

1:00 P.M. EST, Thursday November 18th, 2021
Homewood Suites by Hilton, Cambridge, ON

Committee Attendance:

| | | | |
|--------------------------|----------|------------------------|------------------|
| Terry Dunn (Chair) | Atlantic | Dave Watson | Leland |
| Kevin Williams | Atlantic | Jim Evans (virtual) | Cleveland Cliffs |
| Jason Sherwood | Atlantic | Ian Berry (virtual) | Warner |
| Randy McDonald (abs) | Atlantic | Mike Mounts (virtual) | Valfilm |
| Phil Carroll (abs) | Atlantic | Todd Gray (abs) | ACI |
| Scott MacRae (virtual) | Armtec | Derek Niezen (virtual) | Ironside |
| Bruce Matheson | Frontier | Mike Hook (virtual) | MarMac |
| Jaclyn Pittman (virtual) | Hubb-Cap | Mike McGough (virtual) | NCSPA |
| Kamran Derayeh | AMD | Ray Wilcock | CSPI |
| Byron Nelson | Leland | | |

Guest Attendance:

| | | | |
|--------------|----------|------------------|----------|
| Liz Bouchard | Armtec | Mike Williamson | Hubb-Cap |
| Sam Mitra | Armtec | David Newbigging | AMD |
| Ian Kalverda | Hubb-Cap | Lucas Cooper | AMD |

1. Welcome and Opening Remarks

Terry opened the meeting at 1:00 p.m. and welcomed everyone. Attendance was taken and is recorded above.

2. Review Minutes from September 29th, 2021, and Approve

Minutes were reviewed and a motion for approval was made by **Jason Sherwood**, second by **Kamran Derayeh**.

3. Project List and Approve

1) MTO – Structural Plate Standards Advancement

- Met with Walter Kennedy on November 12th
- Agreed to start with review of Culvert & Structural Plate Planning guidelines and make recommendations in the new year.
- Education on coatings, carbon footprint & rehabilitation in 2022

2) Bay of Fundy & Cabot Trail Polymer Coated Sites

On hold - will look at in the spring of 2022.

Site visit to cover:

- Abrasion 4 or tidal waters, ice conditions?
- Water velocity, chemistries, grade of pipe, fish passage design?
- Inlet control to protect sediment from entering pipe. Characterize the upstream water feeding the pipe, sediment load.
- Find out more information and root causes of the abrasion.
- Bay of Fundy (AIL), Cabot Trail (Armtec)
- Pictures are important to determine bedload / velocity
- Port Hardy site to visit – similar abrasion issues. Future visit for site inspection next time in B.C.

3) TB's – CSP Inspection, Geomembranes & Maintenance of Bolts

- Technical Bulletins completed - French Translation in progress
- **E Blasts, Linked In, social media**
- **January release for publication**



4) CSA G401 Update

- Last meeting held on November 2nd
- 11 outstanding items to complete
- Next meeting December 1st
- Plan is to start with larger external committee in January 2022

5) Fish Baffle Technical Bulletin

Not started yet.

- a. National
- b. Scope: Prepare a document that contains the variables that one must look at:

- i. Owner to hire the consultant.
- ii. Show examples of FB across Canada.
- iii. List benefits of using Steel Culverts for Closed Bottom
- iv. Show Reference Guidelines – DFO, FP innovations

Agreement was reached to develop a fish baffle guideline. Idea is to list all acceptable / available options in Canada. 6 to 8 case studies were discussed. With every province there are many options along with bedload retention, slopes, etc. Reach out to members across the country for options / projects, etc. Work with Julien Cassie (ALL).

6) Design for Abrasion Technical Bulletin

Preliminary discussions have been held, however summer scheduling prohibited moving forward. Will resume this fall.

- a. National
- b. Scope: Ways to calculate water velocity or ways to design for it (open Bottom vs closed bottom)

Abrasion classes, how to measure? Reference documents? What do the NCSPA have in this area? Work with Phil Carroll.

Phil suggested reviewing “Stream Simulation” from the US Forest Services (Turner Fairbanks Lab).

7) CSP Rehabilitation

E-Blast sent in October with link to YouTube posting of webinar held earlier this year. T.B.’s reviewed – no update required.

Jason suggested looking at post inspection guidelines for in situ pipes. Questions to ask such as membranes, water testing, soil testing, issues, and remedies. Kevin sent a link from AASHTO for inspecting drainage pipes for review.

<https://www.google.com/amp/s/aashtojournal.org/2020/08/14/aashto-releases-culvert-storm-drain-inspection-guide/amp/>

Put together a guideline for next meeting.

8) Storm Water Joint Performance

- a. National
- b. Non Recorrugated Ends
- c. MarMac Coupling system
- d. Improve Joint performance – Test current joints!!
- e. Fittings – Develop Standard Fittings to connect to other pipe materials and own. Standardize and potentially test fittings.

