – Brad Dillman
   k. Tub Girders – pages 113 through 118 – Frank Kingston

l. Straddle Bent – New – Randy Harrison

m. Bearings – New – Randy Harrison

n. Miscellaneous Details (Handrail, Drip Bars, Utility Supports, Inspection Access & Walkways, Expansion Joints) – New and page105 – (Open for lead volunteer)

7. Next steps and wrap up (10:50 AM – 11:00 AM)

8. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 2 Fabrication and Repair

Task Group Mission: This Task Group aims to achieve quality and value in the fabrication of steel bridges through standardization of steel bridge fabrication across the nation.

Task Group Leadership

Chair: Heather Gilmer - TUV Rheinland
Vice Chair: Duncan Paterson - HDR Engineering Inc.
Secretary: Christopher Garrell - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/88262197666?pwd=ODUvWm4yc0FnTkFnT3ExTk8zbEdIdz09
Zoom Meeting ID: 882 6219 7666
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/26/2021 (9:00:00 AM - 11:00:00 AM ET)

6. Chairperson's Welcome
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
   c. Reminder of documents currently under the task group's scope
   d. AASHTO steel fabrication specification status update: F3148 & "combined method"
7. G2.2, Guidelines for Resolution of Steel Bridge Fabrication Errors
   a. Improper preheat
   b. Framing members too short
8. AASHTO fabrication specification (formerly S2.1)
   a. Continuing work on slip coefficients, especially regarding metallizing and combination of different coatings in same connection
   b. Scribing/etching of layout marks
   c. Allowable gap at girder bolted splices
   d. Reaming allowances & bolt hole tolerances

e. Unifying requirements for repair by grinding for various situations & combining the sections. Deferred until publication of fabrication specification

f. Applying A6 Table X4.2 (the old radii we used to have) to the 1.5t case for bending connection plates. Or maybe no ¾" limit? Compare AREMA. Deferred until after consideration by AASHTO T 14

g. Transverse members in assembly for skewed as well as curved—currently not in S2.1 or current fabrication specification draft. Deferred until after consideration by AASHTO T-14 issue first

9. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 4 QC/QA

Task Group Mission: This task Group primarily focuses on the requirements for a Fabricator's quality control program, with emphasis on the development and implementation of a quality control plan and minimum requirements for an Owner's quality assurance program.

Task Group Leadership

Chair: Jamie Hilton - KTA-Tator, Inc.
Vice Chair: Robin Dunlap - High Steel Structures
Secretary: Christopher Garrell - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/87033602032?pwd=M24wdkx3UnRhQmV3T0FHZm9NWTladz09
Zoom Meeting ID: 870 3360 2032
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/27/2021 (12:30:00 PM - 2:30:00 PM ET)

8. Chairperson's Welcome (12:30 PM – 12:40 PM)
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
9. G4.2 – Guidelines for the Qualifications of Structural Bolting Inspectors (12:40 PM – 1:00 PM)
   a. Publication status
   b. Review of 2020 RCSC
10. Conflicts with G4.2? Jamie Hilton
11. ii. Any new applications from RCSC to be added to G4.2? Jeremy Rice/Heather Gilmer
12. Retired S4.1 Steel Bridge Fabrication QC/QA Guide Specification (1:00 PM – 1:30 PM)
    a. Can the stripped-down version be a standalone document?
    b. G4.4 Sample Owners QA Manual – add to the stripped-down version?

c. Can we archive the retired S4.1 to either NSBA or AISC websites with guidance of “buyer beware – this doc no longer is being updated, but might contain useful information” – Phil Dzikowski/Ray Monson/Teresa Michalk

13. G4.1 Steel Bridge Fabrication QC/QA Guidelines (1:30 PM – 2:15 PM)
    a. Review and update definitions - replace with terminology from AISC 207-20 doc – Jamie/Teresa Michalk, Heather Gilmer, Jeremy Rice
    b. Address “new business” comments from previous ballot.
14. Section 10.1 - P.O. and Subcontracts
    a. Functions referenced by AISC
    b. Remove 10.1 title, keep paragraph and renumber sections accordingly (editorial)
15. New Business (2:15 PM – 2:30PM)
16. Adjorn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 8 Coatings

Task Group Mission: This Task Group primarily focuses on the functions, operations, requirements and activities needed to achieve consistent quality in steel bridge coatings. At the same time the group acknowledges the need for a cooperative approach to quality, where the Owner's and Contractor's representatives work together to meet their responsibilities, resulting in efficient steel bridges coatings that meeting all contractual requirements.

