



**MINUTES OF THE
THIRD ELECTRICAL SUB-COUNCIL MEETING OF 2021**

DATE: June 7, 2021

TIME: 8:31 a.m. to 11:18 a.m.

LOCATION: Videoconference

PRESENT: **Sub-Council Members**
Gerry Wiles, Chair
Scott Basinger, Vice Chair – North
Patrick Conway
Bert DeBruin (arrived at 9:05)
Hussein Desouki
Gerry Doan
Tim Driscoll
Ken Forbes
Adam Ghani
Todd Grayson
Glenn Hedderick, Vice Chair – South
Ken Hood
Nicolas Leblanc
Tyler Masson
Lori Monaghan
Ed Knaggs

Safety Codes Council
Allison Karch, Kathryn Derkach

Alberta Municipal Affairs
Clarence Cormier, Bob Hall

REGRETS: Brian Townsend, John Briegel, Barry Voogd

RECORDER: Allison Karch

2021 MEETINGS: October 4, December 6

1. Meeting Opening

The Chair called the meeting to order at 8:31 a.m. and reminded members that their primary duty is to act in the interest of safety in the built environment for all Albertans.

1.1 Agenda Adoption

Todd Grayson / Scott Basinger moved that the agenda be adopted, as circulated; CARRIED

1.2 Adoption of the April 12, 2021 Minutes

Gerry Doan / Ed Knaggs moved to adopt the minutes of the April 12, 2021 meeting, as circulated; CARRIED

2. Matters for Decision

2.1. Proposed Provincial Variance on 18-150 2)

The proposed content for this STANDATA that was provided to Municipal Affairs was viewed on screen. It was reported that this wording is exactly what will be incorporated into the 2024 CE Code and that Municipal Affairs is currently working with this content to create a draft Provincial Variance STANDATA. [Hall]

A member reported that he has been in discussions with Tim Pope at CSA on this topic and there is a desire for consistency across the country. It was requested that once the STANDATA is published, it be sent to Tim Pope so he can refer to it in communications with other jurisdictions. [Cormier]

A member raised concerns about Piezo crystals and their ignition potential when impacted. It was noted that C22.2 No 60079-0 and -11 have requirements that speak to this and questioned whether the CSA Section 18 Technical Committee took these into account. It was clarified that would be considered an abnormal situation which would not be considered.

A discussion was held about the review of STANDATA that need to be updated to align with the new code. The CE Code Review Working Group Chair suggested that in addition to their regular code review, the working group can also review the STANDATA and flag any issues to bring forward to ESC.

As a draft of the STANDATA from Municipal Affairs is not yet ready for the sub-council, no motion is needed at this time. The draft will be reviewed at the next meeting.

[Hall/Council Administration]

2.2. Lightning Protection Systems STANDATA

The draft Building/Electrical Joint Interpretation STANDATA was viewed on screen. The BSC has already reviewed and noted their support of this STANDATA.

A question was asked regarding re-training for electrical safety codes officers on these systems. It was clarified that there is no decision on that yet and that once the STANDATA is in force the need for training can be considered.

Scott Basinger / Glenn Hedderick moved to support the Lighting Protection Systems Joint STANDATA; CARRIED.

3. Review Matters Arising/Action List

	Item	Action	Date Initiated	Responsible	Status/Update
1.	CE Code-072 – Concrete Encasements	Consider drafting a Proposed Change to CE Code Part 1 UPDATE: Scott is working on a proposed change for the next code cycle (2024). This will be brought to the sub-council at a future meeting.	Feb 6/17	Basinger	Work completed; this will be added to the next agenda.
2.	Multi Family Unit Site Bonding	It was decided that the affected municipalities will meet with the proponent to discuss the issue further.	Jan 13/20	Wiles	Proponent is no longer with EPCOR; this item is considered closed.

4. Matters for Discussion

4.1. Submission re In Ground Enclosures

The submission was viewed on screen. It was explained that these devices are not approved by a third party and there is no province-wide variance in place to accept them as an unapproved product, and therefore they may not be used under Part 1 without a site specific variance. These devices are also used by utilities and for traffic signals.

It is believed there is no standard for these devices, so a special inspection cannot be done to accept them. It was questioned whether a site-specific variance would be appropriate.

It was reported that this topic is being balloted by CSA (SN 4644) and suggested that a site-specific variance may be the best path forward until it is addressed by CSA. The variance application would need to include evidence of approximately equal or greater safety performance and the AHJ could require engineering involvement as part of that evidence.

It was later identified that there is a product standard that may be applicable: C22.2 #344-2020. This item will be added to the next agenda to confirm that C22.2 #344-2020 could be used for special inspections of in-ground enclosures.

[Council Administration]

4.2. EVSE and EVEMS Issues

Background information was posted in the portal and viewed on screen. A question was posed about single family residences using various load setting systems and putting more than one CT in the box, as some municipalities are seeing, and it was asked if this is an issue that others are experiencing.

