

1:00 A.M. to 12:30 P.M. EST, Wednesday, September 10th, 2025
WEBEX

Committee Attendance:

Pat Mayne (Chair)	Atlantic	Mitchell Swisher	Cleveland Cliffs
Terry Dunn	Atlantic	Jonathan Paton	Warner
Scott MacRae	Armtec	Mike Mounts	Valgroup
Darren Bauman	Armtec	Todd Gray (abs)	ACI
Bruce Matheson	Frontier	Derek Niezen (abs)	Ironside
Jaclyn Pittman (abs)	E.S. Hubbell	Richard Northcutt (abs)	MarMac
Kamran Derayeh	AMD	P.C. Drouin(abs)	SDI
Sarodha Rajkumar	AMD	Cameron Hock	Island Culvert
Byron Nelson (abs)	Leland	Mike McGough	NCSPA
Dave Watson	Leland	Ray Wilcock	CSPI

1. Welcome and Opening Remarks

Pat opened the meeting at 11:05 a.m. and welcomed everyone. Attendance was taken and is recorded above.

2. Review Minutes from June 23rd, 2025, and Approve

Minutes were sent to all committee members and those in attendance. A motion for approval was made by **Mike Mounts**, second by **Scott MacRae** and was carried unanimously.

3. Project List Update

a) CSA G401-24 update

- Standard contains 46 updates – some errata, some new
- Posted on the CSA website for the committee to review – deadline is Sept 12th
- Following will be a meeting and vote
- Current review – added 8 more updates
 1. Definitions – improve pipe arch
 2. Repairs reference to section 6.2 (3)
 3. Table references to ASTM for Aluminized (Chemical Analysis)
 4. Note change for Galvanized Plate Table 1
 5. Annex B – add figures for dissimilar and watertight couplers from MarMac (2)

i) **Section 6.3.1 a) ii) - Polymer repair issue**

a) Uncoated surfaces of width up to 50 mm shall be repaired as follows:

- i) plant: outside (external side) of pipe repairs using RanVar TPC-515-7 or Denso Butyl 35 Tape or equivalent;
- ii) plant: inside (internal side) of pipe repairs using RanVar TPC-515-7 or Denso Butyl 35 Tape or equivalent; and
- iii) field: inside/outside of pipe repairs Denso Butyl 35 Tape or equivalent.

- The safety of painting of Ranvar inside of the pipe was discussed. Mike Mounts stated that it should be applied as per manufacturers instructions. All agreed. Technical Bulletins will be reviewed prior to posting to ensure this is covered.
- Scott stated that Ranvar should be allowed in the field as tape may not be practical for holes or cut ends. All agreed and will be included both CSP and Plate sections of CSA G401 (clause iii) and Technical Bulletins.

ii) **Section 4.7.3.2.4.1 - Welded Seams**

The seam shall be parallel to the corrugations and shall have a continuous weld extending from end to end of each length of pipe. Welding shall be done utilizing ultra-high-frequency resistance shielded metal arc welding (SMAW) or gas metal arch welding equipment. Seams shall be welded in such a manner that they will develop the full strength of the pipe and not affect the shape or nominal diameter of the pipe. Welded seams shall be controlled such that the combined width of weld and adjacent coating burned by welding does not exceed three times the metal thickness. Damage outside this width shall be repaired as required in Clause 6.2. The fabricator shall certify that the welds have been tested and found satisfactory.

Action: The addendum in yellow has been added to G401 to align with ASTM.

b) **EPD's update**

Greenhouse Gas Emissions	2018 Results	1.5 tons of CO2
	North American Average	2.1 tons of CO2
	AMD XCarb	1.0 tons of CO2

2018	67 KM / HR
NA	48 KM / HR
XCarb	100 KM / HR

2018	42,450 liters
NA	59,430 liters
XCarb	28,300 liters



- AMD currently reviewing NA 2024 versus 2018
- There may be an issue with recycling rates
- Will be republished and posted once corrected
- Carbon calculator will then be updated
- Suggestion from Sarodha – look at fuel efficiency versus km/hr. This will be reviewed and presented at next meeting.

Update from Farid Safari (AMD):

The 2024 NA numbers have been updated according to the AISI data for industry average recycled content. The verifier (Groupe AGECO) must confirm it is less than 5% of the results and once AMD receives the confirmation letter, it will be sent to CSPI and CSA for publishing the updated version.

c) MTO – OPSS 960 Structural Plate Package

Latest update:

- Few remaining steps before the OPSS is posted on MTO's Technical Consultation Portal for public review
- Split into two separate specifications:
- OPSS 960 will remain as the construction specification.
- OPSS 1855 will serve as the material specification.
- There are no significant changes made to the material related contents which CSPI has reviewed.

Standard drawings need to be discussed with Armtec & AIL, and then MTO.

d) MTQ Standards update

Discussions taking place on the following:

1. Suppliers versus owners' s consultant designing foundations.
2. Height of cover min of 600 mm in Quebec versus 300 mm in CSA, ASTM, OPSS, CHBDC S6:25 (600 mm for >3 m spans).

