

ELECTRICAL INSPECTORS ASSOCIATION OF ALBERTA ANNUAL TECHNICAL CONFERENCE

Meeting Minutes

February 8 & 9, 2008

Present: [List of attendees]

Location: Franklin's Inn, Sherwood Park, AB

Note – these minutes are not sorted sequentially, but sorted into categories.

I - Announcements

Stan opened the conference by introductions of the head table; John Hilary, Executive Director, Safety Codes Council, Erin Foster-O'Riordan, Coordinator for Legislative development, Safety Services, Municipal Affairs & Housing, Lawrence Pirnak, Electrical Safety Codes Officer, Municipal Affairs & Housing, Don Bradshaw, co chair of this meeting, City of Airdrie, Ivan Moore, Assistant Deputy Minister, Municipal Affairs & Housing, and Dan Niven, Electrical Safety Codes Officer, Assistant Technical Advisor, Municipal Affairs & Housing, also filling in for Pierre MacDonald, Chief Electrical Inspector for the province.

Stan also announced the housekeeping items, smoking policy, bathrooms, exits and the conference attendance sheets. Thank-you's were extended to the people manning the registration desk at the entrance. Joe Messmer, Don Letcher, Lou Greco, Dan Sereda, John Hazelwood, Carl Deshene. Welcome's were extended to the out of province visitor's.

Stan informed the group that there were 435 SCO certified in the province of Alberta as of last fall. 244 have designation of powers as Safety Codes Officers.

Stan encouraged all participants of this conference to voice their opinion, ask questions, discuss items, however, he asked that no individuals or company names be voiced, any derogatory remarks made may be ruled out of order by the chair. He asked that anyone with a question or remark please use the microphones provided and identify them self prior to speaking. Stan asked that every one complete the Conference Critique sheet which are provided in the handout. A reminder to fill in your name at the bottom of the sheet to be eligible for the draw for free registration to next years conference. The lucky recipient from last year's conference was Ken Hood of Lloydminster.

Thank you to donations made to offset this years conference, the sponsors for this years conference are; City of Calgary, ULC, EPCOR Power & Distribution, Schneider Electric, Redback Decals, DeJong Printing, ECAA, Alberta Municipal Affairs & Housing, the Inspections Group, Colt/Worley Parsons, Chemco Electrical, Prolux lighting, Leduc County, CAREA, County of Strathcona, Thomas & Betts, DAD Sales, ENMAX, Cooper Industries, QPS, City of Red Deer, Superior Safety, Alberta Permit Pro, Explosion Research, CSA International, ITS Intertek, Ferraz Shawmut, Franklin's Inn, Co-ordinated Engineering, Safety Codes Council.

All attendee's were asked to introduce themselves. Stan then announced the vendors booths located at the back of the room and asked each booth representative to introduce them selves; Andy McNally Cooper Industries – Crouse Hinds, Doug Clough, administrator of certification, Safety Codes Council, Dwayne Mills, Eaton-Cutler Hammer, Mark Lipton, Ferraz Shawmut, Blaine Doherty, Dyna-flo, secondary seal manufacturer, Daryl Schmidt, Schneider Electric, Tim Hydzik, ProLux Lighting, Perry Bohachyk, DAD sales, Marz DeSouza, Thomas and Betts, explosion proof boxes, Dwight Hunter, Leviton, GFI's, wiring devices,

Dave Moller, President of the EIAA was asked to come up and say a few words. Dave introduced himself and welcomed the attendees, congratulated Stan, Don and Lou for the job they have done. This event is growing every year. Dave thanked the past president and all other executive council. Dave also thanked John Biollo and Don Letcher for there efforts and getting this conference started. Thank you to Dan Niven for representation on the Alberta Electric League. Dan Niven and Pierre MacDonald will be giving a presentation at the Lethbridge learning expo in Lethbridge this year, all are encouraged to attend. Thank you to Lou Greco for putting the EIAA web page together and all where encouraged to visit the site to share the information on it. All EIAA members where encouraged to attend the camp out at Burbank near Red Deer for the fall meeting.

Stan called upon John Hilary from the Safety Codes Council, to say a few words on behalf of the SCC. John welcomed all attendee's, and thanked all representatives sitting on the Electrical Technical Council. John Biollo who sits on the ETC will be giving a report later. John indicated that Stan had mentioned that there where 335 electrical SCO's, and 320 additional SCO's hold a utility level B certification. The Council had about 107 registered for electrical training, of those 61 have completed training, 40 are in the process of completing there training. 2007 saw the adoption of a couple of codes, Alberta Electrical Utility Code was adopted by regulation and comes into effect March 1, 2008. This code is out for printing and will be available by the end of next week. Permit Regulation will be in effect April 1, 2008, there are some changes in this regulation and copies are available. There are some concerns with this regulation but unfortunately it was too late to make any changes at this time.

SCC will be moving to a new office on the 10th floor of First Edmonton Place on 107 St and Jasper. The Annual General meeting this year has changed location from the Jasper Place Lodge and will be moved to the Fairmont Lodge at Lake Louise on June 11 to 13, 2008. This conference will kick off with the Alberta Building Official Association, the Alberta Electrical Industries Codes and Technical Conference, Safety Codes Council workshops and annual general meeting and presentations.

In 2008 & 2009, the SCC will reach significant costs increases; changes to the electronic permit system will be done. The council has decided to phase out POSSE as their electronic permit system and is in the process of converting to a new system. Additional expenses incurred in training, with the adoption of new codes, more funds are required for training. The adoption of the new Building & Fire Code, Electrical Utility Code. The forecast is a million dollar deficit for 2008 and 2009. Changes in the members of the Electrical Technical Council are being made with terms expiring, John Biollo representing the EIAA and Tim Driscoll representing Oil & Gas Industry, terms will expire as of January 31, 2008, Stan Misyk will replace John Biollo and Rene Leduc will be replacing Tim Driscoll. Minutes of the Technical Council meetings are posted on the SCC site, and if anyone is interested they can view them.

Stan called John Biollo to the podium to present him with a gift certificate in appreciation for his 6 year commitment to the Electrical Technical Council as representing Safety codes Officers.

Stan then called on Ivan Moore to give us an update of government activities that may be of interest to this group. Ivan commented on the work this group does and accomplishes. Ivan indicated that the year began with a new minister and the ministry has inherited housing. Changes occurred with the formation of the Emergency Management Agency, which includes the Fire Commissioners Office. Internal changes in Safety Services included the retirement of Bruce Allan and the appointment of Erin Foster as the Director of the Codes and Standards Development. All Codes and Standards groups were brought together under one umbrella including Building & Fire which are headed by James Orr. Ivan added that with this change it would be a positive effect as it will provide leverage for a consistent advantage in the development of codes in all disciplines.

Ivan mentioned that the new objective based Building, Plumbing and Fire code has come into force which is a major step forward in the new scheme of codes. The Utility Code was passed and the Permit Regulations after seven years it saw the light of day and will be coming into effect April 1, 2008. Throughout the year Municipal Affairs continues to work with the ECAA on the enhanced Master's Program, as well with TILMA (Trade Investment of Labour Management Agreement) of BC and Alberta which was signed a little over a year ago and since then government have been working to determine what barriers within the two provinces and want to try and remove these barriers so that certified contractor's, engineer's can work between the two provinces. The intention is not to seek the lowest standard, it is to identify the ability for a person with qualification can move across the border to be able to do his work without going through an unreasonable transition. Looking forward into the future it looks like government will be looking on some energy codes, increasing enfances on things like micro power application and depth metering and those sorts of things to reduce our energy footprint.

Carl Deschene asked if there is any word on the appointment of the new Fire Commissioner since the change of the department. Ivan answered that the positions have not yet been filled but thought that these would be filled in the next few months.

Zoltan Nagy asked Ivan when the new permit regulation comes into effect and who the committee members are. There are several concerns with the new regulation. Another question would be was there appropriate trades representation on this committee. Ivan indicated that there was representation of Master's Electrician's on the committee. Ivan also indicated that he would suggest that the group could exercise their process to change the regulation.

Don Letcher asked Ivan if there has any addition of mobility to bring SCO's across Canada. Ivan indicated that Municipal Affairs is looking at it but did not know where exactly it was at.

Stan Misyk asked Ivan if it was correct that the EIAA did not have direct representation on the second draft of the permit regulation. Ivan indicated that this was indeed correct.

II - Unfinished business

Agenda Item# 2007ag-03 Electrical Nameplates for Electrical Skids & Relocatable Structures

Discussion: Stan asked Dan Niven to speak to this item to give the group and update of the task force's findings.

