

# Meeting Minutes: Board of Electricity

Date: April 9, 2019  
Time: 9:00 a.m.  
Location: Minnesota Room, Department of Labor and Industry  
443 Lafayette Road North, St. Paul, MN 55155

## **Members Present:**

David Curtis  
Alfreda Daniels  
Cole Funseth  
Derrick Givens  
Michael Hanson  
Chad Kurdi  
Peter Lindahl (via tele)  
Scott Novotny – Vice Chair  
Daniel Westberg – Chair (via tele)  
John Williamson  
Weston Wilson

## **Members Absent:**

Duane Hendricks – Secretary

## **DLI Staff & Visitors:**

Jeff Lebowski (DLI)  
Lyndy Logan (DLI)  
Neil Furman (DLI)  
Dean Hunter (DLI)  
Marty Kumm (DLI)  
Todd Green (DLI)  
Charlie Durenberger (DLI)  
Adam Hanson (ABC)  
Gary Thaden (NECA)  
Bob Akers (East Central Energy)  
Dan Ordahl  
Jack Kluempke (COMM)  
Ben Martin (COMM)  
Dan Moynihan (City of St. Paul)

### **1. Call to Order**

The meeting was called to order at 9:04 a.m. by Vice-Chair Novotny. Roll call was taken by Secretary Hendricks and a quorum was declared with 11 of 12 voting members present in person or via teleconference.

### **2. Approval of Meeting Agenda**

A motion was made by Curtis, seconded by Givens, to approve the agenda as presented. The roll call vote was unanimous with 11 votes in favor of the motion; the motion carried.

### **3. Approval of Previous Meeting Minutes**

A motion was made by Givens, seconded by Hanson, to approve the January 8, 2019, meeting minutes adding additional comments from Lindahl on Item 8, Open Forum (***shown in italics below***). The roll call vote was unanimous with 11 votes in favor of the motion; the motion carried.

### **8. Open Forum**

Jeff Keljik, Minnesota Electrical Association, asked if the electrical test would be modified and Williamson said the journeyworker exam was reduced to 80 questions from 100. The license exam guide was completely reformatted. The master electrician test will also be reduced to 80 questions from 100. The “passing score” for all examinations is 70%. Historically since the 1980’s,

journeyworker exams have had a “passing rate” in the range of 40-45%. ***Lindahl said he would be concerned with lowering the standard just because of a labor shortage to squander down the standards for safety for those folks that are going to have electrical work done at their houses or buildings. [Testers] need to come prepared, slacking on preparation is not what should be catered to.*** Williamson said the department believes competency can be equitably assessed with 80 questions instead of 100.

#### 4. Regular Business

- a. **Expense Approval** – reviewed and approved the per diem and expenses.
- b. **Enforcement & licensing update** – Charlie Durenberger referred to **Attachment A**, CCLD Enforcement Stats 2014-2019 and **Attachment B**, Electrical Enforcement Orders.
- c. **Inspections update**  
Williamson referred to electrical news in the spring edition of the CCLD Newsletter.  
Visit: <http://www.dli.state.mn.us/sites/default/files/pdf/review50spring19.pdf>  
Kurdi suggested that more examples related to theory, calculations, and code be added to the exam guide.

#### 5. Special Business

- a. iMS (Intuitive Municipal Solutions) permitting and inspection system  
Williamson said that the new system will replace the e-Trakit/Trakit system in fall 2019. For more information and to sign up for iMS related news, please visit:  
[https://public.govdelivery.com/accounts/MNDLI/subscriber/new?topic\\_id=MNDLI\\_16](https://public.govdelivery.com/accounts/MNDLI/subscriber/new?topic_id=MNDLI_16)
- b. Adoption of the 2020 NEC
  - Williamson said the 2<sup>nd</sup> draft was published on April 3, 2019, and is available on NFPA’s website.
  - Lebowski added that the Board will need to set up subcommittees to discuss possible rule changes. The effective date of the new rule would be July 2020.
  - Williamson gave a PowerPoint presentation – **See Attachment C.**

#### 6. Committee Reports

Construction Codes Advisory Council (CCAC) – has not met because the Energy Code has not released its findings. The CCAC is waiting for this before scheduling a meeting.

#### 7. Complaints

No complaints brought forth

#### 8. Open Forum

Nothing

**9. Board Discussion**

Lebowski said the Request for Comments will be going out next week. There is nothing that needs to be done – this is just a standard rulemaking process.

