

STAC Engineering Guidelines & Practices Committee Meeting

Meeting: May 19, 2017– 11:30 a.m.-12:30 p.m. EDT



Structure, Tower &
Antenna Council
Conseil des structures,
pylônes et antennes

Next Meeting: July 21, 2017 [TIME TBD]

DIAL IN INFO: Toll-free: 1-866-234-0247; Local (Toronto): 416-443-4589

Conference ID: 612392

Action Items:

- Nick to confirm STAC Steering Committee's approval to distribute Pinwheel Fall Arrest: Current and Best Practices document

Attendees:

- Nick Kyonka (STAC)
- Jonathan Walsh (TEI)
- Alex Williams (P-Sec)
- Asma Arefeen (Rogers)
- Blair Bittner (WesTower)
- Cesar Galzev (Telecon)
- Christian Dulude (CIMA+)
- Dany Toulouse (Pinargon)
- Emad Eltowwi (Rogers)
- Gordon Lyman (eSystem Training)
- Gurm Brar (Rogers)
- Hany Danial (Rogers)
- Hugh Heaton (CCI)
- Iain Harrison (P-Sec)
- Leo Helmer (WesTower)
- Luc Dancause (Stantec)
- Marco Di Franco (WSP)
- Marina Guerra (Bell)
- Mirjana Lukac (Telecon)
- Philippe Pinel (Pinargon)
- Shane Hartlen (WSP)
- Simon Weisman (Guymast)
- Sylvie Fortin (Videotron)
- Tessa Dutra (Trylon)

Meeting Notes:

1. STAC 2018 Presentations

- Nick says STAC 2017 presentations are up on the website, and include the following engineering related presentations:
 - STAC 2017 – Tower Reinforcing Considerations – Jonathan Walsh (TEI) and Serge Arseneault (WSP)
 - STAC 2017 – Guy Anchor Corrosion – Craig Snyder and Bart Roberts – AnchorGuard
 - STAC 2017 – Grounding Systems for Towers and Shelters – William Graham – Grounded Connections
 - STAC 2017 – Tower Engineering Fundamentals – Simon Weisman – Guymast
 - STAC 2017 – Tower Engineering Fundamentals – Kurt Penfold – Trylon
 - STAC 2017 – Evolution of Engineering Tools and the Tower Market – Pascal Texier – Stantec
 - STAC 2017 – Evolution of Engineering Tools and the Tower Market – Martin Piercey – P-Sec
 - STAC 2017 – Site-Specific Wind Load Calculations – Ka-Hing Yau and Phil Jarrett – Environment and Climate Change Canada
 - STAC 2017 – Site-Specific Wind Load Calculations – Simon Weisman – Guymast
 - STAC 2017 – Guy Wire Tensioning – Trevor Bolt – Varcon
 - STAC 2017 – Guy Wire Tensioning – Gregory Gasbarre – Titan AEX
- Nick notes that presentations are available on the STAC 2017 Presentations page of the STAC Members website or on the Engineering Committee page under “Resources”
 - Reminds all that he can provide them with access to the website if they don't already have access or forget their password

2. Anchor Shaft Corrosion Project Update

- STAC Anchor Shaft Corrosion Project team made some pretty big decisions at our May 5 meeting, and decided to add two additional documents to our project list



- a. Basic Corrosion Backgrounder
 - This would be a two-page document that would provide information on corrosion protection for site owners
 - Proposed index includes items relating to:
 1. Need for dig-to-block inspection for high-risk towers
 2. Different types of metals and how they affect corrosivity
 3. Different types of soils and how they affect corrosivity
 4. Stray currents
 5. Steel lost due to corrosion
 6. Anode measurements
 7. Identifying high-risk towers
 8. How to minimize risk
 - Intention is to provide a quick reference for people designing sites to make sure they are considering all of the necessary factors
- b. What's Going on Below Grade
 - This document will speak to issue that what happens below the surface is not always the same as what's happening to the visual portion of an anchor shaft above grade
 - Expected that this document will provide basic info for site owners and contractors
 - Proposed index includes items relating to:
 1. Steel lost due to corrosion
 2. Misconceptions
 3. Number + type + size of anodes needed
 4. Importance of measuring and monitoring
 5. Where to place an anode
 6. Dig-to-block
- These newly proposed documents are in addition to other documents we had already identified, including Soil Corrosion (which is pretty much finalized) and Best Practices for Anchor Shaft Inspections
 - Project team will work to develop these documents through regular meetings every third week
 - Soil Corrosion project ready for publication when project team is ready to publish it
- Nick notes that NATE also released a new Safe to Climb Protocol to compliment the Anchor Inspection Standard, both of which will help the STAC project team as we are developing our own similar documents
 - Nick says he has been told that NATE is also working on a video this subject
 - Nick has been asked to speak to Todd to see how they are positioning this procedure: is it a firm requirement that all members should be following at all times and situations?
 - Hopes to do so in the weeks ahead
 - Committee member says they believe it will be a guideline, not a strict requirement, and is designed to bring attention to the issue
- STAC's project team also working on promoting the issue of corrosion awareness
 - STAC has been Tweeting about the issue and will be Tweeting videos from AnchorGuard in the weeks ahead (plus the NATE video when available)
- Nick notes that he has also heard discussion of a potential tower failure in Western Canada that may have been caused by an anchor shaft corrosion problem, and will attempt to get solid information about this incident to report to STAC's membership



3. Pinwheel Fall Arrest Project Update

- Nick says this document has been updated and should be pretty much ready to publish at long last
 - Nick thanks those from this committee who provided feedback on this document, and Brent Hrywkiw (Stantec) in particular for his diligent review
 - Nick will get Steering Committee approval to post it to the website and send out to this committee
- Nick thanks Gordon and Clay for all of the work they have put into this document, and reminds all that the document's intent is to help tower engineers understand how workers are using pinwheels for fall arrest

4. U-Bolt Project Update

- Iain says TIA 222 committee had developed formulas for U-bolt specifications that will be issued in the upcoming revision and CSA S37 committee is expecting to build on those formulas and incorporate them into the Canadian standard
 - Says the 222 formulas are in the draft revision of S37, though some of the resistance factors and wording must still be tweaked
 - Iain says he can distribute these formulas to the U-bolt project team for a meeting to play around with the formulas and to potentially come up with a best practices document
 - May need to specify torque values to get the right tension in the bolts
 - Will likely depend on strength and size of U-bolt and application
 - Iain would like to test out the formulas on a few existing applications: rotatable pinwheels, face mounts and t-booms
 - Iain says he has not yet played around with these formulas to see how they affect current applications
 - Notes that he would like to get data from 222 committee to see how they developed these formulas

5. Concrete Foundation Corrosion Project Update

- Nick notes that he was asked to look into the issue of weathering of concrete foundations and paint on towers that is potentially caused by fertilizer: said he has identified four potential organizations that might be able to help
 - a. Fertilizer Canada
 - b. CFIA
 - c. Chemical Industry Association of Canada
 - d. Chemical Institute of Canada
- Nick contacted Fertilizer Canada but has not yet heard back from them
 - Will try again this afternoon and will follow up with other organizations if no response by next week
 - UPDATE: Nick spoke with Fertilizer Canada which is looking into this issue for STAC but which did not have a firm timeline for when to expect to hear back from them
- Nick notes that he has heard anecdotal evidence from others about this issue as well since it was first discussed on the last Engineering Committee meeting

6. Other business

- Marina says she is meeting with CSA S37 Task Group Chairs in two weeks and will let Nick know if the committee requires anything else from STAC immediately