Dan informed the group that there is an industry task force which had 4 meetings in 2007 and because of the diversity of the task force and their opinions, it was difficult to agree upon the items. There are a number of items that the committee have not been able to agree upon. Item's such as; is the skid electrical equipment or an electrical installation as defined by the electrical code. Another item; is the skid actually a structure and does it fall within the scope of Section 70. One item that there is some agreement on is that perhaps modules be handled in a different manner than skids, all a module may need for a nameplate is the manufacturer's name and some type of structure identification. The executive of the task group is to draft a report with recommendations as to what information should be included on nameplates for skids and modules. Once that is completed the task force as a whole is to confirm those recommendations and forward them to the ETC for approval. The intention of the committee to confirm what is in the present Standata, or modify the Standata so it is clear to what is required on the nameplate.

Stan indicated that he has brought this back again this year to ensure that safety is adhered to. There are many skids of all sizes throughout the province of Alberta. A vote was taken by show of hands; to support the present information as per the Standata or lesser information. 24 for and 4 against.

Action: *Await the outcome of the existing task force.*

Agenda Item# 2004ag Section 0M electrical equipment room/vault

Discussion: *What constitutes an electrical room or an electrical vault?*

Action: *Carried Forward still at Part 1 committee – subject 3247*

Agenda Item# Aq14-104M table 13

Discussion: *Rating of overcurrent devices: Table 13. Why was the allowable overcurrent rating reduced to 45 amperes for a conductor rated 41 to 45 amperes. Recommendation: Return Table 13 to the version shown in the 1994 Code.*

Action: *This item has been discussed at the AEICTC and the ETC. Committees have been informed from the manufacturers that 45 amp breakers are available (special order), Hence, the ETC is not prepared to take it any further. **ITEM CLOSED***

Agenda Item# 2005ag2-310M exit from working space

Discussion: Exit from working space. What is suitable means of egress?

Action: Carried forward, still at Part 1 committee – subject 3248 there is some interface with building code.

Agenda item # 2006ag2-024M equipment certification

Discussion: Amend Section 2 of the Electrical Code Regulation to read; "2(1)(b) change the period to a comma and add "or" after certification body and new sub-rule 2(1)(c), inspected and accepted by a certified and designated electrical safety codes officer performing his duties in accordance with Section 35 and 39 of the Safety Codes Act.

Action: ETC Sept. 24, 2007 update – the ETC discussed this and there was no support to change the Electrical Code Regulation to add a rule for a Safety Codes Officer to inspect and accept unapproved equipment - **ITEM CLOSED**

Agenda Item# 2006ag20-100M commercial repair facilities

Discussion: Does rule 20-100 CEC regarding commercial garages-repair and storage include auto dealership display rooms, auto shows and similar locations?

Action: ETC Sept 24, 2007 – Subject submitted to CSA-CEC Part 1 for response

Agenda Item #2006ag24-000M health care facilities

Discussion: Motion: It is recommended a Standata be issued to bring to the attention of industry and clarify the changes to Section 24 in regard to wiring of health care facilities located outside of hospitals.

Action: Standata CEC-24 released October 2007 – **Item closed**

Agenda Item# 2006ag26-722M sump pump receptacles in bedrooms

Discussion: The Administrator for the Electrical discipline develop a Province wide variance to allow sump pumps in bedrooms to be supplied from a single receptacle, identified for sump pump use only, and connected to a general purpose overcurrent protective device.

Action: ETC Sept 24, 2007 – Subject will be submitted to CSA-CEC Part 1 for a response.

Agenda Item# 2006agSafetyM temporary construction receptacles

Discussion: Rule 76-016 2006 CE Code, Part 1. Does the rule apply to receptacles in a house under construction? The conference agreed to enforce the rule unless a Standata item provides other guidelines.

Don Bradshaw informed the group that the way this question was put forward may have affected the answer given - no GFI protection required for any receptacle that is part of the permanent wiring. It was asked - "With respect to residential construction, do receptacles installed on a permanent basis for permanent loads (i.e.: fridge, microwave, vacuum system, etc.) require GFCI protection as per rule 76-016 if they are energized and used during construction?" See the CSA committee response for details on how the question was handled - their comments must be based on the literal text and not on the intent. This rule continues to be applied differently across the province, and apparently across the country - some of the history and additional information is attached to the agenda packages. In the American code, this item has been reworked over a decade, so hopefully we can learn from their history. Expect to see this rule reworked or an additional rule added next code release.

Action: Subject was submitted to CSA-CEC Part 1 for an interpretation. The reply from Part 1 is: If the outlet is part of the permanent installation, e.g. fridge plug, a GFCI is not required. Most continue to require receptacles installed at the panel when the service is installed at the foundation stage to be GFI protected. - **Item closed.**

Agenda Item# 2007ag-06 adequate ventilation

Discussion: Rule 20-102 (2) states that if adequate ventilation is provided, the hazardous area would only extend to 50mm above each such floor. What is adequate ventilation? If a ventilation system is installed, should it be operating 24 hours a day?

Action: ETC Sept 24, 2007 - Subject has been submitted to CSA-CEC Part 1 for response - **carried forward - Information**

Agenda Item# 2007ag-07 disconnects for fluorescents

Discussion: There is no electrical equipment that is manufactured to date to comply with this Code.

Don Bradshaw informed the group that this item was closed last year, there has been a Standata issued on it, but there is some additional information that is provided at the back of the handouts. Last year we voted on what type of disconnect we would accept. We agreed to accept devices that would mount in the fixture. The type of disconnects intended to be allowed to meet this requirement are listed in the handout, so you should be aware that you could accept these methods as well.

Action: Item Closed - Standata CEC-30 [rev 4] released April 2007 and see additional information at the end of the handout - CSA technical information letter B-78 which outlines background, rationale and types of disconnects allowed.

Agenda Item# 2007aq-09 island counter receptacles

Discussion: 26-712 allows for receptacles on the side of island counter. What determines "permanently fixed" and should they be allowed because of Child safety?

Action: Information - Item Closed – Standata CEC-26 [rev 4] released October 2007.

Agenda Item# 2007aq-14 Permit regulations

Discussion: Permit Regulations – Electrical homeowner permits for other than single family dwellings. Example – townhouse, duplex etc. How are the other municipalities and agencies dealing with this? Are they issuing homeowner permits for Townhouses, Duplexes etc. How do they interpret the statement from the permit regs 29(d)(iii) if the construction will not in any way interfere with electrical system or property belonging to another person.

Don Bradshaw informed the group that the permit regulation will in force on April 1, 2008 and it is recommended that we not comment on it until it is in force. It has a number of contentious issues identified by the group.

Action: ETC Sept 24, 2007 update: The Permit Regulation is expected to be adopted in April 2008 once the regulation has been published in its final form. Questions as to its interpretation and implementation can then be submitted to the ETC. The EIAA representative on the ETC can bring this forward when the permit regulations adopted. **Item closed – new permit regulation.**

Agenda Item# 2007aq-15 Push in terminals on receptacles

Discussion:

Concern is that some contractor's are using the push in connections at the back as well as the screw terminal terminals on the side of receptacles for there feed through connections to avoid going up one size of box. There is new information indicating that there is a conflict with the standard and the manufacturers instructions. This item is to be brought forward again for harmonization of the standards.

Ken Butler shared his experience with some manufactured homes on reserves that outlets are failing and contractors have told him that they have found that in all cases it is a result of a poor connection with the push in terminals, this is unsafe, a fire hazard and something should be done as soon as possible. CSA should be looking into this because their stickers are on the units.

Gary Boswell informed the group and admitted that there is a conflict in the way UL and CSA looks at the standard dealing with push in terminals. The interpretation is coming out of the UL White Book, and the whole definition needs to be read to correctly get an interpretation. UL tests this as a feed through connection while CSA does not, so a clarification needs to be requested from UL.

Rene Leduc informed the group that if this is a problem in the field there is a process called the "Product Incident Report" and maybe these failed products should be investigated and a Product Incident Report be completed. This would go to the certification body and that will trigger a solution to rectify the problem. Rene suggested that this process be implemented.

Ken Butler indicated that he had suggested the Product Incident Report to the contractor and indicated that he would not be interested in doing that because he was too busy. If CSA wants to take note of that and pursue it, Ken felt that would be more effective.

Stan informed the group that we need to show due diligence, and as SCO's we need the information to get to the certification bodies to ensure the proper steps are taken to resolve these issues.

Gary also added that he would need actual fact to act on this, he could not act on hear say, so he encouraged sending in of the product incident reports with evidence.

Action: Item closed. Gary suggested that we do fill in the Product Incident Reports, most certification bodies have a method of reporting these issues and Gary encouraged everyone to go ahead and fill out the reports.

Item was brought up again on second day of conference. Ken Butler asked if he could put a motion forward to the floor to eliminate the use of push in connections for receptacles and have a Standata written. Don & Stan informed Ken that he could put this forward for next years conference or put it forward directly himself through other venues.

Agenda Item# Rule 6-208(1)(a) Thickness of Concrete Embedment

Discussion: Don Bradshaw informed the group that this item has been overwhelmingly disagreed with by the Part 1 committee. Don recommended that everyone go back and take a good look at these types of installations under the existing rules. For example, if a conduit has been installed so it is encased in a residential basement slab, Building code requires residential slabs to be 3 inches thick, so if a conduit is run in that slab it surely is not encased in 2 inches of concrete.