Latest Update:

- Meeting is planned for Tuesday October 7th in Quebec City.
- Both Armtec & Atlantic will be attending.

Action:

- Pat will lead the HOC review.
- Plan is to keep to ASTM < 3-meter diameter/span and CHBDC >3-meter diameter/span.
- Calculations will be run by both Atlantic and Armtec to verify this plan. Span divided by 6

- Minimums only for October 6th. Maximums to be looked at later.

e) AT Standards update

Standard Specifications for Bridge Construction Edition 18, 2026

Latest Update:

- Met on Sept 4th with Frontier, Atlantic & Armtec to review submission
- 37 recommendations submitted on Sept 5th on AT's "SharePoint" site

Highlights:

- Mill Test Reports submission
- Recorrugated Ends
- Couplers
- Polymer repairs
- Inclusion of DCSP

f) BCMOT update

No update or discussion.

g) Handbook update

- 2 Year Project
- Member participation
- Chapter by chapter

Meetings held on:

- March 24th
- April 30th
- May 28th
- Work underway on design / HOC / standard references / compaction tables / culvert location / rehabilitation.
- Next Meeting TBD

4. Member / Ongoing Items update

a) AMD – discuss documents pertaining to wild / forest fires

Clean the damage surface to galvanized surface and follow these steps:

1. Clean the affected area.
2. Apply a suitable zinc-rich paint or paste.
1. Comply with BS EN ISO 1461: 2022

Standard covers:

1. Coating requirements
2. Test methods
3. Inspection procedures
4. Applicability

Action:

- Ray to draft a technical bulletin with assistance from Kamran which will then be submitted to committee for review at the next meeting.

b) Cleveland Cliffs

Mitchell - Nothing to report.

c) Valgroup

Mike – Josh Cmar the Commercial Manager has left Valgroup and is replaced by Dan Macorino.

d) Leland

Dave – tariffs at 25 – 50% are the biggest issue at present and the closing of a hot dip galvanizer in Quebec has resulted in tight supply issues. Dave announced his retirement from Leland on October 1st, 2025. Mike Green will most likely replace Dave on the committees.

On behalf of CSPI, thank you Dave for your support over the years and we all wish you well in your future retirement.

e) Warner

Jonathan - no update.

f) Ironside

Derek – not in attendance.

g) ACI

Todd – not in attendance.

h) MarMac

Richard – not in attendance.

i) Steel Dynamics

P.C. – not in attendance.

5. Other Associations - Updates

a) NCSPA update from Mike McGough

1. CSP Design Manual being updated with 2026 target date for launch. Additions will include special design loading, liner usage and seismic, large diameter caisson, sustainability and resilience.
2. EPD – collecting data from 9 fabricators with good geographical spread. There are 4 producer members of the association who have an EPD which simplifies this part.
3. Research project on skewed headwall design in progress. Working with SGH Consultants.
4. Seismic design – ballot will be tabled soon by AASHTO who are apparently looking at Cal Trans.
5. Future meeting in person on Nov 11th in Atlanta, Georgia

b) ASTM update

1. Next meeting Nov 9-10 in Atlanta Georgia.
2. Spring meetings May 2026 in Dallas Texas.

c) TAC update / 2025 Fall Meetings & October Conference in Quebec City

Attended Spring Meetings (virtual)

- Oct 3rd Environmental Issues Committee
- Oct 3rd Environmental Legislation Committee
- Oct 3rd Climate Change Integrated Committee
- Oct 4th Environmental & Climate Change Council
- Oct 4th Structures Committee

Conference

- Abstract on "Underground Infrastructure — Getting to Net Zero" accepted.
- Scheduled for Tuesday October 7th at 4:00 pm
- Moderate sessions on October 6th & 7th.

d) AASHTO / TRB / AREMA / AISI

AASHTO	Polymer specifications now coincide with ASTM. Allow for a thinner polymer and galvanized coating when applicable. Covered the seismic design issue above. On the materials front there is harmonizing with ASTM.
TRB	Went through a complete reorganization of committees. Committees that were in the 60 -70 range are being maxed at 28.
AREMA	Reached out to Joel Hahn (Contech) for information on joining committee. Take next step. Mike who is a member of AREMA gave the following details: Meetings are twice a year in February & August. Locations change every time a field trip is normally included. Fees are nominal which allows you access to the ballots. Joel Hahn normally attends on behalf of NCSPA.
AISI	No update

6. Discussion / Old / New Business

a) Polymer repair Technical Bulletin updates

- Both TB 2 & 17 updated and will be posted to the website.
- Mike Mounts reviewed
- Changes include:
 - Ranvar allowed inside for repairs at the plant
 - Alternative tapes allowed to DENSO Butyl 35
 - Footers updated as approved at June meeting

b) Bolt issue identified in Newfoundland and Labrador with salt seepage. Update from visit with Dave on June 24th.