**10. Announcements**

Next regularly scheduled meetings – 9:00 a.m. Minnesota Room, DLI

- a. July 9, 2019 (annual meeting)
- b. October 8, 2019

**11. Adjournment**

A motion was made by Givens, seconded by Daniels, to adjourn the meeting at 9:53 a.m. The vote was unanimous with 11 votes in favor of the motion; the motion carried.

Respectfully Submitted,

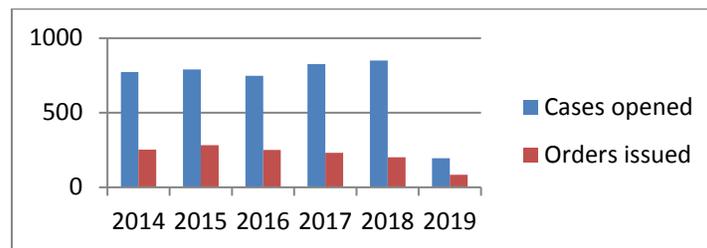
*Scott Novotny*

Scott Novotny  
Vide-Chair

## CCLD ENFORCEMENT STATS 2014-2019

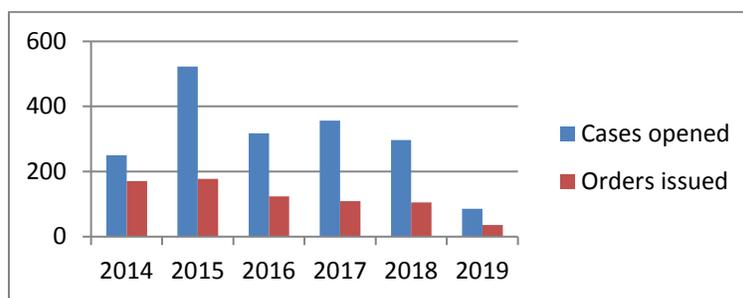
### RESIDENTIAL BUILDING CONTRACTOR

	CASES OPENED	CASES CLOSED	ACTIVE CASES	ORDERS
2019	195	244	420	85
2018	850	792	478	202
2017	826	824	411	231
2016	758	818	463	250
2015	790	900	538	282
2014	774	714	657	252



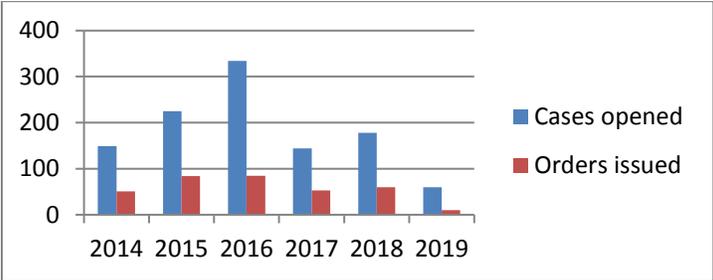
### ELECTRICAL

	CASES OPENED	CASES CLOSED	ACTIVE CASES	ORDERS
2019	86	86	186	36
2018	297	292	160	105
2017	356	353	196	109
2016	317	432	235	124
2015	523	468	328	178
2014	250	238	220	171



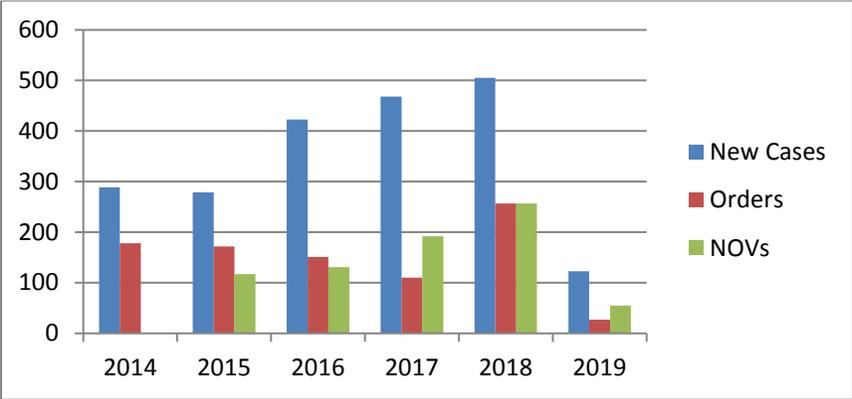
### PLUMBING

	CASES OPENED	CASES CLOSED	ACTIVE CASES	ORDERS
2019	60	38	66	10
2018	178	160	39	60
2017	144	167	30	53
2016	334	362	71	85
2015	225	250	92	84
2014	149	157	102	51