Action: item closed/ for information only

Stan thanked the chair of the Electrical Technical Council "Gary Boswell" for his diligence and assistance in closing a lot of the Part 1 items that have been outstanding for some time.

III - Agenda Items

Agenda Item# 2008ag-01 Professional Engineering – Stan Misyk

Discussion: Stan informed the group that SCO's (electrical) on occasion question the practice of a Professional Engineer with academic training (for example in the mechanical discipline) stamping and signing drawings relevant to classified hazardous areas in the electrical discipline. APEGGA has informed Stan that engineers are not specified by discipline and are not restricted in areas of their competence however if in essence an engineer *feels confident in a discipline* can and do stamp drawings. APEGGA does allow them to do this, however, if some one feels that any engineer is acting out of order, they can submit a letter to APEGGA in writing and they will follow-up.

Action: For Information only.

Agenda Item# 2008ag-02 by Ken Bjerke

Discussion: Stan read the submission that Ken Bjerke submitted, Status for a level of SCO to Senior when he completes 10 years of service with designation of powers. John Hilary was asked to respond to this. John indicated that the system used is competency based and there is nothing in place at this time and thought there may be a danger in doing that. It may be an idea to take it to the ETC to establish another level if required. None of the other disciplines have anything in place to recognize years of service.

John Biollo had two comments, why would the submitter ask for this? And if an SCO has 10 years experience with designation, this would prove his competency. Stan commented that some SCO's could have designation and work on a part time bases for 5, 10 15 years and work a few weeks, this seems unfair. Stan then asked for a show of hands on this issue, should we take this further or not.

Action: Item closed_ Show of hands indicated that there is no support for this item, filed for information only.

Agenda Item# 2008ag-03 **CEC 2-004 -Section 60**

Discussion: Don read the submission that Jim Provost submitted, and brought the article from the Electric Line magazine to the audience's attention and asked Jim to speak to this item.

Jim indicated that he as a private contractor, he has seen many installations that are not installed to code. The inspectors are not noticing that this equipment is not installed to the current code. Someone is going to get hurt if nothing is done about this. Everyone thinks telephone is low voltage; this equipment is bringing current from central office, this voltage anywhere from 90 to 101 volts AC at 20 Hz enough to hurt someone. Jim has seen a lot of problems with the installation; he has replaced a lot of cable. Don read the recommendation that Jim has submitted and felt that there are a couple of things there, it seems you are asking for specialized inspectors. Can you narrow this down a bit.

Jim added the fact that a lot of the equipment being used is are not CSA approved and causes heating with the threat of fire. Should this equipment not meet the code as CSA approved equipment? What is the feeling of the crowd at this meeting? Dennis Smith – Accucode Inspections, indicated that he has experienced a similar situation as telecommunication in the HVAC installations, HVAC contractors are installing conduit, wiring, etc and are in some cases making a mess. Dennis suggested that all these types of contractors should be taking out permits for the work that they are doing.

John Biollo advised that at the ETC this was brought up numerous times, including a proposal that data cabling, communications circuits a permit must be obtained and an inspection performed, keeping in mind that in a standard area, less than 100 volt amps, power supply approved, that's OK. What was suggested to us at the ETC was to put the permit regs through the way they are and forward a request a change to it. This not an item that has not been addressed in the past. As a former member of the Technical Council I have to let you know what has happened.

Jim indicated that John mentioned that this has been taken out of the permit regulations or has been exempt from it. Don confirmed that yes it has been exempted out of the permit regulations. Jim suggested that it is in the code book and if it is in the code it should be in the regulation. If not it should be taken out of the code book.

Gary Boswell indicated that this has been brought up at the ETC for the last 10 years or so but the problem is that we don't have the authority, communications is considered to be a federally regulated item. We as a provincial body do not have authority on it, because they consider communications to cross boundaries. It is strictly a jurisdictional issue and we don't have a lot to say on it.

Joe Messmer informed the group that in the past there was a bylaw in the city that permits where issued with a demarcation point or what ever it was and the communications would work under the permit. I suggest that this should be pursued because it is in the code and should be under permit.

Jim clarified that the communication contractors have a demarcation point located on the outside of a building where Telus etc bring there service to the building. Anything wired within the building is the responsibility of the owner.

Carl Deshene indicated that deregulation in the 80's went from one provider to several, was an education process for the building owner's and contractors. The owner's then took ownership of the equipment within their building. Several hi-rise buildings where required to be issued a permit for security reasons. I feel that there should be permits issued to these types of buildings.

Jim made a motion that the province of Alberta initiate permitting in compliance to monitoring of communications installations across the province within customer premise or property. Seconded by Don Letcher

Don Letcher indicated that this item has been round and round at this conference since it was started. Don has letters from the minister of Municipal Affairs that this item would be taken care of in the permit regulation and he will supply the chair with these letters. Don suggested that we go directly to the Minister with this item.

Stan indicated that we will take Don's advise however, we may go to the Electrical Technical Council first with this item. However we have strong support to take this forward.

Action: A vote was taken to pursue this item. There was a strong indication to take this item forward. Forward to Electrical Technical Council

Agenda Item# 2008ag-04 3 wire service conductor 4-022 Size of neutral conductor 6-308 Bare Neutral John Biollo

Don read the question asked by John. Are all utilities insisting on a neutral the same size as the current carrying conductor? A utility company is insisting on 4 conductor teck cable for this type of service. They will not accept 3 conductor teck and use the bonding conductor in the teck as a neutral. Note: Teck90 is approved as a service entrance cable above/ below ground -Table 19

Discussion: John has submitted this on behalf of a contractor. This is mostly in the oilfield, the utility company is asking for a full sized neutral, thus is adding a substantial cost to the installation. The only reason that neutral is for metering purposes. Why do they have to go through this expense? APL insists on a full sized neutral conductor, they indicate that they prefer and they do not connect unless they have a full sized neutral.

Joe Messmer informed the group that in his experience with the city of Edmonton, for a 3 phase service a neutral was not required, however this caused feed back problems, especially under fault conditions. So the utilities then insisted on a full sized neutral, and the code was amended to accommodate this change.

Don mentioned that a copy of the Standata has been added for information, the last item is addresses that there is a harmonic issue with this type of installation.

Rene Leduc informed the group as chair of Section 10 a bit of history of the grounded conductor for a service. The grounded conductor is coming off a Y transformer therefore it is grounded, sizing of that conductor is based on the amount of fault current it may see at any given time, to allow the completion of that circuit to open the overcurrent device, based on Table 16. If sizing it any larger that that you have to look at any neutral current, so from a code perspective all it's looking for is ability for that ungrounded conductor to be able to carry the fault currents and if there are neutral currents, they have to be increased in size to accommodate the size of the neutral currents. .

Action: Forward to AEICTC

Agenda item # 2008ag-05

CEC 6-206 residential service disconnect outside

Don read the following: Rule 6-206 States that the service equipment be placed within the building being served unless environmental conditions within the building are unsuitable. Sometimes it is very difficult to keep the service conductors as short as practical within the house to comply with Standata 6-206, or the premises is developed making it awkward or very difficult to comply this requirement. Placing the service entrance equipment on the exterior may ultimately be safer as it eliminates un-fused conductors inside the residence. There are combination service entrance devices available that are CSA approved marked for service entrance. Because of Rule 6-206, this equipment is restricted in use.

Discussion: Don indicated that our vendor's booth at the back of the room has a combination meter/disconnect switches that are approved for this purpose. As of today special permission is required- in Alberta this means a variance must be written and filed with the administrator to do this type of installation.

Len Alford informed the group that in Calgary they are restricting a contractor from going more than 7.5 m.

Walter Chledowski stated that in Grande Prairie they do not allow the installation of a disconnect on the outside if more than 7.5m.

Fred Ford, City of Lethbridge, stated that there concern was with the breaker outside when it is -35, so this is also discouraged in the city, another issue is of vandalism.

Don Letcher stated that he did not see a problem with allowing the use of an outside disconnect to be able to run further than 7.5m.

Larry Lind asked how about the use with mobile home parks which run the USEB under the skirting.

Rene Leduc mentioned that a lot of work has been done to relax the rule to run USEB cable from the meter to the panel.

Joe Messmer agreed that he felt that there is no problem with this at all.

Province of Manitoba representative reported that the City of Winnipeg has made a motion to allow it, but the rest of the province we are not allowing it, because it applied not only to residential houses, we have this happening on Apartments', just to save space.

Micheal Chledowski stated that AB Permit Pro do allow a disconnect on the outside so that the conductor can be run more than 7.5m.

Brian Mcgigga does allow it in the City of Edmonton, but asks for a letter on file for special permission.

