

STAC Engineering Guidelines & Practices Committee Meeting

Meeting: March 17, 2017– 11:30 a.m.-12:30 p.m. EDT



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

Next Meeting: Friday, May 19, 2017 – 1:30 p.m. EDT

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

Conference ID: 612392

WebEx Address: <https://cwta.webex.com/cwta/j.php?MTID=me29b5717201c8b55145eb3c652c26577>

Action Items:

- Nick to send out Pinwheel Fall Arrest document to project team and to ask for team to review in advance of meeting during the week of April 3
 - Trevor to share Pinwheel Fall Arrest document with CSA S37 task group
- Anchor Shaft Corrosion project team to add to inspection document that crews should contact site owner to confirm whether there has been a recent anchor shaft corrosion inspection, and to require that they receive site owner approval before beginning a surface inspection down to 24 inches
- Nick to identify and reach out to industry associations that may be able to help identify any fertilizers that may be known to cause concrete or paint corrosion/weathering
- Nick to email Iain Harrison to discuss U-bolt priorities and to email Kurt Penfold to discuss wind load calculations priorities for S37

Attendees:

- Nick Kyonka (STAC)
- Jonathan Walsh (TEI)
- Alex Talmacean (Triginex)
- Asma Arefeen (Rogers)
- Blair Bittner (WesTower)
- Brent Hrywkiw (Stantec)
- Cesar Galvez (Telecon)
- Christian Dulude (CIMA+)
- Clay Parchewsky (WesTower)
- Dany Toulouse (Pinargon)
- Emad Eltowwi (Rogers)
- Gregory Gasbarre (Titan AEX)
- Gordon Lyman (eSystem Training)
- Gurm Brar (Rogers)
- Iain Harrison (P-Sec)
- Ian Panagapka (Rigarus)
- Jerome Isabelle (CIMA+)
- Jodi Ali (Bell)
- John Jupin (Bell MTS)
- Keith Ranney (Bell)
- Kurt Penfold (Trylon)
- Lindsay Tomalik (Tridon)
- Luc Dancause (Stantec)
- Marco Di Franco (WSP)
- Marina Guerra (Bell)
- Mike Morgan (P-Sec)
- Mirjana Lukic (Telecon)
- Philippe Pinel (Pinargon)
- Sara VanderVies (WesTower)
- Serge Arseneault (WSP)
- Sylvie Fortin (Videotron)
- Trevor Bolt (Varcon)

Meeting Notes:

- Nick opens meeting by noting that this will be the end-of-year review after the committee launched last March
1. **Review of committee projects**
 - a. **Pinwheel Fall Arrest Guidelines**
 - Completed the document the project team had requested but have not yet held a follow-up meeting
 - Nick asks whether we should be posting this document to the members website so that is available to everyone; asks whether we should schedule another meeting of the project team to discuss this document and next steps

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- Committee member asks what the purpose of posting it would be
 - Nick says this document shows current practices of where crews tie-off to towers and pinwheels; would be informative to engineers
- Committee members says it would be useful to see if the engineers on the project team have any questions about the document
 - Jonathan asks Nick to send document around to the project team and to say we are planning on releasing it, and to provide a timeline to gain feedback from the project team
 - Nick asks what an appropriate timeline would be
 - Jonathan says we should have the call the week after the conference
 - Nick to send out Pinwheel Fall Arrest document to project team and to ask for team to review in advance of meeting during the week of April 3
- Trevor asks if it is OK for him to share the document with the CSA S37 task group
 - Nick says he thinks this is a good idea unless Gordon or Clay have any opposition
 - Gordon says he has no concerns and agrees that it should be provided to them
 - Trevor to share Pinwheel Fall Arrest document with CSA S37 task group
 - Nick notes that Trevor can tell people to contact him directly if they have any questions about the document
- Trevor notes that the CSA task group did receive a more detailed response from the Government of Canada with regards to where the 17.8 kN requirement came from
 - Says the government said this decision was derived in the early 1980s, largely based on provincial requirements in Nova Scotia (which had 17.8 kN) and B.C. (which had 22 kN)
 - Says the government said it would provide this information in writing but hasn't done so yet
 - Committee member says this still doesn't explain the math behind why that number is being used
 - Trevor agrees: notes that this is more information than has been received through requests before when the government essentially said they had no records of why that threshold was used
 - Says it would be interesting to see when those provinces imposed those requirements and why
 - Nick says he can try to look into this as well in late April or May
 - Trevor to send Nick contact information for government contact

b. Anchor Shaft Corrosion

- Are still looking at developing a document or two outlining procedures for ensuring safety of anchor shafts
 - Project hit a roadblock on the last call, due to concerns about whether we wanted to prescribe a need to inspect 24 inches of each shaft before climbing a guy tower, as is prescribed in the Crown Castle and draft NATE documents the project has been working off of