Task Group Leadership

Chair: Paul Vinik - GPI Construction Engineering
Vice Chair: Johnnie Miller - Texas Department of Transportation
Secretary: Jeff Carlson - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/88921957886?pwd=Q2RXdUEvYVZnaWRLT0FQU1ArR3hIQT09
Zoom Meeting ID: 889 2195 7886
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/25/2021 (3:00:00 PM - 5:00:00 PM ET)

11. Chairperson's Welcome (3:00 PM – 3:05 PM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.
12. S8.4 – Detailing for Corrosion Protection Systems (3:05 PM – 3:35 PM)
    a. Update and discussion from each group
    b. Galvanizing group may briefly discuss the organization of their chapter.
13. Update on UWS Initiatives (3:35 PM – 4:05 PM)
    a. Jason Lloyd – AISC Need for Speed Project on Manual for Design, Detailing, and Maintenance of UWS Bridges
    b. Mike Culmo (or someone from CHA) – ConnDOT UWS Performance Study
14. Single Coat IOZ Synthesis Update (4:05 PM – 4:20 PM)
15. Misconceptions of Chemically Grouping Coatings (4:20 PM – 4:50 PM)
16. Open discussion/New business (4:50 PM – 5:00 PM)
17. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 10 Erection

Task Group Mission: This Task Group develops guidelines and specifications that establish and define the basic, minimum requirements for the transportation, handling and erection of steel bridge components to ensure safe steel erection as well as quality and value in the completed bridge structure.

Task Group Leadership

Chair: Brian Witte - Parsons
Vice Chair: Jason Stith - Michael Baker International
Secretary: Christopher Garrell - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/81843338433?pwd=TEc4R0xWYjVVVnUzbVR4WS9YUXg2dz09
Zoom Meeting ID: 818 4333 8433
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/28/2021 (9:00:00 AM - 11:00:00 AM ET)

13. Chairperson's Welcome (9:00 AM – 9:10 AM)
    a. AISC Antitrust Policy and Meeting Code of Conduct
    b. Review action items from previous meeting
14. Field Reaming (9:10 AM – 9:30 AM)
    a. Update / discussion
15. Broken Fasteners Open Discussion (9:30 AM – 9:50 AM)
    a. Ronnie Medlock mentioned this a potential new topic for TG10 consideration during spring meeting for Main Committee (Tappan Zee)
    b. Do we want to include topic in G10?
16. G10 & AASHTO Bridge Construction Specification (9:50 AM - 10:00 AM)
17. Bearing - Section 5 rewrite (10:00 AM - 10:10 AM)
    a. Review draft language if available
18. Transportation - Section 3 (10:10 AM – 10:20 AM)
    a. Updates complete unless further comments

19. Wind Load on Girders during Erection – no update
20. Bolting for Bolters – no update?
21. Beam Clamp Loading (10:20 AM – 10:25 AM)
    a. Show updated graphic
22. New topics for consideration (10:25 AM – 10:35 AM)
23. Review & assign action items (10:35 AM – 11:00 AM)
    a. Next Revision Publish Date?
24. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 11 Design

Task Group Mission: This Task Group aims to develop and maintain consensus guidelines to assist with the design of steel bridges and their components.

Task Group Leadership

Chair: Brandon Chavel - NSBA
Vice Chair: Domenic Coletti - HDR Engineering Inc.
Secretary: Christopher Garrell - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/85227945614?pwd=d1U3YlkvY3ZnaktsL0hUc2xTNEZyZz09
Zoom Meeting ID: 852 2794 5614
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/29/2021 (9:00:00 AM - 11:00:00 AM ET)

7. Introductions (9:00 AM to 9:10 AM)
   a. AISC Antitrust Policy and Meeting Code of Conduct
   b. Approval of Previous Meeting Minutes.
8. Announcements and Administrative Items (9:10 AM to 9:15 AM)
   a. FDOT Steel Bridge Research Project RFP – Christina Freeman
9. Presentation (9:15 AM to 9:45 AM): TBD
10. Guidelines for the Design of Cross Frames & Diaphragms (9:45 AM to 10:45 AM)
    a. Review Status and path forward
11. General Open Discussion (10:45 AM to 11:00 AM)
    a. Design issue discussions
    b. Other potential items for the next design TG task.
12. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 12 Design for Constructability and Fabrication

Task Group Mission: This Task Group primarily focuses on addressing the questions that have been and are continually asked concerning the constructability of steel bridges according to the latest practice for steel mills, fabrication, detailing, erection, and design.

