

**CORRUGATED STEEL PIPE INSTITUTE  
TECHNICAL ADVISORY COMMITTEE  
Memorandum of Meeting**

8:30 A.M. Tuesday December 1<sup>st</sup>, 2015 – Kitchener, Ontario

**Present:**

Kevin Williams (Chair)	Atlantic	Jason Sherwood	Atlantic
Bruce Matheson	Frontier	Byron Nelson	Leland
Dave Watson	Leland	Chris Groot	ES Hubbell
Randy McDonald	Armtec	Mike Mounts	Valfilm
Kamran Derayeh	ArcelorMittal	Dave Penny	CSPI
Ian Berry	Warner	Ray Wilcock	CSPI
Lyndsay Dokas	Armtec		

**Absent:**

Jim Evans	AK Steel	Shane Setter	Ironside
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**Guests:**

Stephen MacKinnon	Atlantic	Janine Yetke	Armtec
John Tran	AMD	Doug Lowry	Armtec
Mike McGough	NCSPA	Nick Spence	Atlantic

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**1. Welcome and Opening Remarks**

Kevin Williams opened the meeting at 8:30am. Go-To-Meeting was not used for this meeting. Attendance was taken and is recorded above.

**2. Review Minutes from June 15<sup>th</sup>, 2015**

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

**3. DOT's**

**a) MTO Design Build Guidelines**

The first tender came out this past fall. Ray will follow up once Maria Bianchin (MTO) returns to work to continue discussion with regards to revising the specification down the road.

**b) Bolts & Nut Research – MTQ**

MTQ have instituted new guidelines when submitting bolts for testing. Testing is expected to start on the new 4 Leland bolts as well as those submitted by Atlantic in January 2016.

**c) CSP Manufacturing Protocol Update**

Chris asked if material producers were taking steps to improve coatings. Mike stated that Valfilm is in the early stages towards improving the polymer laminate coating. As for Aluminized Type II, Jim was not present to respond.

**Action: Update the CSA (original) Protocol to reflect the changes in CSA G401-14 and insert a clause that it is CSPI property for members only. The update will also include the polymer laminate tech bulletin currently in draft form and rerolled end manufacturing repairs.**

**d) Regional Updates**

Region	CSP Protocol	Structural Plate Protocol	Comments
Newfoundland	Presentation made on August 11 <sup>th</sup>	Submitted Polymer Plate Spec.	Follow up in 2016 with Doug Power and John Morrissey
PEI			Spoke with Darrell Evans at TAC in Sept. Follow up in 2016
Nova Scotia	Presentation made on August 12 <sup>th</sup>		Changes Specs every 2 years. Download section 12 and send changes in 1 <sup>st</sup> Q 2016 to Will Crocker
New Brunswick			Attempted a number of times through Rob Simpson. Work through Armtec & AIL in 2016
Quebec	Using 2007 with no CSPI reference. Asked question about polymer laminated in the North – freeze issues	Presentation made on Sept 14 <sup>th</sup>	Follow up in 2016 with Gerard Desgagne – sent him OGPDG
Ontario	Using 2007 with no CSPI reference.	Using 2014 with CSPI reference. Target Tony Merlo for all	Discussions underway with Art Groenveld

		structural plate specifications.	
Manitoba	Presentation made on Sept 22 <sup>nd</sup>		Follow up with Ruth Eden in 2016
Saskatchewan	Presentation on Sept 21 <sup>st</sup> . Polymer laminated edges – issue?	Height of Cover Tables need updating – download from Website	Meet with Doug Ross in 2016 – site visits, water testing, certification for 2016
Alberta	Presentation on August 4 <sup>th</sup> and Kleskun Hills visit		Follow up meeting with Des Williamson on Dec 15 <sup>th</sup> in Edmonton. Positive to certification
B.C.	Presentation on August 7 <sup>th</sup> . Very positive towards updating specifications and certification program.		Updated section 320 & 303 and submitted in September. Followed with Yasser Abdelghany in November. Will continue to follow up. Phil Carroll pushing from member's end.

**Action: Stephen suggested a matrix which includes all materials (concrete & HDPE). Start research on Provincial specs and target June 2016.**

#### **4. Polymer Laminated Research Project – Alberta Trans**

2<sup>nd</sup> year report was issued to the committee. Conclusions were as follows:

- The only repair which performed good to excellent was the Denso Tape.
- Where the tape did not hold, it would appear that it was due to taping a non-clean surface. As was described in the initial report, it is imperative that the surface is prepared and grit, dirt and water is removed. From the 2014 report, the tape stuck best if it sat in the sun to warm, then immediately applied to the seam.
- If we decide to do future repairs, we need to have a generator and vacuum cleaner available to better clean the metal surfaces before repairing them

Visits with BCMOT, MTQ & MTO, revealed the perception of delamination issues at the seams. When asked if these were new installations or old, they did not know. Perception or reality, nevertheless perception exists in many provinces.