### WORKER MISCLASSIFICATION

	CASES OPENED	CASES CLOSED	ACTIVE CASES	ORDERS	NOVs
2019	123	114	166	27	55
2018	505	527	186	109	257
2017	468	465	201	110	192
2016	423	455	190	151	131
2015	279	237	251	172	117
2014	289	260	148	178	NA



## **ELECTRICAL ENFORCEMENT ORDERS**

**January 1, 2019 through April 8, 2019**

**Unless otherwise noted, Cease and Desist Orders and Administrative Orders are based on allegations of unlicensed activity**

**A Consent Order is not a finding of fact or an admission of guilt.**

**For more information on specific orders, please call (651) 284-5069**

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**Able Energy Corp., dba WeKnowSolar.com, and Michael J. Harvey, Individually  
– Lic #EA006412 and AM711510**

Shoreview, MN and River Falls, WI

\*Findings of Fact, Conclusions of Law, and Order: Licenses revoked; Respondents ordered to cease and desist from performing or offering to perform electrical work; \$30,000 monetary penalty against Able Energy and \$20,000 monetary penalty against Respondent Harvey – 1/28/19

\*ELE1712-00033/00017/00016/1710-00009/1709-00049/1607-00023/00021/CMW – OAH Docket No. 82-1902-35187

**Anderson, Rick R. – Lic. #AJ013767**

Inver Grove Heights, MN

\*Licensing Order: License suspended until such time that continuing education requirements are completed; \$1,000 monetary penalty – 1/2/19

\*ELE1812-00021/WJS

**Bassing, Brian R. – Lic. #AJ014674**

Ogilvie, MN

\*Licensing Order: License suspended until such time that continuing education requirements are completed; \$1,000 monetary penalty – 1/2/19

\*ELE1812-00018/WJS

**Brink, Zachary A. see Restorz, LLC**

**Connectors Audio and Video Services, Inc. and Jerome Kramer, Individually. – Lic. #TS753106**

North Mankato, MN

\*Consent Order: License granted with conditions; Respondents shall fully comply with the requirements for continuing education; \$2,000 monetary penalty with stayed with conditions – 3/19/19

\*ELE1804-00010/AWT

**Croix Management, LLC and Croix Valley Contracting, LLC**

Taylors Falls, MN

\*Administrative Order: Corrective action required; Respondents shall cease and desist from performing or offering to perform electrical work; \$5,000 monetary penalty of which \$4,000 is forgivable if violations are corrected or corrective plan acceptable to Commissioner is developed – 1/24/19

\*ELE1812-00024/CMW

**Crumrine, Robert** - see Genesis 6 Construction, L.L.C.

**Diers, Thomas R. – Lic. #AM005053**

Minneapolis, MN

\*Consent Order: Respondent censured; \$2,000 monetary penalty with \$1,500 stayed with conditions – 3/19/2019

\*ELE1808-00015/CMW

**Dillard, Cornell – Lic #RE668162**

Minneapolis, MN

\*Licensing Order: Registration revoked; Respondent ordered to cease and desist from performing or offering to perform electrical work; stay of \$2,250 monetary penalty previously assessed is lifted, and an additional \$7,000 monetary penalty is assessed – 1/3/19

\*ELE1812-00025/CMW

**Dimmer, Allen G. – Lic. #AJ711407**

Fargo, ND

\*Licensing Order: License suspended until such time that continuing education requirements are completed; \$1,000 monetary penalty – 1/2/19

\*ELE1812-00020/WJS

**Enterprise Sales Company**

Valley City, ND

\*Consent Order: Respondent shall not perform or offer to perform in the state of Minnesota services for which an electrical contractor license is required until such time the requisite licensure is obtained – 3/19/2019

\*ELE1712-00038/AWT and OAH Docket No. 21-1902-35665

**Fisher, Johnnie W. – Lic. #PL711184**

Lucasville, OH

\*Licensing Order: License suspended until continuing education requirements are completed; \$1,000 monetary penalty – 1/14/19