Dennis Smith informed the group that they do allow it but insist that the enclosure has the ability to be locked so that unauthorized person can come along a open the breaker.

Dan Niven informed the group that the purpose of this rule was to provide the electrician room when working on the equipment.

Don asked for a vote to leave the rule as it or to make changes to it. Show of hand indicated that there is support to leave the rule as is.

Ken Butler asked for a revote, he felt that the group was not aware of what they where voting on. He would like to see the rule changed so that special permission is not required every time you accept this type of installation. SORRY VOTE WAS ALREADY TAKEN. This can be resubmitted next year.

Action: Item Closed. Rule remains as is.

Agenda item # 2008ag-06 **CEC 10-618 (4) Bonding methods – stainless steel jacketed Mineral Insulated heat tracing cable**

Does industry understand the difference between the stainless steel sheath of MI Cable used to supply power to equipment and the stainless steel sheath of MI Electric Heat Tracing Cable?

Discussion: Rene Leduc indicated that some people in industry think that a bonding conductor is required in MI cable.

Don Letcher asked if these cables come in a set length and use a bonding conductor?

Rene Leduc indicated that in some cases these cable come with a bond conductor with in the MI jacket, and if the MI cable is used for heat tracing only and not feeding through, then a bond conductor is not required.

Jim Adams, Syncrude, has worked for a manufacturer of MI cable stated that if the MI cable is not used for heat tracing, if used for a wiring cable the stainless steel jacket cannot be used for a bonding conductor. If it is used as heat trace then the jacket can be used as a bond. It is clear in the code rule.

John Biollo suggested that we incorporate David Adams explanation and post it on the EIAA web site.

Stan asked for a show of hands to see if we should take Mr. Adams explanation and post it on the web site. Majority was for posting it on the web site.

Jim's explanation "The confusion stems from when the MI cable is not used as a heating cable, the problem is that you get something that looks very similar in the field, used for two different applications, when it's used as a wiring cable. So when it's used as a wiring cable because stainless steel has a much higher resistance it's typically 5 time that of copper, they will not allow you to use it as a bonding conductor which makes very good sense because you don't get a good ground connection. In a heating cable it is the end device and as such the bond only needs to go to the last termination point. So if your feeding a heat tracing cable when tech or a conduit, if it's bonded to the box where the heat tracing cable is terminated, you're done".

Action: Information only – item closed.

Agenda item # 2008ag-07 CEC 10-700 Grounding of cable tray in classified area

Is it necessary to install a ground wire from a pile to the bonding conductor (in cabletray)?

Discussion: Harry Langner informed the group that if two piles on building (connected) and ground wire in tray as a grounding conductor. It is generally impossible to touch two piles at same time, due to distance.

Don Bradshaw asked what location they would be located in and what would be the hazard.

Harry indicated that some are in general purpose areas and some are in hazardous areas.

Stan Misyk asked Harry if the intent is to take the ground wire from the tray to the pile only, not to the structural steel.

Harry indicated that the ground would be taken to the pile and the structural steel.

Ken Butler stated that he thought that to run to the structural steel and the pile. Ken felt that the tray was bonded through the tray. Ken supports this method of grounding.

Jim Adams informed the group that at Syncrude QE1 expansion all their grounding was done in this manner under a variance. They found that this method was very effective. Testing was done and it proved to be very good.

Stan asked if there was a ground grid or not.

Jim assured Stan that there is a grid, however, he found that additional inspections where conducted to ensure the contractor had actually done this, because when it's covered up it's hard to tell if the connections where made. It does work be it creates a lot of extra work.

Rene Leduc added that he felt that some of the problems we have is that people consider cable tray as a raceway. A raceway as in a conduit etc serves as a bonding conductor, so a raceway should be able to carry the fault current. If you run cable in a commercial building there is no requirement to bond the tray to the structure. There are two different rules that must be considered.

Don read Harry's recommendation and felt that a little more work is required to clarify the request so it can be submitted.

Harry reiterated that he would like a clarification for his engineering department.

Stan stressed that rule 12-2200 (8) for bonding, this gives us some direction and refers us back to 10-814. This does not speak to hazardous areas, your installation is in a general area.

Harry indicated that he would direct these rules to his engineers for clarification and understanding.

John Biollo added that he has had extensive experience with cable tray, there are two types of cable tray one is acceptable for bonding, the other requires a bond conductor to be installed for bonding. John cautioned the group that you need to be careful of which one you are using. For information there is a proposal at Part 1 right now that is to remove cable tray out of the definition of raceway.

Don asked Harry where he wanted to go with this and Harry suggested that this is for information only.

Action: For Information only, Item Closed.

Agenda Item# 2008ag-08 Rigid PVC spacing of supports Dennis Smith

Discussion: Don Bradshaw read the inquiry and asked Dennis to speak to it.

Dennis informed the group that he is having trouble with the utility company in the area that he works, in trying to get ATCO to follow Standata CEC 12 rule 12-1114 Maximum Spacing of Conduit Supports. ATCO has mentioned that Accucode is the first that ever have asked for this, and he said he has been working all over the province. The Standata says that you need to use a 2 ½" conduit at the base of the pole with an 8' space between the first and second stand off, this is so no one can climb the pole. What is happening in other areas in regard to this item.

Don stated that he thought that the size of conduit determined the spacing of the stand offs.

Wendy Nixon – EPCOR – does not allow stand off brackets on their poles. All conduits are run directly on the pole, even Telus conduits are run directly on the pole and we do not have a problem. Has a comment on the Standata, the last comment which says that you should contact the utility before working on there pole, we would like to see that say please stay off our pole.

Tim Central Alberta REA we do not use stand offs either, we use 3" of 4" pipe depending on the circumstances.

Jim Porth – ENMAX – we use a 3m or 10 foot fiberglass riser guard at the bottom of the pole and our first stand off bracket is at 16 feet above ground. We rack all the conduits ourselves, we do not allow anyone on our poles.

Don commented that this item was just for discussion and asked Dennis what he wanted to do with it, raise awareness, Dennis indicated that yes, this will raise awareness but if no one is following this rule, why do we have it there?

Stan asked Dennis what he wanted to do with this item, forward or what. Dennis would like clarification of the rule to make sure he is reading it right.

Mike Gardner informed the group that the Overhead Standard states that you cannot have any supports that one could climb the pole. To change this is a difficult task. As it is the standard stating that you cannot have anything on the pole that would encourage climbing.

Dennis felt that maybe a standata to clarify and bring awareness may be an idea. Maybe by discussing this at this meeting is awareness enough.

Action: No Action Required. For Information Only.

Agenda Item# 2008ag-09 CEC 12-2200 Expansion joint installation in Cable Tray Systems by Kevin Manchur

Don read Kevin's enquiry and informed the group that the EEMAC Standard which is a Canadian Standard indicated the procedures for expansion joints. There also is the National Electrical Manufacturer's Association Standard which will give a person all the requirements for the proper installations.

Discussion: Jim Adams indicated that the NEMA standard is the way to go and the National Standards are exactly the same.

Don Letcher indicated that he has the 2006 charts and they are very confusing.

Gary Boswell informed the group that the Standard and information is free on the web site.

Action: Item Closed. For Information only.

Agenda Item# 2008ag-10 CEC 12-3022(7)(8) Terminating single conductor tray cable

Stan Misyk read the question - When terminating single conductor un-armoured (tray cable), do the precautions outlined in rule 12-3022 have to be observed?

Discussion: Jim Adams indicated that if using a metal connector to connect single conductor unarmored tray cable, there would be a heat build up and he would not recommend using this method. If you used a non metallic connector on the same application, this wouldn't be a problem and if you use a PVC gland connector on the same application, this wouldn't be a problem either.

Rene Leduc quoted rule 10-800 for information only.

Don Letcher indicated that his experience showed that by using a metal connector for this application would cause heat build up problems.

Action: Item Closed. Information only.

Agenda Item# 2008ag-11 CEC 12-3022 Tray Cable with connectors

Stan read the enquiry - Does the code intend that we do or do not require connectors on tray cables?

Discussion: Stan asked Gary Boswell if he knew if there was a separate standard for Part 2 on non metallic sheath cable versus tray cable. Gary said he did not have experience with this and could not comment. Gary indicated that common sense would tell you what the difference would be.

Rene Leduc brought up the Standard on Cable Tray CSA 22.2 230 which indicated that if it doesn't have a sheath or armor, then it is non metallic.

Stan showed some pictures of examples of cables run in tray and entering conduits and electrical panels. His question to the group was, should cable exiting and entering cable trays have connectors on them or not? The photo's shows cable exiting the tray and entering a conduit without a connector and run to a panel. Is

this in compliance with the current code. We cannot find a rule that would cover this installation, is it compliant? Should we take this to Part 1 for clarity or would we accept this?

Ken Butler thought that this installation would meet the code. He felt that if he ran across this he would not ask for a connector on that conduit.

