

**MINUTES OF THE ANNUAL TECHNICAL CONFERENCE
February 10 & 11, 2023**

DAY ONE – February 10, 2023

1. CALL TO ORDER AND CHAIRMAN’S ADDRESS

The meeting was called to order by the Conference Chairman, Michael Chledowski, at 8:00 am. The Chairman welcomed all delegates and guests to the 27th Annual Technical Conference of the Electrical Inspectors Association of Alberta (EIAA). He explained that this conference is being attended live as well as on-line through Zoom.

Thanks went out to the Safety Codes Council and the Electrical Contractors Association of Alberta, for their support of the conference. Vendor tables were mentioned and thanked. The format of the conference is following last year’s conference in that the first day is the traditional conference agenda, and the second day is for training. AGM will take place virtually in March.

Don Ursuliak, President, welcomed everyone and thanked the Education Committee for their work.

2. SUBMISSION ITEMS

This portion of the agenda was hosted by Clark Redden.

2023-01:

Submitted by: Curtis Smith

Code or regulation number: 6-208 subrule 1 c) i and ii

6-208 Consumer’s service conductors’ location

- 1) Raceways or cables containing consumer’s service conductors shall be located outside buildings unless they are:
 - c) run in a crawl space located underneath a structure, provided that such crawl space:
 - i) does not exceed 1.8 m in height between the lowest part of the floor assembly and the ground or other surface below it;
 - ii) is of non-combustible construction.

Question/enquiry:

Is there a definition that says the space underneath a mobile home specifically is deemed as either:

- A. livable space and therefore inside the trailer
- B. not livable space but still inside the trailer
- C. a crawl space as described in the rule

Background information was included in the conference package.

Decision: The space underneath a mobile home specifically is deemed as a crawl space as described in the rule.

Recommendation: CLOSED.

2023-02:

Submitted by: Larry Cantelo

Code or regulation number: Alberta Permit Regulation – Section 8

- 1) A permit in the electrical discipline is required to install, alter or add to an electrical system.
- 2) Despite subsection (1), a permit is not required for the following:
(e) the replacement of electrical equipment with units of a similar type if the replacement is made for the purpose of maintaining the system and does not modify the ratings or characteristics of the electrical installation.

Question/Enquiry:

In some cases, where dwellings have branch circuits with aluminum wiring, insurance companies have required the aluminum conductors to be pig-tailed at receptacles. If this is the only work being done, is an electrical permit required?

Background information:

Some AHJ's require a permit for this, and others do not.

Recommendation:

There should be consistency across the province in whether a permit is required or not.

Decision: Permit is required.

MOTION: EIAA supports this decision.

Motion by: Gerry Wiles

Seconded: Greg Marshall

CARRIED

2023-03:

Submitted by: Jeff Goebel

Code or regulation number: CEC rule 12 - 118 (2) 12-118 Termination and splicing of aluminum conductors:

- 2) A joint compound, capable of penetrating the oxide film and preventing its reforming, shall be used for terminating or splicing all sizes of stranded aluminum conductors, unless the termination or splice is marked for use without compound.

Question/Enquiry:

The use of a wire nut approved for the connection of aluminium-aluminium and aluminium copper conductors for the purpose of installing copper pigtails for connection to wiring devices such as receptacles and switches; is compound required?

Background information was included in the conference package.

Recommendation: For discussion and consensus.

Decision: The rule noted lists that only stranded conductors require paste, and consensus was achieved on that. **CLOSED.**

2023-04:

Submitted by: Clark Redden

Code or regulation number: 32-300

32-300 Insulated conductors (see Appendices **B** and **G**)

b) be protected against fire exposure to provide continued operation in compliance with the National Building Code of Canada.

Question/Enquiry: Fire pumps: What cables need to be protected from fire damage, and how?

Appendices and background information were included in the conference package.

Recommendation: For information purposes only.

2023-05:

Submitted by: David McMullen - RMWB

Code or regulation number: 12-106(1)

Question/Enquiry: Do all conductors of a circuit have to be contained in the same cable?