Task Group Leadership

Chair: Christina Freeman - FDOT
Vice Chair: Russell Jeck - Tutor Perini Corp.
Secretary: Brandon Chavel - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/81246425774?pwd=MmZHWitldG5NVWZrayt1YTQydXdoQT09
Zoom Meeting ID: 812 4642 5774
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/28/2021 (2:00:00 PM - 4:00:00 PM ET)

2. Chairperson's Welcome (2:00 PM – 2:10 PM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.
3. FDOT Research Opportunities (2:10 PM – 2:15 PM)
4. Presentation on Weathering Steel Rolled Plate Stiffener for FDOT Wekiva 8 Project, by Ben Boss, DRMP (2:15 PM – 2:35 PM)
5. Comments for Next Version of G12.1: (2:35 PM – 3:40 PM)
    a. Comments from Heather Gilmer:
        i. Section 1.3: "increased corrosion resistance durability" Why is "durability" there?
        ii. C1.4.1: "encouraged to be aware" seems odd. Hard for them not to be aware once we've pointed it out. "Should be aware" or "encouraged to consider"
        iii. In general, delete "note that" from various locations in document

iv. Section 2.1.1.2 technically those aren't "connection stiffeners". "Connection plates and intermediate stiffeners".
v. Section C2.1.2.6: not editorial; please consider as new business (I assume too late for this edition so next time): if you're going to mention FC in the context of stiffeners (2nd bullet), please note that typically bracing members are not considered FC. Wouldn't want anyone to interpret this to mean FC bearing stiffeners should be a thing!!
vi. Section C3.7: as new business for next edition, consider explaining why WTs are preferred and maybe have a figure illustrating the weld access.
vii. Section 4.4: This is a guide and shouldn't have "shall". If it's required in AASHTO. note that AASHTO requires it.

b. Comment from Jon Edwards:
    i. Section 2.1.1.1, the second paragraph is commentary and should be moved there.
c. Comment from Russ Jeck:
    i. Section 1.1 (Rolled vs Plate Girders): consider recommendations or suggestions for proper camber of rolled girders
d. Any miscellaneous comments

6. Closing Remarks (3:40 PM – 3:45 PM)
7. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 13 Analysis of Steel Bridges

Task Group Mission: This Task Group focus has been the development of guidance on the issues related to steel girder bridge analysis and to educate Engineers so that they can better make decisions for their own projects.

Task Group Leadership

Chair: Deanna Nevling - HDR
Vice Chair: Francesco Russo - Russo Structural Services
Secretary: Brandon Chavel - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/83610176223?pwd=KzFlZWROSDNZUloyZUM1M1ZBUnlpdz09
Zoom Meeting ID: 836 1017 6223
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/28/2021 (11:30:00 AM - 1:30:00 PM ET)

1. Chairperson's Welcome – (11:30 PM – 11:45 AM)
   a. AISC Antitrust Policy and Meeting Code of Conduct
   b. Approval of Previous Meeting Minutes – Virtual March 30, 2021
2. General Announcements (11:45 AM – 12:10 PM)
   a. FDOT RFP - Christina Freeman
   b. Conferences/Research/Publications
   c. NSBA Update – Brandon Chavel
   d. FHWA Update – Dayi Wang, FHWA Steel Specialist
   e. TRB AKB20 (Steel Bridges Committee) Update – Brandon Chavel Secretary
   f. AASHTO Bridge Update (T-14 Structural Steel Design) – Frank Russo
3. Presentation (12:10 PM – 12:40 PM) "Quick and Easy Three-Dimensional Finite Element Modeling of Trusses" Terry Cakebread and Andy Taylor – LUSAS
4. G13.2 Guidelines for Steel Truss Bridge Analysis (12:40 PM – 1:30 PM)
   a. High Level Comment Review
   b. Benchmark Models

c. Example Truss Model Writeups

d. Volunteer Reviewers

e. Volunteer Authors

5. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 14 Field Repairs and Retrofits

Task Group Mission: This Task Group primarily focuses on providing practical solutions for design and implementation of field repairs and retrofits of existing steel bridges.