\*ELE1812-00018/WJS

**Four Seasons Electric LLC – Lic. #EA004908**

Owatonna, MN

\*Consent Order: Respondent Censured; Respondent shall ensure all of its registered unlicensed employees are properly supervised while performing electrical work; \$3,000 monetary penalty with \$2,000 stayed with conditions – 4/8/19

\*ELE1902-00028/WJS

**Genesis 6 Construction, L.L.C. and Robert Crumrine, Individually – Lic. #BC683429**

Jordan, MN

\*Consent Cease and Desist Order: Respondents censured; Respondents ordered to cease and desist from performing or offering to perform electrical work in the state of Minnesota until granted the requisite licensure; \$3,000 monetary penalty with \$2,000 stayed with conditions – 2/28/19

\*ELE1809-00016/WJS

**Harvey, Michael J.** - see Able Energy Corp., dba WeKnowSolar.com

**Helms, Richard R., Individually and dba Richard Helms Electrical – Lic. #EA709793 and #AM004429**

Minneapolis, MN

\*Licensing Order: License suspended until such time that Respondent fully complies with Commissioner's January 8, 2019 request for information and pays monetary penalty; During term of suspension Respondent shall cease and desist from performing or offering to perform electrical work in the state of Minnesota; \$6,000 monetary penalty – 3/1/19

\*ELE1812-00026/CMW

**Johnson, Robert D. – Lic. #PL677301**

Coon Rapids, MN

\*Consent Order: Respondent censured; Licensing Order vacated; Respondent shall ensure that he has complied with continuing education requirements; \$1,000 monetary penalty with \$900 stayed with conditions – 4/2/19

\*ELE1901-00007/WJS

**Lipinski, Daniel S. – Lic. #PL004778**

Oakdale, MN

\*Licensing Order: License suspended until such time that continuing education requirements are completed; \$1,000 monetary penalty – 1/2/19

\*ELE1812-00019/WJS

**North Star Electrical Contractors, Inc. – Lic. #EA001357**

Plymouth, MN

\*Consent Order: Respondent censured; Respondent shall ensure that all permits are obtained prior to commencing work and all required inspections are requested; \$2,000 monetary penalty with \$1,500 stayed with conditions – 3/19/19

\*ELE1812-00007/WJS

**Ohren Electric, Inc. and Justin L. Ohren, Individually – Lic. #EA737864 and 651969 and AM008355**

Dalton, MN

\*Consent Order: Respondents censured; Respondents shall ensure all requests for electrical inspections are filed prior to commencing electrical work; \$10,000 monetary penalty with \$8,000 stayed with conditions – 3/26/19

\*ELE1811-00019/CMW

**Ohren, Justin L.** - see Ohren Electric, Inc.

**Omega6 Contracting L.L.C. dba Omega6 Contracting, and Mark A. Smith, Individually – Lic. #BC708948**

Duluth, MN

\*Consent Order: Censure; Respondents ordered to cease and desist from performing or offering to perform electrical work in the state of Minnesota until granted the requisite licensure; \$5,000 monetary penalty with \$4,000 stayed with conditions – 4/8/19

\*ELE1903-00018/AWT

**Pettus Plumbing & Piping, Inc.**

Saint Paul, MN

\*Administrative Order: Respondent shall cease and desist from performing or offering to perform electrical work; \$1,750 monetary penalty– 2/13/19

\*ELE1902-00002/TWI

**Q3 Contracting, Inc. – Lic. #EA006277**

Little Canada, MN

\*Licensing Order: License suspended until such time that Respondent submits complete responses to Commissioners' requests for information and submits all required documentation to identify and secure a qualifying responsible individual for its electrical contractor license; \$5,000 monetary penalty – 3/6/19

\*ELE1808-00012/CMW

**Restorz, LLC and Zachary A. Brink, Individually**

Zimmerman, MN

\*Consent Cease and Desist Order: Respondents ordered to cease and desist from performing or offering to perform electrical work in the state of Minnesota until granted the requisite licensure; \$2,500 monetary penalty stayed with conditions – 4/2/19

\*ELE1903-00003/CMW

**RJR Services LLC and Ronald J. Rotondo, individually**

Coon Rapids, MN

\*Administrative Order: Respondents shall cease and desist from performing or offering to perform the services of an electrical or technology systems contractor; shall also cease and desist from acting or holding themselves out as a residential building contractor, remodeler, or roofer until appropriate licensure is achieved; \$10,000 monetary penalty – 3/4/19