Technical Bulletin on best practices was sent to the committee for review. Once signed off, it will be released in the members section of the website.

**Action: Give a copy to Joe Filice once the committee has signed off. Ensure that the report states it is confidential and is between CSPI & Alta Trans. Put a positive spin on it and report that seams not repaired are performing OK. Report on A44 as Joe performed this repair.**

**Include material and coating spec (ASTM A742) in the Tech Bulletin under material / coater section.**

## **5. Steel Drainage Handbook Update**

No change from last meeting. This has been pushed back to the spring of 2016.

## **6. Transportation Research Board**

- Webinar on design of buried bridges: scheduled for early 2016. The actual date has not yet been scheduled. It will include concrete and Bridge in a Backpack.
- Summary of NCHRP ongoing projects for reference

Active NCHRP Project Updates

Project	Name	PI / Agency	Status
15-54	Load Rating of Culverts	Contract is in negotiation	
14-19	Culvert rehabilitation to maximize service life while minimizing direct costs & traffic disruption	Erez Allouche / La. Tech	Ph III report is pending
14-26	Culvert & storm drain inspection manual	Jesse Beaver / SGH	Ph IV underway – <a href="#">mid 2016</a>
4-39	Field performance of corrugated pipe manufactured with recycled polyethylene content	Michael Plummer / subcontract to TRI	Work is in progress
20-05 (45-01)	Synthesis – service life of culverts	Michael Maher / Golder Associates	<a href="#">Publication in Feb 2015 – similar to OGPDG</a>
20-07 (347)	Test methods for water tightness of joints (10 mins / 10 PSI) – driven by state DOT's	Ian Moore / Queens University	Completion 02/27/15 – <a href="#">testing on Dec 8<sup>th</sup>, 2015</a>

Dave mentioned that MTO may revisit this is OGPDG. Ray will talk with Art and continue to promote silt tight and soil tight.

## **7. ASTM / NCSPA Update**

There was attendance at the ASTM fall meeting in Tampa in November. Details were as follows:

ASTM A761 – AIL flange ballot was passed.

Randy stated that Armtec will be undergoing testing on deep corrugated structural plate. Randy, Ray & Kevin attended part of the NCSPA meetings which were held that same week. Mike McGough stated that they will be moving forward on testing polymer coated structural plate using the CSPI protocol.

## **8. Fish Ladder MTO Project – Dave**

Dave gave an overview of the MTO project currently being installed in the Southampton area. This is a half round structural polymer coated plate with the newly designed baffles inside a jack & bore steel pipe. This project has been a joint effort among CSPI, MTO, First Nations and many others. He showed pictures that were taken the previous day. This is a high profile project that if successful with fish spawning in the spring, will be pitted against the existing DFO specification. A paper is being submitted to CSCE (Canadian Society of Civil Engineers) for their conference in London this spring by the consultant. Doug suggested that a paper be presented at TAC. This will be considered in due course.

## **9. Discussion / New Business**

### **a) AREMA (American Railway Engineering & Maintenance of Way Association)**

Phil Carroll is a member and has agreed to update CSPI on any issues arising from that association.

### **b) CSCC (Canadian Steel Construction Council)**

Ray attended two board meeting as well as the marketing committee meeting. Although discussion pertains to building construction, the discussion pertaining to marketing against concrete and wood threats pertains to CSPI and ideas may emanate that we can use. Next meeting is scheduled for January 8<sup>th</sup>.

### **c) Ontario Gravity Pipe Design Guidelines Webinar**

Ray visited Art Groenveld in MTO in July. He is still recuperating from back surgery and has agreed to do the webinar in December / January time frame. Date needs to be firmed up and communicated. This will most likely be late January.

### **d) Ideas for new Technical Bulletins**

- 1) Rehabilitation of inverts using half round structural plate
- 2) Bolts – once the research is complete

### **e) Research Projects**

For future considerations:

- 1) Elimination of rerolled ends
- 2) Aluminized Type II – ends splitting – Chris suggested that all CSPI members work as a team on this one. Kevin suggested that due to being in the busy season for all, to keep this in the minutes for fall review.
- 3) Yukon – CSP in permafrost. Seams are being welded to prevent splitting. We need a better understanding of permafrost to be able to come up with a recommendation for the north. Resources to call on are Phil and Ellery Chornopyski who have experience in these conditions.
- 4) Alternative Polymer Coated Plate – monitor what NCSPA is doing

### **f) New Business**

- Winter construction risks guideline  
High priority

- Water resistance (membranes & seam sealants) technical bulletin  
High priority
- Field inspection (build on NCSPA & NCHRP)
- Invert relines guideline  
Medium priority
- Buried Bridge guideline  
High priority, TRB discussion, designable from the bridge code
- Polymer laminated repair guideline  
Will emanate from the research project with Alta Trans

#### **10. Adjourn & Next Meeting**

The meeting was adjourned at 10:34a.m. Next meeting scheduled TBD (beginning of February at the Cambridge office.

Secretary  
Ray Wilcock