Task Group Leadership

Chair: Kyle Smith - GPI
Vice Chair: Jonathan Stratton - Eastern Steel Works, Inc.
Secretary: Jason Lloyd - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/86768805745?pwd=WGlxTFlDeXMzdEpHaGRodnFpZkd0Zz09
Zoom Meeting ID: 867 6880 5745
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/25/2021 (11:30:00 AM - 2:30:00 PM ET)

1. Chairperson's Welcome (11:30 AM – 11:35 AM)
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
2. Presentation: Matt Hebdon, PhD - "Experimental Study of Corroded Beam Ends" (11:35 AM – 12:15 PM)
3. G14.1 - Quick update on publication status (12:15 PM – 12:20 PM)
4. G14.2 - Section updates by authors and reviewers, collaborative discussion on open topics (12:20 PM – 2:20 PM)
5. Milestones & Goals (2:20 PM – 2:30 PM)
6. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 15 Data Modeling for Interoperability

Task Group Mission: This Task Group's primary focus is on facilitating the development of bridge industry consensus standards for data description, modeling, and interoperability for integrated design, construction, and lifecycle management of bridges (i.e. BIM).

Task Group Leadership

Chair: Aaron Costin - University of Florida
Vice Chair: Jonathan Stratton - Eastern Steel Works, Inc.
Secretary: John Hastings - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/86261851555?pwd=V0Q2OVdBb1pXTEhyclMrdkNLWkI0UT09
Zoom Meeting ID: 862 6185 1555
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/26/2021 (11:30:00 AM - 12:30:00 PM ET)

5. Chairperson's Welcome (10:30 AM – 10:40 AM)
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
6. US Data Dictionary (10:40 AM – 11:30 AM)
   a. Overview
   b. buildingSMART USA Chapter vision
7. Bridge Data Dictionary (11:30 AM – 12:30 PM)
   a. Overview
   b. Updates
   c. Working session on updating
   d. Next steps
8. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 16 Orthotropic Deck Panels

Task Group Mission: This Task Group aims to establish an Orthotropic Steel Deck (OSD) panel design that can be cost effectively produced in the United States for the bridge market.

Task Group Leadership

Chair: Sougata Roy - Rutgers University
Vice Chair: Frank Artmont - Modjeski & Masters, Inc.
Secretary: Jason Lloyd - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/82055594559?pwd=YzVJZTdPSXRlM0lTVjREaXJPSG9HZz09
Zoom Meeting ID: 820 5559 4559
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/27/2021 (9:00:00 AM - 12:00:00 PM ET)

1. Chairperson's Welcome
2. Attendee Introductions – Adjusted for online meeting (chair, VC, and Secretary)
    i. Introduce Existing and Welcome New Members
    ii. The reading of AISC Antitrust policy
    iii. Review and Approval of previous minutes
3. General updates and announcements review of mission statement:
4. "This Task Group aims to establish an Orthotropic Steel Deck (OSD) panel design that can be cost effectively produced in the United States for the bridge market."
5. Presentation from Justin Dahlberg ISU: FHWA Orthotropic Standard Panel project update
6. 10 min break (optional)
7. Task Group updates
    i. State of Practice Synthesis Document
    ii. Review sections
    iii. Review author assignments
    iv. Monthly webinar meetings schedule

v. White Paper “Tolerance for Tolerance” (working title) – Terry Logan

vi. Short Span Orthotropic Update (SSSBA) collaboration

8. Review Committee Goals

9. Old business and additional discussion

i. Floorbeam and diaphragm details

ii. Other

10. Review Action Items

11. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

TG 17 Steel Castings

Task Group Mission: The mission of this Task Group will be to develop and disseminate resources specific to the US steel bridge community to support the increased and effective use of castings in steel bridges. The targeted community includes design engineers, DOT professionals, steel fabricators, steel erectors, inspectors, general contractors, and detailers.

Task Group Leadership

Chair: Jennifer Pazdon - CAST CONNEX
Vice Chair: Jason Stith - Michael Baker International
Secretary: Devin Altman - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/86124317552?pwd=ak5GNVVPYmN3bDZ4eDRybDNLK2pzdz09
Zoom Meeting ID: 861 2431 7552
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/29/2021 (11:30:00 AM - 1:30:00 PM ET)

1. Chairwoman's Welcome
   a. Attendee Roster Announcement
   b. AISC Antitrust Policy and Meeting Code of Conduct
   c. Approval of Previous Meeting Minutes
2. Introductions: Existing and New Members
3. Recap of Activities in 2021 (Jennifer)
   a. Speaking Engagements - Rationale, Goals, and Execution
   b. Case Study progress/Design explorations (Network Tied Arch, USACE, Bearings) - Rationale, Goals, and Execution
4. White Paper (Jason)
   a. Rationale, Goals, and Execution
   b. Review of comments from committee and/or breakout sessions for comments/discussion
5. Scope and Deliverables

a. Update on “strawman”

b. Breakout sessions in groups for comment/discussion

6. Collaboration Tools to Support Productivity and Communication
7. Action Items before Next meeting/Milestone(s)
8. Confirm Next Meeting Date/Milestone(s)
9. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

Combined TG 1 Detailing, TG 11 Steel Bridge Handbook, TG 12 Design for Constructability and Fabrication

Task Group Mission: This group is focused on the development of guidance for the detailing, fabrication, design and construction of steel straddle bents.