Rene Leduc gave his view of this a felt that we may be looking for something that isn't there. He recalls on a residential installation he installed a 1110 box with a 1/2" conduit running up to the joist space and fed an NMD cable into it without a connector and was never called on it. There are connectors available for this installation but what is the issue here.

Dennis Smith assured the group that if he runs across this type of installation he will call it and ensure that there is a connector on the conduit. Dennis feels that a connector is needed.

Colin Roth stated that this may seem like an innocent installation, but if for any reason the cable get pulled on damage could occur to the wire. This just does not feel right and he agreed that a connector should be required.

Stan asked the group where they would like to go with this and does any one else have any comments.

Don Letcher commented that he would be concerned with this type of installation for heating because of loading. He also commented that is someone asked him about this before installation he would deny it, but if he ran across it after it had been installed he would look at the installation carefully and probably would accept it.

Joe Messmer added that he would have no problem with the way this installation was installed, he would examine both ends of this installation before he would accept it.

Gary Boswell agreed that the picture that where shown where at an industrial project but what would be the effect if it was in a location where it was subject to workers pulling on it or stepping on it. I think in this situation this installation would be a problem.

Stan indicated that this particular contractor will be installing spray foam in each conduit to keep the conductors in place and keep rodents out.

Micheal Chledowski brought up that the recommendation indicated that the tray cable be defined as non metallic sheath cable but it doesn't go the other way that non metallic sheath cable can be used on cable tray.

Frank Krockner stated that he would like to see connectors used on all these cables to limit the chance of damage to the cable and other equipment.

Stan asked the group is this installation in compliance with CEC, if it is fine but if it is not where should we go with it. This can be accepted with a variance. A show of hands was taken and the group felt that it is NOT compliant.

Perry Shmaltz stated that section 12 has a general section that deals with support to cables run in cable tray.

Bill stated that he felt that it is in compliance with the rules of cable tray but may not meet the section of the code after it leaves the tray.

Kevin Roth stated that he is not an SCO but would not accept this type of installation if it was installed in his building.

Ken Butler added that there are many situations out there that have cable run in conduit without a connector. Ken felt that we should leave this rule as it is because if we need a connector for all cable entering a conduit would cause havoc in industry. Stan asked the group if each installation be accessed on a one on one bases through a variance.

Dennis Smith stated that this should go back to Part 1, and recalled projects that he was on, the use of strain relief and connectors where used and this made a very good installation which was secure and safe.

Rene Leduc stated that he felt that we should not be issuing anything out there that would ask for a variance. The SCO out there should be able to make a distinction on their own. Once you start doing things like requiring a variance you start to tie people's hands. Rene recommended that this item go back to part 1 for clarification and a request for change.

Stan suggested that this be taken to the AEICTC for support and discussion and then to the Part 1 committee.

Action: Forward to the AEICTC.

Agenda Item# 2008ag-12 **CEC 16-212 Interlocking furnace blower and principal ventilation fan by Noel LeChasseur**

Don Bradshaw read the enquiry - C.E. Code Rule 16-212 Standata April 2004 displays a diagram and then states or other acceptable methods. What are some other acceptable methods?

Discussion: *Noel stated that this is an issue of consistency, it seems that electricians from different areas come in and say, the way you want it is not the way we can do this and yet the Standata says that here is one option of how this can be done to control your principal air fan. Now we have two methods of installing a principal air fan, it can be a separate fan or in some cases we can use a bathroom fan as the principal air fan, so we need some clarification on this whole subject. And if there are other options we need to know what they are.*

Don replied by giving the group his experience. He has seen a bathroom fan made by Broan, that has an interlocking relay which is part of the fan and it can be used for interlocking the furnace to the bathroom fan. In Don's area contractors are primarily using the class 2 power supply in the basement and an external relay as the Standata describes.

Dan Niven stated that there are several ways to do it but when the Standata was written, the intent was just to show one possible method of having an interlock with the principal exhaust. It was not the intention to show 10 different versions of how it could be done. At that time there was a lot of problems in the industry in finding at least one correct method of interlock.

Don advised that the method of putting a relay in the furnace to achieve interlock is not necessarily an approved method and it can void the approval of the appliance, so SCO's should be aware of this and ensure that this method is not accepted.

John Biollo stated that he has seen the use of a 2 pole switch and in the past this group has indicated that a 2 pole switch is not allowed.

Clem Gratton - C&M Electric - the method that C&M is using is a separate relay mounted near the furnace, bringing the power down from either the principal exhaust fan or the bathroom fan. The power is brought down to a 120 volt relay and then we use a 600 volt rated wire to bring it down to the furnace.

Don added that there is also available a load sensing relay system which turns on the furnace blower when a large microwave fan or the principal exhaust fan is turned on.

Dennis Smith stated that even if you have a high efficient furnace you still need to install an interlock with the principal air fan. Dennis stated that in his area he will not allow the use of a 2 pole switch or a relay mounted in the furnace.

Don supported that the new building code still requires a principal ventilation fan interlocked with the furnace blower. The new building code also has a new clause that requires providing independent, possibly tempered make up air for each and every exhausting appliance that could possibly depressurize the residence - such as built in vacuums, bath fans, dryers, hood fans etc. This is a requirement when the

residence has gas appliances that are subject to back draft. Builders are installing appliances (furnaces and hot water tanks) that are not back draft susceptible to eliminate the challenges of providing independent tempered make up air for each individual exhausting appliance. There is a lot of controversy on this issue surrounding what is acceptable for the hot water tanks, so the gas and building people are currently working on resolving this issue.

Don asked Noel where he wants to go with this or is this just for information, Noel Agreed that this is just for information.

Actions: Item Closed. Information only.

Agenda item # 2008ag-13 Secondary Seals - Ken Butler

Is it possible to have the rule rescinded or modified? If it is not possible on the provincial level, is it possible that the AEICTC can move the request to the Part 1 committee?

Discussion:

Stan commented that there are a couple of Standata's published on secondary seals giving the manufacturer's time to get there product certified, the deadline is April 1, 2008 for the second draft of that Standata. I'm aware of approximately 10 manufacturer's who have declarations in place, on 60 of there products, so the process is working although it is slow and frustrating. Rene was asked to speak to the rule in Section 18.

The present rule (provincial variance) encompasses too many installations and pieces of equipment and too many wiring methods and installation techniques. In too many cases the rule as it is required to be applied makes no sense, and adds no value to an installation. It does add a great burden in cost and care, both in the field and at the administrative level. The Administrator has been approached with this problem, but has stated that he is not prepared to change it (the STANDATA). This is unfortunate, as the problem is not going to go away and the issue that precipitated the all encompassing Part 1 rule would be better death with in Part 2. It should be deleted in its present place and wording

Rene commented that he could appreciate Ken's frustration because he has felt the same frustration and have heard the same frustration through out industry. This requirement has been in the NEC from the early 90's. There is real danger if gases migrate to an electrical device. We do not hear of an incident very often but when we do there is a catastrophic effect or very near deaths. The probability is very low. There is a concern with the IS circuits if gases migrate through the cable to the device as well. The code is very prescriptive and will allow for good engineering practices to resolve this issue. The subcommittee is in the process of redrafting the rule and locating it in the rule 18-072 - Flammable Gas or Liquid Seals, and the work we are doing right now, and it is not finalized but this is the direction we are going, electrical equipment in contact with a primary seals shall be constructed or installed so that to prevent the migration of gasses and be used at pressures lower that the marked maximum. We are trying to focus on the device, there will always be the case where you will run across a device that is not certified. The second part to that rule is where subrule 1 is meet through the installation of the secondary seal, the possibility of the primary seal tender shall be by attaching a label to the seal to indicate that it meets the requirements to protect by the installation of a secondary seal. That is prescriptive and the Appendix goes into more detail about how these seals are to be installed.

Ken indicated that Rene had some good suggestions but would like to see this move into Part 2 rather than Part 1 and the devices cannot be constructed so that they would not require a secondary seal, that the device actually would have to be shipped with a secondary seal and the instructions on how to install it so that it could be taken out of Part 1 and put in Part 2.

Dan Niven informed the group of the existing Standata, and at this time there is no intention to extend the deadline. Dan answered Ken's question on the ability to rescind a rule, yes it is possible, and on a provincial level it is also possible.

Stan asked Dan if we have ever rescinded a rule? Ken felt that yes we have in the past rescinded a rule in regard to grain elevators.. Dan indicated that we try to amend a rule rather than rescinding a rule, and we are going in the direction of not amending a rule either.

John Biollo commented that this was discussed numerous times at the ETC, and with regard to grain elevators, this was provincial it was never code, Alberta Justice has told twice last year at other conferences that you cannot take out a rule just because you don't like it, you leaving yourself wide open for litigation. John had a question for Rene on Section 18, the statement made about what you are working on seems to me to be more of a Part 2 statement rather than a Part 1. Rene indicated that he was aware of this and will be trying to ensure it falls within the proper section. John expressed his concern that he is not convinced that the ANSI standard is all that it is cracked up to be. John recommended that this whole issue be taken back to Part 1 for a total rewrite and let Part 2 to there work, why are we doing there work for them. Rene indicated that doing this work is not to tell the installer how to install the devices, it just to make them aware of what is out there. It is hard to get some of the jurisdictions out there to comply to this rule as it is, a number of them are ignoring it. Our job it to identify it and it is up to them to comply.