Decision: Rule is clear and should be followed. EIAA is not interested in changing this rule.

Recommendation: **CLOSED**

2023-06:

Submitted by: David McMullen – RMWB

Code or regulation number: 12-510

Question/Enquiry:

In some jurisdictions, inspectors will require a loop of cable at the device box. The reason given is to have extra cable in the event the cable gets destroyed or damaged, usually by the router when installing drywall.

Background information was included in the conference package.

Recommendation: Please provide clarity on this. What is the rule saying – loop for protection or for trailer boxes?

Decision: Not our call. Does not apply to 2104's in a residential application. CLOSED.

2023-07:

Submitted by: David McMullen – RMWB

Code or regulation number: 6-206 1)

Question/Enquiry:

Does a landing with min. 1M² constitute part of a stairwell for the purposes of this rule?

Background information was included in the conference package.

Decision: An electrical panel can be placed on this type of landing providing clearances are met. CLOSED.

2023-08:

Submitted by: Clark Redden – RMWB

Code or regulation number: 2-024

Question/Enquiry: Is it permissible to install an obsolete (e.g. FPE) panel in a new installation?

Recommendation: For information.

Decision: The manufacturer states it is not recommended but does not forbid it. Some members spoke up that a special inspection is required when a panel is reused, however the code does not support that. CLOSED.

2023-09:

Submitted by: Curtis Smith

Code or regulation number: 68-058(1)

Question/Enquiry:

Subrule 1 talks about the bonding of non-electrical equipment within 1.5m of a pool. The question came up of the definition of a pool vs a hot tub and does a step ladder railing, or metal fencing that is not a part of a hot tub yet is within 1.5m need to be bonded. If a hot tub is considered as an integrated unit, and the metal railing is not a part of the manufactured tub itself, does it then require to be bonded.

Background information was included in the conference package.

Recommendation: Looking for clarification on when metal fencing or other non-electrical equipment within proximity to a hot tub is required to be bonded.

Decision: Yes, it is required to be bonded. Also, receptables within 1.5 metres have to be GFI. CLOSED.

2023-10:

Submitted by: RMWB

Code or regulation number: Definitions, 26-658

Question/enquiry:

Would a night care qualify as a dwelling unit:

Background information was included in the conference package.

Recommendation: For discussion, looking for consensus.

Decision: A night care is NOT considered a dwelling unit, so CAFCI protection is not required. CLOSED.

2023-11:

Submitted by: Michael Chledowski – Leduc County

Code or regulation number: 2021 CE Code

Question/enquiry:

Providing access to the branch circuits in the electrical panel for the person living in the legal suite should be required whether it is created by subdivision after the dwelling is built or not. Building code article 9.7.5.2. of the Nation Building Code of Canada (Alberta Edition) requires that there be a locked door between the tenant/s in the legal suite and the persons living in the remainder of the dwelling; therefore, access to the electrical panel is restricted from the tenant/s living in the legal suite. Furthermore, CE Code 2-310 requires entrance to the electrical equipment, and it can be argued that all persons living in the dwelling should have access to the branch circuits feeding their living space not just the persons living in part of the dwelling. Access to the electrical panel by the persons occupying the living space. The installation of a sub panel in the tenant space should be looked at or alternatively the main panel should be located in a common space for the tenant and the other persons living in the dwelling. A parallel can also be drawn from CE Code 6-206 which refers to service equipment being readily accessible and while the main panel may not be required to be accessible to the tenant/s the panel from which the branch circuits feeding the should be accessible to the person/s living in that space.

Background information was included in the conference package.

Recommendation: I am looking for additional input, but I will be taking this to Part 1 for review and change to the CE Code.

Decision: To proceed as above. Update at next year's conference.

3. REPORTS

Copies of these presentations are available. Questions and comments were taken after each report.

Safety Codes Council Update

Kris Schmaltz

Alberta Municipal Affairs Electrical Update

Kevin Glubrecht, Provincial Administrator for the Electrical Discipline

Electrical Sub-Council 2022 Summary

Gerry Wiles, Chair of the Sub-Council

AEUC – report was not available.