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- Have agreed that any documentation needs to make sure that dig-to-block inspections must be under the supervision of a qualified engineer
- Must now figure out whether we want to call for 24-inch surface inspections of all guy towers that have not been inspected recently
 - Project team member notes that at least one large carrier has an ongoing anchor inspection program through which they are completing surface inspections on a cycle
 - Also testing soil resistivity
 - Notes they don't want to add this as a scope to every contractor who goes to a tower: recommends that the contractors instead check with carrier to see when last surface inspection was completed and make decisions from there
 - Would want carriers to authorize surface inspections on a case-by-case basis
 - Second committee member agrees that requiring surface inspections in all cases may be overkill, says you can usually see rust near the surface: not 24 inches down
 - Nick says the guys from AnchorGuard who will be presenting at the STAC conference will show images of anchor shafts that showed no signs of corrosion until further down
 - Gordon asks if there is a study that shows soil resistivity in different areas of Canada; asks whether there is anything in S37 on anchorage protection
 - Marina says there is only minimal detail in S37 on anchor shaft protection, but doesn't say how they must be inspected
 - Nick notes there is a link to the [National Soil Database](#) through this [committee's page](#) on the STAC Members website; says this shows a high-level overview of the different soils in different regions of Canada, and these can be compared to known resistivity rates
- STAC Steering Committee has also asked Nick to have a third-party expert review a document put together by a corrosion engineer on the project team
 - Does anyone on this committee have a background in corrosion engineering and the ability to review a three-page document today or over the weekend or know of anyone else who might be able to do so?
 - Gordon says he knows a couple engineers in the U.S. who might be able to review the document
 - Jody Ali says he can ask someone at Englobe, which acquired LVM, to look at the document
 - Nick to send document to both Gordon and Jody to pass along to have reviewed by a second corrosion engineer



c. U-Bolt Failure

- Nick received U-bolt surveys from a number of contractors and carriers, but hasn't yet had a chance to aggregate the data
- Intention is to come up with recommended manufacturing specifications for U-bolts used in the industry
- Following the last call, Nick did receive some indication that one or more members of this committee would also like to see us develop a best practice document relating to U-bolt installation
 - Nick would like to ask the Workplace Health and Safety Committee to help with this
 - There has also been talk of potentially connecting with a lab that could help us test out U-bolt installation practices to determine ideal torquing, among other things
 - Did not receive any suggestions for labs that may be able to assist with this though, and cost may be prohibitive

d. Concrete Foundation Corrosion

- Marco DiFranco from WSP shared a [presentation](#) he put together on Concrete Foundation repair, which has now been posted to the Engineering Committee page on the STAC Members website
 - Nick says he would like to know if anyone has any specific issues they would like to see STAC address through this project:
 - Are we just looking for information on the retrofitting process?
 - Trying to identify which sites might be prone to excessive foundation corrosion?
 - Steps installers can take to ensure foundations are less likely to corrode?
 - Committee member says they encountered a situation where a concrete foundation appeared to have been weathered by some sort of chemical, likely a fertilizer, but could never figure out which fertilizer
 - General agreement that this issue would be worth studying
 - Nick to identify and reach out to industry associations that may be able to help
 - UPDATE: Nick has identified a few groups that may be able to help and is reaching out to them next week, including: [Fertilizer Canada](#), [Chemical Institute of Canada](#) and [Canada Food Inspection Agency](#)
 - Will ask if they know of any fertilizers or types of fertilizers that are known to weather/corrode either concrete or paint
 - Jonathan says fertilizers that use sulphur compounds may be the issue

2. Review of other related activities

a. Wind Load Calculations

- Nick says STAC is still working with ECCC, getting them to come out to the conference to speak about their formulas and where their service may go in the future
 - Simon and Boris Weisman will also present on that panel, and have offered to provide a follow-up webinar on site-specific wind load calculations if members of this committee think it would be of value
 - Nick to gauge interest in webinar in April/May timeframe

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b. Research Requests

- Nick notes that STAC has not received a great deal of research reports that he can share, but notes that the invitation to send them along still stands

3. Identification of potential future projects

- Nick asks if there are any additional issues that STAC should be looking at in the year ahead
 - No issues raised
 - Nick notes that he is always willing to take suggestions for different issues to address as they come up

4. Planning and priorities for 2017

- Nick asks for thoughts on this committee's priorities for this year
 - Notes that one objective includes the completion of the Pinwheel Fall Arrest document
 - Another is to continue to support S37 committee as need be
 - Marina notes that final draft of revision is committed for September, 2017
 - Says other projects that could be prioritized to benefit the S37 committee is the U-bolt fatigue project and wind load calculations
 - Nick asks what specifically would be useful from the U-bolt project
 - Marina says S37 committee is looking into the design of U-bolts mainly, but other items may also be of interest
 - Nick to email Iain Harrison to discuss u-bolt priorities and Kurt Penfold to discuss wind load calculations priorities for S37
 - Marina says she may have additional details on what STAC can do to help after the March 28 meeting of the S37 committee
 - Nick asks whether there are any concerns with STAC prioritizing S37 support over other potential items
 - General agreement
 - Nick notes that anyone who is not currently involved in any of the projects should email him to request to be added to that project's team list
- Nick asks, if this committee was going to spend money on something, what would it be?
 - General agreement that lab tests are not feasible due to costs, and that priority should be development of educational materials
 - Marina notes that there may be some possibility for STAC to support some wind load testing