\*ELE1811-00001/WJS

**Rotondo, Ronald J.** - see RJR Services LLC

**Sachs Fence LLC and Jarod Sachs, Individually**

Farmington, MN

\*Consent Cease and Desist Order: Respondents ordered to cease and desist from performing or offering to perform electrical work in the state of Minnesota until granted the requisite licensure; \$2,000 monetary penalty with \$1,500 stayed with conditions – 1/23/19

\*ELE1811-00016/WJS

**Sachs, Jarod** - see Sachs Fence LLC

**Smith, Mark A.** - see Omega6 Contracting L.L.C. dba Omega6 Contracting

**Speedway, LLC**

Enron, OH

\*Stipulation and Consent Order: Respondent shall cease and desist from performing or offering to perform electrical work and shall cease and desist from directing or dispatching employees to perform electrical work until the requisite licensure is obtained; \$5,000 monetary penalty with \$3,000 stayed with conditions – 2/4/19

\*ELE1810-00029/CMW

**This & That Handyman Services, LLC**

Apple Valley, MN

\*Consent Cease and Desist Order: Respondent ordered to cease and desist from performing or offering to perform plumbing and/or electrical work in the state of Minnesota until granted the requisite licensure; \$5,000 monetary penalty stayed with conditions – 1/2/19

\*MLT1811-00004/SON

**Tinklenberg, Thomas Lee**

Taylors Falls, MN

\*Administrative Order: Corrective action required; \$2,500 monetary penalty of which \$2,000 is forgivable if violations are corrected or corrective plan acceptable to Commissioner is developed – 2/12/19

\*ELE1810-00031/TWI

**University Electric, Inc. – Lic. #EA006045**

Buffalo, MN

\*Consent Order: Licensing Order vacated; censure; Respondent shall ensure that all of its employees who engage in electrical work are either registered or licensed and properly supervised; shall secure an inspection to finalize all electrical work in a timely manner; \$3,000 monetary penalty with \$2,750 stayed with conditions – 3/7/19

\*ELE1811-00011/TWI

**Vinco, Inc. – Lic. #EA003009**

Forest Lake, MN

\*Consent Order: Respondent censured; Respondent shall ensure all of its registered unlicensed employees are properly supervised while performing electrical work; \$3,000 monetary penalty with \$2,000 stayed with conditions – 1/23/19

\*ELE1811-00009/WJS



## An overview of significant proposed changes in the 2020 NEC

Construction Codes and Licensing Division | Electrical Inspection Unit  
April 6, 2019

[www.dli.mn.gov](http://www.dli.mn.gov)

## Disclaimer and Notification



- At their January 8, 2019 meeting, the Board of Electricity passed a motion to start the adoption process for the 2020 NEC
- The 2<sup>nd</sup> Draft of the 2020 NEC was published by NFPA on April 3, 2019
  - <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70>
- The ANSI-approved 2020 NEC will be published by NFPA in September 2019
- If everything goes according to plan...  
...the 2020 NEC will be enforceable on July 1, 2020
- The information and analysis in this presentation is based on preliminary information from various industry sources and is **subject to change**.

2

## NEC 210.8 GFCI Protection for Personnel



- **Topic:** Measurements for GFCI protection
- **Type of Change:** Revision
- **Change at a Glance:** Revised language to clarify how measurements would be determined for GFCI receptacles
- **Analysis of the Change:** In the parent text of 210.8 where it describes how to measure the shortest path of an appliance cord, the words “door” and “doorway” have been removed. Under the 2017 NEC, it has been interpreted that the receptacle for a garbage disposer would not require GFCI protection because a cabinet “door” would obstruct the path of the appliance cord. The 2020 NEC would be clear that GFCI protection is required for all receptacle outlets that are within 6-feet of the hazards listed in 210.8 (A) and (B), regardless of any cabinet doors.



3

## NEC 210.8(A) GFCI Protection for Personnel



- **Topic:** GFCI Protection in Dwelling Units
- **Type of Change:** Revision
- **Change at a Glance:** The receptacle voltage thresholds have been changed, and the amperage thresholds have been deleted
- **Analysis of the Change:** GFCI protection would be required for all 125-volt through 250-volt receptacles that are supplied by single-phase branch circuits rated 150-volts to ground or less. Previously, GFCI protection was only required for 125-volt, 15- and 20- amp receptacles. In addition to 125-volt receptacle outlets, 250-volt receptacle outlets would also be required to have GFCI protection, such as clothes dryers and range receptacles. In effect, GFCI protection would be required for most receptacle outlets commonly used in bathrooms, garages, basements, outdoors, kitchens, near sinks, and for laundry areas.