4. UNFINISHED BUSINESS

This portion of the agenda was hosted by Ken Hood.

See conference package for details on each of these items.

2022-01: Three new rules in the 2021 Canadian Electrical Code for this discussion.

2023 Update: Based on the minutes of the 2022 conference this subject was recommended to be carried forward though there was no direction on the recommended follow-up.

Recommendation: Recommend this subject be carried closed unless there is a recommendation to submit a code change or informational request to SCC at the 2023 conference.

Decision: CLOSED.

2021-03: 2018 CE Code 10-100: Objectionable passage of current over a grounding conductor.

2022 Update: CSA Subject No. 4722 has been initiated to adjust the wording in Appendix B to acknowledge that some neutral current will be placed on the grounding conductor due to parallel paths created by design from multiple grounding on then neutral (grounded) conductor when connected to a utility system. At this point this subject is still in progress.

2023 Update: This subject was accepted at Part 1 and noted in MOR 2-2021 code.

Decision: CLOSED.

2021-06: 2018 CE Code 10-708

2022 Update: CSA Subject No. 4676 interpretation question has been initiated.

Question: Can a person run a #10AWG bonding conductor in the walls where it is concealed & has mechanical protection provided by location?

Answer: Yes – was submitted from the subcommittee to Part 1; at this point we are unaware of the results. Another proposal was submitted asking the sub-committee to provide better clarity in the wording. Wording was modified accordingly and has gone to Part I for a vote.

2023 Update: This subject was accepted at Part 1 and noted in MOR 2-2021 code.

Decision: CLOSED.

2021-08: 2018 CE Code 4-004 (7) & 12-900 Auxiliary Gutters

2022 Update: It appears that a proposal was not submitted to Part 1 due to an error in the proposal.

2023 Update: The submitter has suggested that this item be closed.

Decision: CLOSED.

2020: No outstanding items.

2019: No outstanding items

2018: No outstanding items

2017: No outstanding items

2016-07: CE Code 2015 – 4-004

2018 Update: This item remains at the Electrical Sub Council working group. Note that no changes are in the 2018 CE Code and no clarification of the drawing has been provided. However, there are multiple references and examples throughout the code book that indicate these are not concrete duct banks but direct buried raceways.

2019 Update: This item remains at the Electrical Sub Council working group. Note that no changes are in the 2018 CE Code and no clarification of the drawing has been provided. However, there are multiple references and examples throughout the code book that indicate these are not concrete duct banks but direct buried raceways. What is really important for using the diagrams and associated ampacity tables – if the installation is not in accordance with the assumptions given and the Appendix B diagram configurations, IEEE 835 ampacity calculations shall be performed and submitted to the AHJ. Note that you must not alter depth of burial in the specifications for any more than 1/3 of the run (deeper is not better, it results in 6% less ampacity for each foot); you must use native backfill and trenches cannot be shared with other services. Adjacent installations must be at least 1.2 m away or accounted for in the calculations.

2020 Update: The matter is still under review and being worked on by the CECWG.

2021 Update: The matter is still under review and being worked on by the CECWG.

2022 Update: As of December 2021, the table and calculations in line with IEEE 835 are complete and have been uploaded to the electrical sub-council's website for comment. It will be voted on next meeting which is scheduled for February 4, 2022. It is expected that this work that was done will be sent into Part 1 code for recommended changes to the tables during the spring of 2022.

2023 Update: A proposal is in progress with final formatting expected soon and will be sent to Part 1 once completed.

Decision: CLOSED.

Day One was adjourned at approximately 5:10 pm.

DAY TWO – February 11, 2023

PRESENTATIONS (available upon request)

1. Electric Vehicle Energy Management Systems (Ark Tsisserey, AES Engineering)
2. Fire Investigations (Keven Lefebvre, Leduc Fire Chief)
3. Administrative Penalties (Danny Stoesz, Manager Compliance, AMA)
4. Residential Battery-Based Energy Storage Systems (Steve Douglas, QPS Evaluation Services) – *Presentation not available for distribution.*