Gary Boswell clarified that the general philosophy is to adopt Part 1, then the standard, we don't want any variance, what this rule did, when we went through it was, when we issued a province wide variance, we didn't lessen the requirements of the rule. What the Standata did is, we can not get rid of the rule, but we could provide another means or an equivalent to the rule. The scope of these products covers such a variety of stuff such as; valves, sensors, switches etc. It was put in there to drive the Part 2 people because right now, you would have to go to a dozen part 2 standards to try to get them to agree, it would be a very long process. So what they did is put it in Part 1, and over time it will be designed to meet this section.

Art Leverington commented that the seals available today only accommodate a maximum of 4 conductors, what is happening if more than 4 conductors are required?

Don Letcher stated that he thought that the two biggest problems areas in the 2006 CEC Code is #1 - Secondary Seals and #2 - fluorescent fixture disconnects, and both items are situation where items were rightfully wrong in Part 2 with part 2 enforcement have been put into the installation standard. This is just principal and maybe something should be submitted to CSA on behalf of this association that we discontinue this practice in the future.

Don asked Ken if he wanted to let this recommendation stand or what should we do with it. Ken indicated that he would like it taken out of Part 1.

Stan also showed some pictures of thermo well devices that had broken down due to the migration of fluid on an oil site. These were in service for approximately one year.

Action: Forward to the AEICTC meeting for information only.

**Agenda Item# 2008ag-14 Residential outside receptacles – handbook
CEC 26-724 by Len Elford**

Although only one outdoor receptacle is required by rule 26-714(a), if additional receptacles are installed outdoors are they required to be on a dedicated circuit as well or if only one receptacle is required to be on a separate circuit, why do they refer to receptacles in 26-724?

Discussion:

Len stated that there seems to be some confusion in the province with regard to outside receptacles.

Rene Leduc chair of Section 26 – stated that the intent was that only one receptacle is required but if more than one is installed they must meet the code.

Representative from Manitoba stated that a minimum of one plug is required but if more are installed they must be one that circuit or another GFI circuit.

The City of Calgary is calling this rule to meet the intent.

Fred stated that in Lethbridge they have been following the intent of the rule.

Brian McGegga stated that in the City of Edmonton the inspection group calls it to meet the intent of the rule.

Don mentioned that there is an error in the Handbook and Len verified this, the question was asked; how do we deal with this?

Don Letcher stated that this item was dealt with in the 2006 conference this item was dealt with, it was agreed to at that time.

Kevin Harrison stated that at NAIT they tell there students that the Handbook is a guide and is not an actual code, so caution has to be used.

Stan commented that most people that use this Handbook may not have a copy of the Code and do not necessarily contact there inspection authority.

Ken City of Red Deer are allowing tapping off of a general purpose circuit for an outside receptacle.

Ron Ludwar Medicine Hat we allow one dedicated circuit but other receptacles can be on a general purpose circuit.

Walter Chedlowski of Grande Prairie, calling it as per the code rule however have seen a receptacle on a general purpose circuit only once.

Dennis Smith Cold Lake – are calling it as per the intent of the code however if the receptacle is not accessible from the ground it must be GFI protected.

Michael Cheldowski stated he does not allow outside receptacles be feed off of general purpose circuits unless they are not accessible from the ground..

Rene Leduc indicated that in the case of the handbook, CSA puts this out and should update it whenever a change is made to the code, this is a lot more work. For the record, the chair of Section 26 was not in agreement to the direction this issue was going, this is a design issue: either the breaker trips or it dosen't.

Don Letcher stated that there are two rules involved here, 26-724(a) talks about outdoor receptacles installed in accordance with 26-714(a). 26-714(a) talks about at least one duplex receptacle must be installed readily accessible at ground level for the use of appliances to be used outdoors. 26-724(a) state it has to be on a separate circuit. Don expressed that he felt that the rule a fine as the are.

Stan asked Len if he wanted the rule to go to Part 1 for interpretation or change. Len indicated that he would like the rule changed and consistency between the Handbook and the Code.

Action: Forward to Part 1 for clarification.

**Agenda Item# 2008ag-15 Location of residential furnace disconnect switch
CEC 26-806**

Don read the item - Some furnace disconnects (switches) are not "readily accessible" and may require a step ladder to reach it. This is not considered as readily accessible as per CEC 28-604(3). Have a stipulation in CEC or STANDATA stating maximum height from floor level for furnace disconnect switch similar to breaker heights

Discussion:

Stan stated that typically a lot of the ceilings in basements are unfinished and could be from 8 feet to 9 feet high. We are looking for a code rule that would make this switch readily accessible. Comment from various jurisdiction to see what they are faced with.

Dennis Holmes commented that we should look at why the switch is there in the first place, the City of Calgary is permitting it in the ceiling. The purpose of this switch is to assist someone when they are working on the furnace.

Dennis Smith informed the group that the problem is that there is no where to put the switch if the basement is not finished, he insists in his area that the switch be located so that you do not have to walk past the furnace to operate the switch. Some contractors have installed a 2 x 4 mounted to the floor joist down to an accessible height so that it can be reached.

Fred City of Lethbridge - has been allowing the switch to go in the ceiling but are asking that it be in a location as not to walk past the furnace.

Ken - Red Deer - have been asking that they not be in the ceiling.

Representative from Manitoba - does not have a problem of switches being on the ceiling, they approve switches on the ceiling for unit heaters, so this would be the same.

Ken Butler stated that the original reason we wanted the furnace switch located in an accessible location was to do with the oil burning furnaces that would be faced with a run away at time and so you could shut the power off to prevent fires. With the new gas furnaces these days, Ken felt that there is no problem with switches on the ceiling.

Ron Ludwar Medicine Hat - we are encouraging the location of switches on stud walls where possible, these switches are a convenience for maintenance.

Carl Deschene stated that his understanding was that a furnace switch was required to be located at the 6 foot mark with identification, lock off and painted an orange color.

Brian MaGegga - stated that in the City of Edmonton we are allowing the switch to be mounted on the ceiling because when the house is under construction the contractor usually installs the furnace and mounts the switch on the ceiling.

Action: Item Closed. For Information only.

Agenda item # 2008ag-16 CEC 30-504 Stairway (lighting) by Dan Sereda

Don Bradshaw read the enquiry - Do motion detectors and wireless switches comply with the intent of sub-rule 30-504 (1)

Discussion:

Dan Sereda commented that when the basement is developed a 3-way wall switch is required. If the staircase is dry walled it is difficult to install the three wire conductor to the existing switch located at the head of the staircase. Motion detectors and new wireless switches are available that can be installed rather than a conventionally wired 3 way switch. These are approved and appear to meet the intent of the rule when wall mounted at the head and foot of the stairway,

Don stated that from his perspective a wireless switch would suffice, the code does not specify that the switch be hard wired.

Dennis Smith indicated that his understanding was that the code called for a 3 way switch which was roughed in, so it is to be hard wired as part of the house wiring. However, if the wireless switch achieves the objective of the code, then he sees nothing wrong with a wireless switch.

Lou Greco stated that if the wireless switch is approved, then we should also make sure that the remote switch is attached to the wall at the end of the stairs and not carried in someone's pocket. Dan agreed.

Don Bradshaw added that the code does say it has to be wall mounted, but it might not necessarily need a conventional wall switches. A twist to this technology is Kidde has a smoke alarm that uses a wireless interconnect so the third wire is not required. If that smoke alarm meets the CSA standard for smoke alarms, then the third wire is redundant as the interconnection is achieved by other means.

Stan Misyk commented that reading the code it refers to a wall switch, that means to me as a hard wired wall switch. Maybe we need to take this to Part 1 for clarification.

The representative from Manitoba indicated that they ask for a hard wired switch for a 3 way switch going into the basement. If the basement is not finished they ask for provisions for a 3 way switch to be added when the basement is finished.

Zoltan Nagy indicated that a simple solution would be in the case of a home owner he could hire an electrician, we all know how to fish.

Stan suggested that we need a clarification on what is a wall switch, should we take this to Part 1. Don stated that a switch is defined, he sees no problem with this, and lets accept it.

Dennis Smith stated that if the wireless smoke detector is UL approved, why not accept a wireless switch.

Brian McIntosh indicated that in Section 32 it states that a smoke detector is to be hard wired unless you cannot on a renovation, then you can use a battery operated one. I'm using wireless smoke alarms and am not happy with their operation, in regard to safety.

Gary Boswell commented that the wireless switches may not be able to be shut off as a true disconnect. In the case of changing a light bulb you are not sure if the power is actually shut off or not.

