

1:00 P.M. Thursday November 29th, 2018 – Kitchener Holiday Inn

Present:

Kevin Williams (Chair)	Atlantic	Derek Niezen	Ironside
Jason Sherwood	Atlantic	Mike Mounts	Valfilm
Nick Spence	Atlantic	Marc Warden	Hubbell
Riley Wilson	Atlantic	Byron Nelson	Leland
Randy McDonald	Atlantic	Kamran Derayeh	ArcelorMittal
Scott MacRae	Armtec C.C.	Dave Watson	Leland
Heba Ahmed	Armtec C.C.	Jim Evans	AK Steel
Bruce Matheson	Frontier	Ray Wilcock	CSPI
Ian Berry	Warner		

Absent:

Phil Carroll	Atlantic	Mike McGough	NCSPA
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Guests:

Dave Newbigging	AMD	Robert Cichocki	Queen's
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1. Welcome and Opening Remarks

Kevin Williams opened the meeting at 1:00 p.m. and welcomed everyone. Go-to-meeting was not used for this meeting. Attendance was taken and is recorded above.

2. Review Minutes from October 19th, 2018

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

3. Outstanding Items to Complete

a) Bolt & Nut Research

MTQ acceptance request update

Schedule a meeting with the Deputy Minister (Ann-Marie Leclerc) in the 1st Q of 2019. Stephan Martineau (AIL) and Tony Tekly (Armtec Canada Culvert) to be included.

b) Rehabilitation Gap Analysis Literature Review

Robert Cichocki from Queen's University under the direction of Dr. Ian Moore gave an update to the committee.

The end date for this project is January 15, 2019. The objective was threefold:

1. Knowledge of deterioration of CSP & SPCS - completed
2. Summary of CSP deterioration causes - completed
3. Determine best practices & techniques for rehabilitation – next step

The 3 factors of deterioration discussed were corrosion, abrasion & soil corrosion. The number 1 issue Robert pointed out was erosion of soil or material being the lead cause of deterioration. During his meeting with MTO in St. Catharines (Tony Merlo & Walter Kennedy), apparently MTO stated with steel they are looking for a maintenance free design based upon past history. They stated that RCP is used more widely than steel due to corrosion issues. Robert displayed a graph of all the structures per year of installation in Ontario, that were colour coded due to their condition. Many in the 1960 – 2000 time frame require rehabilitation.

Scott pointed out that the gauges required from 1960 to 2000, were much thinner than what is required today and that different coatings introduced in the 1990's and 2000's were not available back then. Life span was never looked at or considered. He asked if anyone knew when OPSS specification changed to consider life span?

A question was raised as to why the MTO has different criteria for buried bridges to traditional bridges? Is it due to "out of site, out of mind"? The public does not see buried bridges or culverts.

A suggestion was made to look at a study with railways. Future project?

c) MTO – Structural Plate Standards Advancement

- Will follow up each quarter with Tony Merlo.

d) Municipalities Standards Submission:

Four municipality applications have been completed. The remaining six will be completed by the end of the year.

e) Galvalume – outstanding issues

Kamran gave an update on the Elzly white paper. The outstanding item is predicting life of Galvalume in order to include this material in technical bulletin #1. The electrochemical testing protocol was sent to Pete Ault for review. Once comments are received from Pete, a task group (Kevin, Randy & Scott) will review and sign off on the test protocol by the end of the year. The tests will then proceed at AMD. Kamran stated the sample will be AZ150 instead of AZ210. Ray will arrange to obtain a water sample from Algonquin Park, weather

dependent. Kamran asked the committee to move quickly on making decisions and following up.

f) OPSS 1801 Update

Ray sent updates to the OPSS committee on September 12th which included edit clarifications and CSPI CSA certification bulletins 18 & 19. Committee is expected to respond by the end of the year.

g) Sustainability (EPD), technical bulletin 8

Ray gave an update from his meeting with Stan Lipkowski & Keith Killpack of SCS Global with regards to the comparison of CSP to Concrete:

1. In order to compare EPD's, they have to be built using the same rules
2. Comparison of steel versus concrete would involve the performance of the product (cradle to grave)
3. LCA reviews can only be done if rules are the same
4. Concrete used Simapro software, CSPI used Gabi software.
5. Cost would be \$10,000 US for a life cycle critical assessment under ISO 14044
6. The data verification and slag (system expansion approach for steel and the cut-off approach for concrete creates a comparability issue and possibly double-counting benefits of the slag cement) are issues that have to be resolved before we can proceed.
7. Stan asked Keith if modeling could be done in Excel, using an equivalency factor for the data. Keith responded that the issues in 6 would need to be resolved before proceeding.
8. Stan to follow up with Thinkstep (European) and the Athena Institute to attempt to resolve these issues.
9. Next meeting is December 11th, AISI Sustainability meeting

[Kevin & Randy to review Technical Bulletin #8 by year end for publication in January 2019.](#)

4. Long Term Items

a) ASTM A742 ballot

Mike Mounts gave the following update:

1. Abrasion testing methods need to be updated in 2019
2. Salt spray inclusion (1,000 hrs) in the near future

b) Thermopolymer plate in brackish/salt water – Quebec site update

There are three sites requiring a review (1 in BC, PQ & NS). MTQ are extremely interested in these sites as this is their number one concern.