It was reported that this is seen in the solar/renewables industry too--a single family residence may have solar generation, storage, electrical vehicle charger load, etc. all monitored with CTs. It was noted that the manufacturer must state that the panel is suitable for that use.

A related issue regarding Tables D8 to D11 being based on 90 degrees C was noted and it was suggested that there's the potential for underground services to fail if they are fully loaded.

It was further noted that there may be interest in a recent Alberta Utilities Commission Decision for their Distribution System Inquiry: <https://efiling-webapi.auc.ab.ca/Document/Get/685017>

The member who brought this forward was looking to get a sense of the scale of this issue currently and is satisfied that no further action is needed at this time but the issue should be monitored.

4.3. 2021 CE Code Gap for communication wiring

A submission regarding how to treat cables with a non-metallic outer jacket was reviewed. The submission indicated that in the past, the 12-500 series of rules were applied to these cables, but a change in the 2021 edition of the code introduced a restriction so that 12-500 rules apply only to NMD90 and NMWU. It is believed this has caused a gap in the code.

It was suggested this topic needs more investigation, such as rationale for this new restriction and clarity on the Appendix B note. The Memorandum of Revisions includes a statement indicating that local interpretations may be needed until code provisions have been developed.

Scott Basinger / Ken Hood move to create a Working Group to investigate the installation of non-metallic outer jacket cables as per the gap in 2021 CE Code Rule 12-500; CARRIED

Scott Basinger / Adam Ghani move to include the following members Adam Ghani, Bert de Bruin, Ken Hood, Gerry Doan, with Bert de Bruin as chair; CARRIED

Scott Basinger / Ken Hood move to provide a final report for the October 9, 2021 meeting; CARRIED

4.4. Bonding requirements in CSA B149.1-20

An excerpt from GSC minutes was shown regarding bonding requirements for CSST in CSA B149.1. The Electrical Administrator has corresponded with Plumbing and Gas Administrator about what specific requirements for bonding are included in the gas code. It was explained that this provision exists in the gas code to help ensure that these gas systems are bonded and to allow gas safety codes officers to inspect the bonding when there is no electrical permit associated with the work. Gas code writers have consulted with the electrical discipline at CSA to ensure the requirements in the gas code are appropriate and don't conflict with the CE Code.

Specific comments were made, in particular regarding the size of the conductor. It was clarified that the code writers' intent for the minimum requirement is that the system is bonded and the size of the conductor is unimportant in this case.

It was reported that there is a new topic being balloted at CSA that might have an impact on this topic regarding wire sizing.

As clarification has been provided, this item is considered closed.

4.5. Working Group Reports

4.5.1. AEUC

The Working Group Chair provided the following update via email:

The Working Group met on April 26th and primarily went over the proposed changes to the Code based on the 2020 CSA C22.3 publications. The work is going well and we are still on track to have a draft of the 2021 AEUC ready for review for the first meeting of the new Utility Sub-Council.

4.5.2. 2021 CE Code, Part 1 Review

The working group has met once and review is continuing.

4.5.3. USEI Cable

The final working group report was included in the portal and shown on screen.

It was pointed out that in the 2021 CE Code, Table 19 has been changed for the usages of USEB, USEI and NS cables. The working group feels that the new code is clear on the usage for USEI cables and that no additional recommendations are necessary.

The Administrator can respond to the submission with the input provided from the working group report. [Cormier]

Ken Hood / Ed Knaggs moved to disband the USEI Cable Working Group; CARRIED

4.5.4. Farm Services

The working group met to discuss the final recommendation for the submission asking about Rule 10-210. It was felt that a Part 1 installation may not utilize the utility ground/bond. A response will be sent back to the proponent. [Council Staff]

A draft STANDATA about Section 10 – Grounding and Bonding was reviewed by the working group with comments submitted back to Municipal Affairs.

The working group identified four more questions that should be considered by a future working group. It was proposed that once the Electrical Utilities Sub-Council is created, a joint working group be formed to review these questions.

Ken Forbes / Glenn Hedderick Moved to disband the Farm Services Working Group; CARRIED

4.6. BSC Liaison Report

The liaison to the Building Sub-Council reported: no electrical items at the last BSC meeting.

4.7. Administrator/AMA Report

The Administrator reported:

- A written report will be posted in portal.
- The Administrator may be able to invite individuals to national codes and standards meetings in June if anyone is interested in observing.
- Administrative Items Regulation has been updated as of March 12, 2021—please check Queen’s Printer for the latest version and ensure you are referencing this new version.

4.7.1. Submission re CE Code 08-100 Current Calculations

A submission was received regarding questions about rounding and significant figures. The Administrator explained the approach to rounding and significant figures that Municipal Affairs staff give—if the code asks for 20 amps and the calculations come to 20.4, you can round to 20 as there are two significant figures in the original requirement. If the code asks for 20.0 amps and the calculations come to 20.4, then you are over the code requirement because there are three significant figures.