4

## NEC 210.8(B) GFCI Protection for Personnel

- **Topic:** GFCI Protection in Other Than Dwelling Units (Kitchens and Other Areas)

- **Type of Change:** Revision

- **Change at a Glance:** GFCI protection has been expanded beyond kitchens to other areas

- **Analysis of the Change:** In addition to kitchens (defined in Article 100), GFCI protection would also be required for “other areas” with a sink and permanent provisions for either food preparation or cooking. The distinction here is that GFCI protection would be required in permanent food preparation areas, regardless if there is any permanent provision for cooking. Ice cream parlors, coffee shops, some delicatessens, sandwich shops and other food retailers have preparation areas, but no cooking appliances. It has been substantiated that stainless steel food preparation areas that utilize refrigerators and freezers also deserve protection from electric shock.



5

## NEC 210.52(C)(2) Islands and Peninsulas

- **Topic:** Receptacle Outlets for Island and Peninsula Countertops and Work Surfaces

- **Type of Change:** Revision

- **Change at a Glance:** The method for determining the number of receptacle outlets has changed

Rule: One receptacle for the first 9-square feet, or fraction thereof, and one additional receptacle for every additional 18-square feet, or fraction thereof.

Length	7	Measured in Feet
Width	4	Measured in Feet
Total	28	Area in Square Feet
Minus 9	9	First Receptacle
Minus 18	18	Second Receptacle
Fraction Thereof	1	Third Receptacle



- **Analysis of the Change:** Instead of basing the number of receptacle outlets on short and long dimensions of the countertop, a calculation based on square-footage would be used. At least one receptacle would be required for the first 9-ft<sup>2</sup>, or fraction thereof. An additional receptacle would be required for each additional 18-ft<sup>2</sup>, or fraction thereof. At least one receptacle would be required to be located within 2-feet of the outer end of a peninsula.

6

## NEC 210.52(C)(2) Islands and Peninsulas



- Jeopardy Question: Name an object in the middle of the kitchen, often in various sizes, that has a flat surface for multiple uses.

- Is it kitchen table?
- Is it a kitchen island?
- Is it a dining island?
- Is it fastened in place?
- Is it moveable on casters?
- Would the NEC require receptacle outlets?
- How many receptacle outlets need to be installed?



7

## NEC 215.9 GFCI Protection for Personnel



- **Topic:** GFCI Protection for Personnel on Feeders
- **Type of Change:** Revision
- **Change at a Glance:** The language that referenced 15- and 20-ampere receptacle branch circuits has been removed
- **Analysis of the Change:** Previously, feeders were permitted to have GFCI protection where they supplied 15- and 20-amp receptacle branch circuits. It has been substantiated that there is no practical reason to continue to impose what appears to be a limitation. In recent years, GFCI protection has been expanded to include dishwashers, boat hoists and crawl space lighting that are not connected via receptacle outlets. In some situations installers may choose to provide GFCI protection at the feeder level instead of at the individual branch circuit level.



8

## NEC 220.12 Lighting Load for Non-Dwellings



- **Topic:** Lighting Load for Non-Dwelling Occupancies
- **Type of Change:** Revision
- **Change at a Glance:** Extensive revisions have been made to modify the lighting loads in certain occupancies
- **Analysis of the Change:** NEC 220.12 and Table 220.12 have only seen minimal revisions in the past 40+ years, yet lighting technology has changed significantly in very recent years. The promulgation of modern energy codes, and the collection of data from numerous case studies, has propelled the need to modify lighting load values. The lighting load was slightly increased for gymnasiums, manufacturing, religious facilities and warehouses, but otherwise reduced across most other occupancies.