Ken Butler stated that 3 way switches are not recognized as a disconnect switch, you must shut off the breaker when working on it. A switch is a switch and it should not matter how this is achieved, we should not restrict new technology.

David Moller indicated that he has switches in his house and is happy with their operation, the switches can be mounted with two sided tape. Stan stated that he is not against new technology, but he thinks we should take this to Part 1 for clarification.

Zoltan Nagy added that there are a number of motion detector switches in bathrooms which turn lights on and off and they have been used for some time now.

Stan asked Dan Niven if he would accept a motion detector switch as the assistant technical advisor. Dan indicated that he would go by what was written in the code, and that is the way we would interpret it, it would be a conventional 3 way switch. Stan asked for a show of hands to take this to Part 1 for interpretation to accept a wireless switch to turn lights on or off. The group voted in favor of the motion.

Action: Forwarded to Part 1 for Interpretation

Agenda Item # 2008ag-17

Don Bradshaw indicated that this item was one of his items and because of the time, he suggested that this item be forwarded to next years conference. There was a show of hands, the majority agreed to forward this item to next years conference.

Don thanked everyone that submitted items for this conference and reminded the group that if you are sending an item in, please send them in as early as possible so that we can do the best background research possible on that particular item.

IV - PRESENTATIONS

Kelly Morris representing the ECAA conducted a presentation on the revised Master's Program.

Kelly informed the group that he has been involved in revising the Master Electrician's Certificate Program for several years. Kelly is a Master Electrician, Professional Electrical Contractor, he is past president of the ECAA and runs an second generation electrical contracting business in the City of Edmonton for the last 34 years. Larry Lind questioned the courses required to become a Professional Electrical Contractor. A person must be a Master before one can become a PEC. In 2003, the proposed Permit Regulations were to allow a journeyman electrician to be able to be issued permits. The ECAA lobbied to stop this change of the Permit Regulation, at this point the ECAA approached Safety Services branch of Municipal Affairs to enhance the Master's Program. Meetings where held across the province to discuss and come up with a new enhanced masters program. Before the program can be completed the terminology must coincide with the terms that are in the permit regulation. The new program will have a Certified Master Electrician and a Registered Master Electrician which means if you hold a Certified Master Electrician's Certificate you are an active Master and are eligible to be issued permits, if you are a Registered Master you are considered non-active and cannot be issued permits. There will not be an abeyance of master's certificates anymore. There will be an annual fee charged for both types of master's certificate. The program will be self governing with a committee to deal with any master that is not upholding to the rules. This committee will have the power to discipline masters that are guilty of a offence. There where approximately 4000 invitations sent out for feedback to active and inactive master, 404 responses, 360 support the new scheme, 23 had additional question and 44 opposed. Municipal Affairs & Housing supports the program and are working with ECAA to bring this program to life. The Master's program is to meet TILMA requirements. Most government departments did not have a concern with the master's program enhancement. APEGGA supports the master's program.

Ken Butler asked what would happen if the draft permit regulation would have been accepted what would have happened. The regulation would allow a journeyman to be issued permits.

Joe Messmer informed the group that he was surprised that the Permit Regulation had gone through, he thought that with the ECAA protesting the regulation it would not be enforced until all these issues where resolved.

Larry Lind questioned that the new permit regulations coming into effect is contrary to what we are talking about. This is a step in the wrong direction. The master's are a controlled group aren't they?

Michael Chledowski with regard to the new master's program, does a person have to be a PEC to be able to be issued permits. It is not required that a contractor be a PEC to be an active master.

Stan Misyk asked if he had to be a member of the ECAA to be a master. NO, it is not a requirement, but you probably are better off being a member as far as annual fees as well as a master.

Rene Leduc asked if existing master's can be grandfathered into the new program or what is the process. Kelly answered with that a person would have to take the required code training sessions within a specified time before he would be certified.

Larry Lind asked that any of us that are SCO's would the training that is required for SCO's be sufficient for the Master's certificates. Yes that would suffice.

Dennis Smith asked what control we would have if a master is not correcting his deficiencies continually. Kelly replied that this would be taken to the governing board that has powers to suspend a master's certificate if required.

Walter Chledowski asked if it is necessary for a contractor to be a master to be in business? Can he have a master in his employment to sign permits? Does master who does not live in the area is signing permits for a contractor out of his area? Kelly replied that this is something that will be dealt with and it would be hoped that the governing board would ensure the master is responsible.

Larry Lind asked if a master in one province can sign permits for a master in another province? And what are the fees, and what is the time frame? Kelly replied that yes this is one thing that the program will be looking at and your second question will probably be yearly and am not sure what the fee will be.

Kelly briefly discussed the New Permit Regulation and indicated that the ECAA did not have the involvement that Municipal Affairs is claiming that they had prior to adoption. Comment where made in the ETC minutes that the members reviewed the permit regulations shows that there was insufficient information. In September 2006 it was reported that the ETC have reviewed the draft permit regulation, but there is no evidence that this actually happened. Kelly informed the group that the ECAA will be pursuing the process of action to change the document so that it reflects the new master's program.

Stan indicated that if anyone has comments in regard to the Permit Regulation to make sure that they contact Kelly at the ECAA.

Stan presented Kelly with a portfolio and a \$50 gift certificate on behalf of ITS-Intertek in appreciation for his presentation.

Copy of this presentation is posted on the EIAA2004.com website.

PRESENTATION

Rob Falconer from ENMAX

Rob spoke to the GE regulation in regard to solar panels, what is the effect on connecting a solar system to a power grid? This system is new to Alberta, Rob showed some pictures of some solar systems in various part of North America. Solar panel cost are coming down each day, the price of solar panels today is \$4.00 a watt, there is talk of \$1.00 a watt in the near future. There are no moving parts, the life span of a solar panel is 40 years according to some manufacturers. Micro wind systems are now economical in Alberta. Micro CHP, combined heat and power, whisper jet about the size of a dishwasher. Similar to a conventional boiler that it produces heat, the by product is electricity, it does this with a sterling engine. Some things about Co-generation, public likes it you get power and heat out of the same unit. This product, and there are 6 here in Alberta, these units are not CSA approved. We're working with the federal government to look at this product and see what we need to pull it into the market place. Micro Generation Regulation on February 1, 2008 government passed the regulation and there is a news link. As of January 1, 2009 this regulation will come into effect. Copies of the news release were left for information. Rob showed some examples of installation that he has done.

Don presented Rob with a portfolio and a \$50 gift certificate on behalf of ITS-Intertek and thanked him for his presentation

Copy of this presentation is on the EIAA2004.com website.

Presentation by Kevin Harrision from NAIT – Fire Alarm Systems

Kevin presented and in-depth overview of various types of fire alarm systems and associated wiring methods. Kevin also stressed the importance of meeting the requirements of other disciplines such as the Building inspection authority requirements.

A copy of this presentation is included with the minutes.

Stan presented Kevin with a portfolio and a \$50 gift certificate on behalf of ITS-Intertek in appreciation for his presentation

Copy of this presentation is on the EIAA2004.com website.

V - Committee Reports

Oil & Gas Committee – Stan Misyk

The last meeting was held on April 15, 2007, there has been some changes in memberships, Pierre MacDonald is now the Provincial Administrator regulator representative. Kevin Wanner is the representative from Saskatchewan, Ivan Pye is the BC representative. Vince Rowe Section 18. One item that was discussed was the auxiliary load tap off's. We had that in place for quite some time in the Oil & Gas regulations; we clarified it to make sure it was taken off the load side of the breaker not the line side. Discussions took place on the use of USEB used in the oilfield to feed an oil controller and in essence ensure that an appropriate grounding is maintained is required by the CEC. A USEB cable can be used to feed a controller (3-wire) and the neutral used as a ground. The Doghouse on a rig floor, is classed Class 1 Zone 2 area, the concern that was expressed and brought to our attention was that there are various scenarios of dog houses, they are either swing out of telescoping and as long as the vapor barrier is being maintained it may encroach into a classified area. Secondary seals were discussed for information only. General purpose fixtures, a concern was expressed with general purpose lighting on service rigs.

OBIEC – Stan Misyk

We will go through a little history, standards, hi-lights, excerpts from the SMS and the proposed time schedule for completion. We will focus on the provisions for Safety Codes Officers in the SMS. A little background, this started in the late 1990's, evolved in 2000, 2001, 2002 etc, seeking global support across Canada .We have support in principle across Canada, and today we will review the SMS standard to it's final stages. The Safety Management System is going to be a mandatory document, on how an organization may become accredited to use this type of a process. OBIEC is one part of the Management System, the "technical engineering portion", we will not discuss today. The Objective Based Industrial Electrical Code, will highlight the principals and objectives, and is based on the IEC-60364 fundamental principals. The SMS requirements are based on an ISO document. Who can use this, what's the plan and where will it go? The regulator may adopt the OBIEC with the following parameters; the authorized user will establish a management system that meets the OBIEC and SMS requirements. Once the SMS document is finalized, the Safety Management System is rolled out, The applicant will have to apply to be authorized to use the OBIEC, and the Safety Management Manual. They will also have to register their Safety Management System with the registrar accredited by the Standard Council of Canada, similar to QAI. The SMS has provisions for, duties of Engineers, Contractors, workers, inspectors, installation inspections, and also CEC Part 1 and Part 2 which are the bench marks for safety. That was key in moving this project forward, about a year ago there was a hiccup, in the analysis it was asked what is the bench mark, so CSA Part 1 & Part 2 are the bench mark.