Task Group Leadership

Chair: Christina Freeman - FDOT
Secretary: Brandon Chavel - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/81676587570?pwd=a2VLK1NEQUNKK3BWOWdLN01ZUUNrZz09
Zoom Meeting ID: 816 7658 7570
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/28/2021 (4:00:00 PM - 5:00:00 PM ET)

1. Chairperson's Welcome (4:00 PM – 4:10 PM)
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
2. Presentation (4:10 PM – 4:40 PM)
3. David Konz is a Technical Manager for Atkins Structures based in Tampa. He has 17 years of experience and serves as a long-span specialist and discipline lead for alternative delivery projects nationwide. David will present on design and construction of a complex steel straddle bent cap for the FDOT I-4 Ultimate project. The steel straddle cap, pictured below during construction, supports two separate steel ramps in Orlando.
4. Update on Progress of Guidelines for Straddle Bents and Planned Future Work (4:40 PM – 4:55 PM)
5. Closing Remarks (4:55 PM – 5:00 PM)
6. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

Combined TG 1 Detailing, TG 15 Data Modeling for Interoperability

Task Group Mission: This Joint Task Group's focus is to produce the data requirements needed for the development of Model View Definitions (MVDs) related to steel bridge detailing and fabrication that will be used in the Industry Foundation Classes (IFC).

Task Group Leadership

Chair: Aaron Costin - University of Florida
Secretary: John Hastings - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/84293505780?pwd=ZndjUWJQOVorZndrbTlZenZJYnE4UT09
Zoom Meeting ID: 842 9350 5780
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/26/2021 (1:00:00 PM - 3:00:00 PM ET)

6. Chairperson's Welcome (1:00 PM – 1:10 PM)
   a. AISC Antitrust Policy and Meeting Code of Conduct.
   b. Approval of Previous Meeting Minutes.
7. Design to Fabrication Model View Definition (MVD) project update (1:10 PM – 1:20 PM)
8. Detail to Fabrication IDM Development (1:20 PM – 1:40 PM)
   a. Overview
   b. Defining the model definitions
9. Working Group- Assign Data Requirements (1:40 PM – 3:00 PM)
   a. Data Requirements
   b. Discussion
10. Adjourn

AASHTO/NSBA Steel Bridge Collaboration

Fall 2021 "Virtual" Meeting

MC Main Committee

Task Group Mission: The Collaboration Main Committee provides oversight and guidance for all Task Groups. A meeting of the Main Committee will take place at the end of each Collaboration meeting.

Task Group Leadership

Chair: Ronnie Medlock - High Steel Structures, LLC
Vice Chair: Christina Freeman - FDOT
Secretary: Christopher Garrell - NSBA

Zoom Information

Meeting Link:
https://us02web.zoom.us/j/89162780770?pwd=andNV2F3enVtY0svbVJGTUwxM0NaQT09
Zoom Meeting ID: 891 6278 0770
Zoom Meeting Dial-in: (312) 626-6799

Meeting Agenda: 10/29/2021 (2:00:00 PM - 5:00:00 PM ET)

5. Chairperson's Welcome (2:00 PM – 2:10 PM)
    a. AISC Antitrust Policy and Meeting Code of Conduct.
    b. Approval of Previous Meeting Minutes.
6. Task Group Reports - Approximately five minutes each (2:10 PM – 4:50 PM)
    a. TG 1 - Randy Hasrrison (W&W|AFCO Steel)
    b. TG 2 - Heather Gilmer (TÜV Rheinland)
    c. TG 4 - Jamie Hilton (KTA-Tator, Inc.)
    d. TG 8 - Paul Vinik (GPI Construction Engineering)
    e. TG 9 - Michael Culmo (CME Associates, Inc.)
    f. TG 10 - Brian Witte (Parsons)
    g. TG 11 - Brandon Chavel (NSBA)
    h. TG 12 - Christina Freeman (FDOT)
    i. TG 13 - Deanna Nevling (HDR)
    j. TG 14 - Kyle Smith (GPI Construction Engineering)

TG 15 - Aaron Costin (University of Florida)