9

## NEC 230.67 Surge Protection



- **Topic:** Surge Protection in Dwelling Units
- **Type of Change:** New
- **Change at a Glance:** A surge protective device (SPD) would be required at dwelling unit service equipment
- **Analysis of the Change:** NEC 230.67 would be a new section in the code. Surge protective devices would be required at all dwelling unit service equipment. The SPD would be required to be an integral part of the service equipment, or located immediately adjacent to the service equipment. An exception would allow the SPD to be installed at each next distribution equipment downstream and toward the load. The SPD would be required to be Type 1 or Type 2 (Type 1 SPDs are permitted to be installed on the supply-side of the service disconnecting means, and Type 2 must be installed on the load side of an overcurrent protective device). Where service equipment is replaced, SPDs would be required to be installed. The substantiation for this new requirement is to protect all of the critical electronic equipment that is deployed in modern homes (GFCIs, AFCIs, smoke and carbon dioxide alarm systems, security systems, HVAC systems, etc.)



10

## NEC 230.86 Emergency Disconnect(s)



- **Topic:** Emergency Disconnect for One- and Two-Family Dwellings
- **Type of Change:** New
- **Change at a Glance:** An outdoor emergency disconnect would be required for all one- and two-family dwellings
- **Analysis of the Change:** This new provision would require an emergency disconnect at a readily accessible outdoor location for all one- and two-family dwelling units. The substantiation for this new rule is to provide a means for first responders to disconnect power in an emergency, instead of relying on the electric utility to remove power to the structure. There are three options:



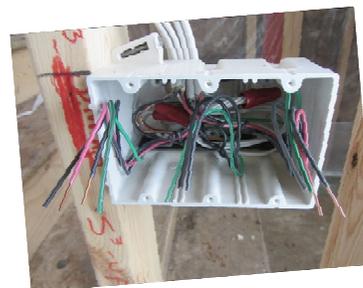
1. **Service Disconnect marked: EMERGENCY DISCONNECT, SERVICE DISCONNECT**
2. **Meter Disconnect marked: EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE DISCONNECT**
3. **Other SUSE-rated Disconnect marked: EMERGENCY DISCONNECT, NOT SERVICE DISCONNECT**

11

## NEC 314.16(B)(5) Conductor Fill at Boxes



- **Topic:** Equipment Grounding Conductors
- **Type of Change:** Revision
- **Change at a Glance:** The box fill volume allowance for equipment grounding conductors and equipment bonding jumpers has been revised



- **Analysis of the Change:** To avoid overcrowding and to ensure adequate heat dissipation, the single volume allowance for grounding conductors would only include up to four conductors. A 1/4-inch volume allowance must be added for each additional grounding conductor that enters the box, based on the largest grounding conductor. In multi-gang boxes only one volume allowance for grounding conductors has proven to be inadequate, especially with the larger devices in use today (dimers, fan controls, etc.)

12

## NEC 314.27(C) Boxes at Paddle Fan Outlets



- **Topic:** Boxes at Ceiling-Suspended Fan Outlets
- **Type of Change:** Revision
- **Change at a Glance:** Outlet boxes in ceilings of habitable rooms, in a location acceptable for the future installation of a fan, must be listed for the sole support of a fan, unless the fan will be supported independently by the structure.
- **Analysis of the Change:** Language concerning spare, separately switched conductors has been deleted. That criteria is no longer a driving factor for fan box selection. Ceiling fans today (with or without luminaires) are remote-controlled and can be supplied by a 2-wire circuit (extra switched conductors for speed control or lighting are no longer needed).

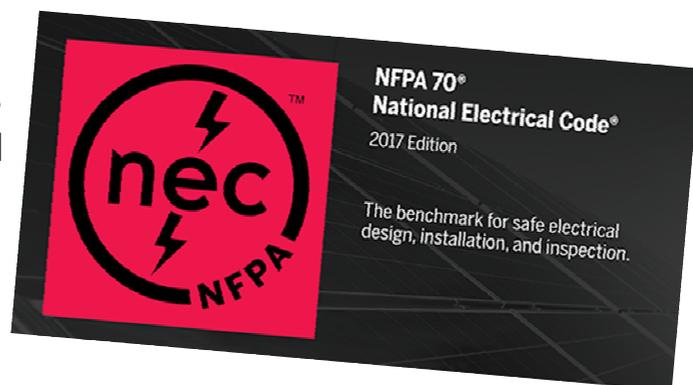


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## Stay Tuned for More 2020 NEC Updates



As more 2020 NEC information becomes available, the Electrical Inspection unit in the Construction Codes and Licensing Division will continue to expand this presentation.





**Thank you!**

*dli.electricity@state.mn.us*