Ray visited the Quebec site and brought a sample to the meeting. Ian believes that the one side was hit by abrasion. He has taken the sample back to his lab for testing. Will be tabled

at the next meeting. Phil agreed to visit the BC site with Ray next spring and will supply the canoe. NS site visit planned for summer of 2019.

c) Bolt & Nut Research – Higher abrasion resistant coatings (Leland lead)

Byron discussed the spinning bolt issue that Phil brought up at our last meeting. He suggested a different socket head that the manufacturers should try on future NZF3000 installations. Dave Watson asked if he could attend a future site installation. Riley offered to have Dave visit the Ayr plant where they could do some tests.

5. Ongoing Items

a) Kleskun Hills report – August 2018 site visit

Committee approved the 2018 report which can now be submitted to Alberta Transportation.

➤ [Next site visit in August 2019](#)

b) ASTM

One standard up for review is the Life Cycle Costing which Jesse Beaver is leading. Ray will participate on the sub committee and coordinate this with the BC Coquihalla study.

c) NCSPA

Ray & Jason attended their TAC meeting on November 7th in Washington DC. They intend to proceed with a polymer coated (65% liquid zinc) plate specification based upon Pete Ault's report. Bolts to be included are Leland's NZF3000 and dipped spun.

A great deal of discussion took place on plant certification comparing the NTPEP program and NCSPA's program. Members agreed to move forward with the NCSPA program and start conversations with a number of states that require certification. There is no impact on our CSA G401 certification program.

A sub committee made up of Scott, Randy, Kevin, Heba, Ian, Byron, Dave & Ray will convene in January 2019 to discuss the pending ASTM specification for polymer coated plate and bolts. Ian was asked to give a reader's digest of CSA versus Pete Ault's report at this future call.

Ian stated that he is looking at alternative materials to improve on polymer. These will be discussed in January.

d) TRB

Kevin reported that the culvert inspection guide should be out soon.

e) CSA G401 revisions

Initial meeting held on November 16th. Attendees included Kevin, Jason, S Aransh (AIL), Heba, Scott, Bruce, Byron and Ray. Over 36 updates were discussed. The master word document was sent to the entire TAC committee. Next meeting is scheduled for December 20th.

f) AREMA

Nothing to report.

g) CSCC (Canadian Steel Construction Council)

Tariffs and EPD's were discussed at the last board meeting on October 31st. The next step for some in the buildings area is Health Product Declarations.

h) AISI 2019 Projects Submission update

1. Polymer Laminated Steel	10,000
2. CSA Certification Programs	10,000
3. University Outreach Program	5,000
4. Galvalume Project	5,000
5. Floodnet	1,000
6. Municipal Standards Project	5,000
7. CSA G401 update for 2020	10,000
8. Rehabilitation Technical Bulletin	5,000
9. EPD – Benchmarking	5,000
10. Elimination of Rerolled Ends	5,000
11. Life cycle comparison - BC	5,000

Total **\$66,000**

Decision will be forthcoming by the end of the year.

6. Discussion / New Business

1. Calculators on the website (from last meeting): Nick & Ray to work on this.
2. LCC project - Coquihalla Highway comparing buried bridges versus traditional. Ray to set up conference call with BCMOT as there has been a change in players with recent retirements.

3. MTO Kingston – Polymer laminated site (installed in 2017), where pipes were showing rust stain. Ray visited the site on November 17th. Stain easily removed using scotch brite pads. Water chemistry tests showed heavy chloride results. Report discussed at TAC meeting. Will release to MTO once lab tests are completed by Jim.
4. Bruce brought up an issue with regards to Alberta Transportation. AT performs bridge inspections on all culverts / bridges >1500mm. The system does not appear to be uniform or standard and reports are not shared with manufacturers. Ray will discuss with AT during his next trip to Alberta, most likely in March 2019.
5. Scott suggested that TAC tackle an update of the Handbook after work on CSA G401 is completed.
6. Bruce suggested we go to the colour Gray for all polymer laminated material as Black shows everything. Mike stated that in order to make a change 20 to 30 thousand lbs. would have to be run. Ray will take this up with Mike McGough to determine if the NCSPA is contemplating a change in colour to make it worthwhile.

7. Adjourn & Next Meeting

The meeting was adjourned at **3:32pm**. Next meeting at the call of the chair.

Secretary
Ray Wilcock