Caplin Cove – built in 2018

Water Testing Results

Hardness	0	All coatings
PH	4	Polymer coated
Chlorides	9	All coatings

Low PH Acidity – decaying organic matter

- Photos were shown upstream & downstream
- Combination of bolts were used with the majority being mechanical galvanized.
- Found Stainless Steel nuts in the stream.
- The bolts that were marked NF A449 were mechanical galvanized coating.
- Most of the bolt heads were on soil side, thus difficult to identify coating.

- Lab test will be done from sample taken.
- Report from CSPI & Leland to follow.

Brownsdale – built in ????

Water Testing Results

Hardness	0	All coatings
PH	4	Polymer coated
Chlorides	21	All coatings

- Photos were shown upstream & downstream
- Majority of bolts were mechanical galvanized. Same markings as Caplin Cove.
- All bolts were in excellent condition.
- Report from CSPI & Leland to follow.

Overall: worst case scenario with mechanical versus HDG bolts. Mechanical does not have the thickness of HDG, thus breaks down well before HDG & NZF. In the ASTM salt spray tests mechanical starts to show red rust between 100 – 200 hrs, HDG 200 – 400 hrs and NZF over 3,000 hrs.

AIL is working on a data base that will look at bolt coatings across the country for field assessment.

- c) **Alberta Transportation - Open Bottom Structures. Cookie cutter design, headwalls, cross sectional drawings, standard drawings, this number of boxes, arches, etc. Mimic concrete. ISG Engineering coordinating.**

No update.

- d) **Technical Bulletin #13, Performance Guideline for Buried Steel Structures – reference to AASHTO electrochemical tests to previous version. Update.**

Updates include:

- References & definitions
- Grammar consistency
- AASHTO test methods
- New profiles added
- Bolt coatings

Outstanding:

- Soil environments, zinc & carbon loss rates, corrosion allowance
- Update to CHBDC S6:25, table 2.5, etc.

Pat to look after the update with regards to CHBDC.

e) Canadian Water Resources Association – ½ day workshop on culvert design.

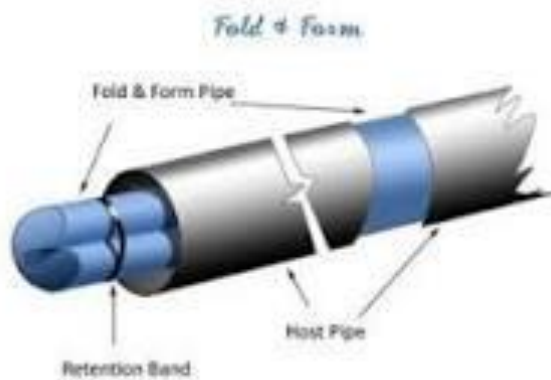
½ day online seminar on CSP:

- 9:00 Introduction to CSPI / Industry (Applications, Product Details, Fabrication)
- 9:30 Structural Design of Culverts & Storm Sewers
- 10:30 Installation & Construction Procedures
- 11:00 Inspection, Maintenance & Rehabilitation
- 11:30 Durability & Sustainability

[Will discuss with CWRA a webinar in December / January time frame.](#)

f) Fold and form and CIPP liners used for rehabilitation. Update.

- A liner is folded to reduce its size before insertion and reversion to its original shape by the application of pressure and/or heat. (Polyethylene or PVC), but their effectiveness is uncertain.



- Reached out to MTO – heard from Craig McLeod (Lead Bridge Engineer)

Key takeaways:

- Chapter contained in the MTO Trenchless Technologies Design Guideline
- Used for invert rehabilitation
- Not used when structural integrity is an issue
- Not used for spans > 3 meters
- Document will be sent with minutes of this meeting

g) Online Tool – CSP configurator

[Deferred to next meeting.](#)

- h) **Rerolled ends for Aluminized Type II – cracking – why? then must paint. Continue discussion from last meeting.**

Deferred to next meeting.

New Business

- a) **Technical bulletin for safe handling, stacking, bundling of CSP.**

Look at nesting of pipes in TB 17.

Deferred to next meeting.

- b) **Concrete pipe collapses on HW 40 in Quebec.**

<https://ici.radio-canada.ca/nouvelle/2188264/autoroute40-infrastructures-entretien-ingenieurs-quebec#:~:text=Pr%C3%A8s%20du%20quart%20des%20ponceaux,Berthierville%20et%20Lanoraie%2C%20dans%20Lanaudi%C3%A8re>

7. Adjourn & Next Meeting in November (in person) Waterloo ON at the Delta Hotel on November 4th

The meeting was adjourned at **12:47 pm** motioned by **Dave Watson** and second by **Scott MacRae** and was carried unanimously. Next meeting on November 4th.

Pat Mayne
Chair

Ray Wilcock
Executive Director