It was reported that from an education and training point of view, wire size doesn’t follow this convention. They use one decimal with no rounding, as a safety measure to ensure they’re not going over the wire’s capacity. If the calculations come out over, they are not rounded and students must move up to the next wire size. The Professional Engineer representative reported that he follows the same approach when designing electrical installations.

Because of this discrepancy, the Administrator will hold off on responding to this inquiry and this item will be added to the next agenda for further investigation.

[Council Administration]

The Education & Training representative will reach out to other colleges to find out how they approach this.

[Hedderick]

4.7.2. Submission re CE Code 26-256 Current Calculations

The Provincial Electrical Administrator reported that he received a submission regarding Rule 26-256 and the answer is clear in the code. He provided an overview of the submission and his response. The Administrator will provide a written reply to the proponent and copy the sub-council.

[Cormier]

4.8. Council Updates

A written report was included in the portal and updates were provided on:

- Council staff continue to work from home and staff will provide updates on plans for the fall meetings as they are available.
- Now that Allison is back at work, she and Kathryn are dividing the sub-council work. Kathryn is the primary contact for the Electrical Sub-Council.
- An update was provided on the newly created Electrical Utilities Sub-Council (EUSC). Letters to the nominating organizations identified in the new sub-council’s matrix have been sent to begin the process of finding nominees. The ESC will be involved in recommending appointment of EUSC members to the Board. It is anticipated that this

process will be complete in the fall and the EUSC will have its first meeting in October or November.

5. Meeting Finalization

5.1. Round Table

- A suggestion was made regarding re-posting pertinent documents from previous meetings if a topic is revisited at a subsequent meeting. Council staff will re-post any documents that members and Municipal Affairs staff identify are needed.
- It was reported that in-ground enclosures is at ballot at CSA. If there are any negatives it won't be discussed at the June CSA meeting.
- A question was raised about creating sub-folders within a working group folder and members were shown how to do so.

5.2. Next Meeting

The next meeting was reconfirmed for October 4, 2021 via videoconference at 8:30 a.m.

5.3. Meeting Adjournment

The meeting was adjourned at 11:18 a.m.

– NEW ACTION ITEMS –

2.1. Proposed Provincial Variance on 18-150 2)

It was reported that this wording is exactly what will be incorporated into the 2024 CE Code and that Municipal Affairs is currently working with this content to create a draft Provincial Variance STANDATA. [Hall]

It was requested that once the STANDATA is published, it be sent to Tim Pope so he can refer to it in communications with other jurisdictions. [Cormier]

The draft will be reviewed at the next meeting. [Hall/Council Administration]

4.1. Submission re In Ground Enclosures

This item will be added to the next agenda to review the scope of C22.2 #344-2020 and whether it applies to Part 1 and could be used for special inspections of in-ground enclosures. [Council Administration]

4.5.3. USEI Cable

The Administrator can respond to the submission with the input provided from the working group report. [Cormier]

4.5.4. Farm Services

A response will be sent back to the proponent. [Council Staff]

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Because of this discrepancy, the Administrator will hold off on responding to this inquiry and this item will be added to the next agenda for further investigation. [Council Administration]

The Education & Training representative will reach out to other colleges to find out how they approach this. [Hedderick]

4.7.2. Submission re CE Code 26-256 Current Calculations

Administrator will provide a written reply to the proponent and copy the sub-council. [Cormier]

– MOTIONS –

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– WORKING GROUP MEMBER LISTS –

WORKING GROUP	WORKING GROUP MEMBERS (<u>Chair</u>)
AEUC	<p><u>Brian Townsend</u> Jim Porth, Cory Akins, Ran Li, Sandya Neelawala, Travis Shmyr, Ken Chao, Clark Laing, Barry Thoms, Will Hillary, Al Nagel, Henry Navis, Rodger Renwick, Brian Wagner, Lisa Liusz Senio, Mark Liebel, Graeme Vanderstar, Tony Walker</p>
Single Family Residential Dwellings (Joint with GSC)	<p>ESC: Barry Voogd, Bert DeBruin GSC: Roy Herrington, Mark Guderjan, Larry Miller</p>
Submerged and Flooded Equipment	<p><u>Nicolas Leblanc</u> Tyler Masson, Adam Ghani, Scott Basinger, Patrick Conway, Hussein Desouki, Gerry Doan, Tim Driscoll</p>
2021 CE Code Review	<p><u>Ken Forbes</u> Ed Knaggs, Patrick Conway, Glenn Hedderick, Tim Driscoll</p>
Use of USEI in Situations Other Than Service Entrances	<p><u>Ken Hood</u> Barry Voogd, Lori Monaghan, Gerry Doan, Patrick Conway</p>
Non-metallic outer jacket cables re. gap in CE Code Rule 12-500	<p><u>Bert de Bruin</u> Ken Hood, Gerry Doan, Adam Ghani</p>