Mike Hook – MarMac presentation

- Working with Pacific Corrugated on coupling rerolled and non-rerolled ends
- Lab testing in Kingston at Queen's with the NCSPA under Dr. Ian Moore, \$1,500 to set up and \$1,500 per test (include winter / northern conditions / perma-frost)
- Creepage issues, transferring of loads to the two pipes, strain on coupler
- Looking for a 10.8 PSI or better
- Manufactured to ASTM A873, C990 – working on a CSP standard
- Will keep us in the loop on the testing

9) Carbon Neutral

Held discussions with Stan about reporting annually. Determined that it would be difficult given the complexity of LCA reviews / comparisons / 3rd party review, etc. Stan indicated that all members should see a significant improvement in the 2022 EPD, given that CSP is made using the EAF method versus an overall average of EAF & BOF methods contained in the latest EPD.

Stan indicated that CSPI start to follow the “Greening Government Procurement” federal department for updates and potential speaking engagements.

Reached out to international members pertaining to needs / ideas, etc. Heard back from Viacon who are using the calculator and asked if we had any plans to produce one for structural plate.

- a. How do we take it to the next level?
- b. Find an EPD for HDPE once Published.
- c. Make it more project related with budget pricing to compare costs and CO2
- d. What else can CSPI do to promote and lobby steel over other building materials?
- e. Do we need to do more lobbying?

Link for sustainable minds www.sustainableminds.com or <https://www.transparencycatalog.com/>. Search the word pipe.

10) Green Handbook Update

Commence after CSA G401 is complete.

- a) 2 Year Project
- b) Member participation
- c) Chapter by chapter

Idea – hire someone to move this along. Look at this in 2022 using surplus funds. Students interested in participating.

11) Mitacs Opportunity – Municipal Storm Sewer Standards

- Draft sent to universities for consideration
- Ideal candidate P' Eng. with MBA
- Dave will be able to provide a reference to business schools

4. Member / Ongoing Items update

a) AMD – carbon / galvalume update (Kamran)

Nothing to report. Remove from the agenda. Will look at down the road.

b) Valfilm – Lighter polymer laminate (Mike Mounts)

Several samples of different steel types and film thicknesses have been submitted to KTA for lab testing where they are going to complete all testing described in ASTM A742. This testing will take 6 – 8 months, so it will probably be after the first of the year before we get the complete results and decide how we are going to proceed from there.

c) Leland - Bolt & Nut Research update (Byron)

No update on research.

d) Warner – alternative polymer coating update (Ian)

Tried several different coatings. Nailed it down to 4 and will determine next steps.

e) Ironside – machinery update (Derek)

No update.

f) ACI update (Todd)

Todd was not in attendance.

g) MarMac Joint Testing of non-rerolled ends (Mike H)

Covered above

h) PPI Carbon Document review (Ray)

Moved to PPC for response.

5. Other Associations - Updates

a) NCSPA update (Mike)

- Evaluated trench coat without gaskets in the seams or welded seams and held at 10.8 PSI, for the 24" pipe, except for small leaks at the bulkheads
- Collecting information on aluminized type II sites (about 25 years old) – no issues found (PH 6-7, Resistivity of 4,000 ohm-cm) non-aggressive sites
- Put together a task force on resiliency and sustainability to ensure that the message goes out

b) ASTM update (Mike)

November meetings A05 & B07 were held via WEBEX on November 15th & 16th. Handful of ballots coming up for vote next go round.

c) TAC update / Fall Conference & Meetings (Ray)

Attended a number of sessions as conference was held online. Recordings are available.

Meetings to be held this November via WEBEX:

| | |
|------------------|--|
| 1 st | Structures |
| 9 th | Road Safety |
| 10 th | Small Municipalities |
| 15 th | Climate Change Integrated |
| 17 th | Environmental Issues / Legislation |
| 19 th | Environmental & Climate Change Council |

d) TRB update (Mike)

Will meet in person in January in Washington DC
Mike attends one committee meeting

e) AREMA (Mike)

All quiet – Joel Hahn from Contech attends.

g) AISI News (all)

Attended the Communications session this week – many of the competing materials are driving the message, whereas steel needs to drive the messages on resiliency and sustainability.

6. Discussion / Old / New Business

a) CO2 calculator in French

Fall project.

b) Training course on water testing – sponsored by CSPI

Start with members this winter via webinar. Move to provinces.

7. Adjourn & next meeting at the call of the Chair

The meeting was adjourned at **3:00 pm** motioned by **Jason Sherwood** and second by **Liz Bouchard**. Next meeting to be determined by the Chair – most likely February 2022.

Terry Dunn
Chair

Ray Wilcock
Executive Director