Stan read over the definitions and responsibilities of the parties involved to meet the Safety Management System -commitment by management for engineering, design and inspections. Stan also read off the duties of all involved, emphasis on safety due diligence and design. Stan indicated that Draft #4 is completed April 1, 2008, there will be a ballot some time in May with final approval in June 15, 2008 and is expected to be published January 2009. This is where it is at today, we need your feedback as soon as possible. you can e-mail Stan at smisyk@inspectionsgroup.com

ETC Report

John Biollo gave a summary of the report of the ETC, there were 4 meetings since the conference last year, ETC regarding the Standata on the disconnect for fluorescent fixtures, Electrical utility Code, task force was created for secondary seals and a Standata was issued, a correspondence course for SCO's was approved, CSA will be releasing a new code book every 3 years now, next code will be published January 2009, Cathodic protection and the issuance of permits, that is still under discussion, Relocated structures – ongoing, Master's Electrician Program – ongoing, the next ETC meeting is scheduled for March 6, 2008.

CE Code Advisory Committee

John also gave a summary of the CE Code committee report, receptacles for temporary power, interpretation came back and dealt with in an agenda item, nameplates for modified heating sets, standata issued, on an agenda item, section 24 patient care areas, standata issued, counter receptacles dealt with, standata issued. John advised that he has completed his term on both the ETC and the CE code committee and thanked everyone.

Stan asked about the correspondence course. John indicated that there is an SCO correspondence course sponsored by the Safety Codes Council, and is an A and B course, you must have the electrical basic training to be able to take it, you have 6 months to complete and have one 3 month extension only. When you apply to take the course you can question the course advisors which are Don Letcher and John Biollo. There has been talk of some electrical upgrading courses, but so far it is only talk.

Zoltan Nagy asked that if you take level B only, you do not get certified, is this correct,

John replied that that was correct if you take level B you will not get designation of powers.

Utility Committee – Mike Gardner

Mike informed the group that the title of the Alberta Electrical and Communication Utility Code is now changed to the Alberta Utility Code. In the scope they have included street lighting. Section 8 they have taken out the disconnecting means for pole top transformers and also fusing for pole top transformers, there is a push out on reliability on power system, and the fuse there is only to protect the equipment, there is no people protection in any of the utilities. There has been some reduction of clearances in tree trimming, power line to trees, we were at 2m wet flashover, that has been changed to 3m wet flashover. A lot of the rules in section 6 are grounding have been moved to the amendment section of the underground standard. The reason they did that was because in the next standard which we have a draft of is for the 2010 underground and overhead standard. The underground standard is going to have a large section on grounding, this started off with the subsurface of volts and it got expanded to the scope of that grounding to anything feed from an ungrounded system. So it was felt that most of the section on grounding will end up in the Overhead Standards. These rules have been moved out of section 6 and it's in preparation for the new 2010 standard. They want to use them early so they put them in the amendments. They have changed some rules such as clearance of pipelines, conductors over a roof, horizontal distance from a building, moved the appendix A and taken the old section 4 safety rules and move them to appendix B.

Workplace, health and safety has some concern with closing breakers, they are looking a moving some of these rule to the OH&S language, so we will see some of these changes in the 2010 standard. Accident Stats for 2007, we has 360 incidents reported, and 427 for 2006, we had 13 reported injuries and 21 for 2006, we had 2 fatalities, one 19 year old electrocuted due to vandalism, cut down a tree and them cut down a power pole, we had a few serious accidents when working on 600 volt MCC equipment.

Stan asked when the new Utility Code will be available and when a copy of the 2007 Incidents Report will be available to the public. Mike stated that the Utility Code is out to print as we speak, so it will be available in the next few weeks. The Standards will not be out until 2010 but some of the changes and included in the Utility Code as amendments. 2007 incidents stats are available on Municipal Affairs web site, however, there are some people that send in there reports late, so we like to wait until the end of March before we post the most recent report.

Ken Butler asked if any of this report will be included with the minutes. Stan advised that they could be available on the AMA website when available.

Certification Bodies Report – Gary Bosewell CSA

Gary stated that there are a lot of modules being built these days which involve all disciplines, it is not only electrical it involves all disciplines. There are fuel burning equipment in these units which involve certification from more than one discipline. They have had meeting with government on this subject to try and reach an agreement of how these items are to be dealt with, so as a heads up be aware of these item when you look at one of these units. Gary indicated that he is not in favor or a 3 year code cycle but it looks like that this is what we will be faced with. The problem with this is that not all jurisdictions may not adopt each code cycle.

Paul Heide from Intertek

Paul informed the group that he will focus on the concerns that you may have out in the field. Certification Issues and will try to clarify that today. As with CSA, please be sure to forward PIR's on products that are in question. Class B and Class A wiring, as it relates to conventional or non addressable systems, DCLB & DCLA wiring and as it refers to addressable systems and Alberta Building Code 2006 Fire Alarm Systems are some of the new updates. There is a lot of cross reference of Fire Alarm Systems, smoke alarms which are handled in Section 32, and in two parts of the Building Code, Part 3 and Part 9.

Fire Association Report – Carl Deshene

Carl on behalf of the Fire Investigation Association of Alberta informed the group that because of copper theft, he was called out to two fire, one where a man was blown out of a switchgear on a third attempt to steal copper out of an vacant building. He was blown out and caused a fire and as far as he knows the person did not survive. He was called to two separate fires which involved aluminum wiring, however, in both cases the fault was due to the age (30 years) and the was a breakdown of the receptacle. The fires did not amount to much but noted that it was very cold when this happened and they were contained within the metallic boxes. USEB fires, there has been as many as ever, one insurance agency suggested that we should litigate action against the contractors responsible for the installations.

The fire departments are concerned with the fumes given off by these conductors. A lot of the problems are due to the fact of the lack of secondary fusing of these conductors. Metal Halide lamp failure continues, there have been 6 incidents in the City of Edmonton last year regarding these lamps. There has been number of fires caused by heat tracing in Edmonton and Northern Alberta. There has been emphasis on making sure that heat tracing is installed according to the manufacturer's specifications. There has been a few fire cause by lightning arresters but seem to be of minimal concern at this point.

Ken Butler asked if there should be something he should be warning his contractor regarding metal halide fixtures. Carl replied that the key would be to regularly shut the fixture off so that the fixtures can cool down.

Gary Boswell asked if the aluminum wiring fires, where the receptacles the original ones installed. Carl replied that yes they where the original ones.

Don Letcher had the same question and had another question in regard to the USEB fires, where these houses that where already occupied? Carl replied that some of them where occupied and some where still unoccupied. There was no cause found besides settling, the installations seem to have been installed properly.

Zoltan Nagy informed the group that he ran across a situation similar to the aluminum wiring issue. This was a receptacle with copper wiring and the wire was terminated utilizing the " back stabbed" method and the receptacle was burnt out and just hanging on by a thread. Also Zoltan informed the group that he has come across a light fixture with a half round globe, the fixture had heated up and burnt off the marrettes in the outlet box, upon further investigation it was found that the fixture had a bogus label on it, so just a heads up to watch for fixtures that are not approved. Carl informed the group that yes there is a lot of counterfeit breakers, fixture and all types of electrical devices so yes, be aware of this and make sure you check for the labels.

Joe Messmer commented that in the case of USEB fires, a lot of the causes for these fires is the amount of room in the meter sockets. Conductors are cramped in these boxes and pressured against the walls of the meter socket causing short circuits and resulting in fires.

Stan asked that Carl's presentation refers to fires in the City of Edmonton area, what is happening in the rest of the province? Carl assured the group that he is in Edmonton and he see's these fire because he is close to them, there are the same fires happening in the rest of the province, Carl is just more familiar with the ones in Edmonton.

Don Bradshaw added that regarding the lighting failures may be do to when they are shipping them, they push the light socket holder down which limits the clearance of the lamp to the fixture, so maybe the installers need to be aware of this, they need to pull the lamp holder back in place to allow proper clearance from the bulb to the body of the fixture..

Stan closed the meeting with his thanks and reminded the group that as per there vote on where to have this meeting next year, the majority voted to have it here in Sherwood Park again next year.

Next Years Conference to be Held at Franklin's Inn, Sherwood Park on February 6th & 7th , 2009