



# THE WIRE

*Published by  
The Electrical Clearing House of Louisville  
Established: 1912*

102 Whirlaway Ct, Cox's Creek, KY 40013  
502.528.9319  
www.echlky.com

## DECEMBER 2022

### **The Presidents' Letter**

Our November 14<sup>th</sup> general membership meeting was well attended. We had 45 members present and many of them participated with a lot of questions and comments. Metro Inspector Norb Thorpe put on an excellent presentation regarding common code violations. I have been very pleased with the members participation during the last three meetings. I have come to realize after all these years that if your audience is participating with questions and comments, then the presentation must have been pretty good.

There is nothing new to report in regards to the adoption of the 2020 NEC. The 2023 edition is available for anyone interested.

The presentation for our December 12<sup>th</sup> meeting will consist of a code panel made up of Dennis Steier, Norb Thorpe, and myself. We will take questions from our members as well as answer questions that have been submitted earlier.

The 50/50 drawing was for \$57 and was won by Paul Johnson. Do not forget, if you have any suggestions on presentations, please get with one of the board members.

As mentioned in the last several newsletters, the Department of Housing, Building, and Construction has gone to a new data base system which will no longer allow users to search for their licenses or their continuing education hours. We have had several members whose hours were not transferred from the old data base into the new one. So, for more information or any problem please call the Department at (502) 573-2002.

Our next general membership meeting is Monday December 12<sup>th</sup> at the Elks Lodge located at 2824 Klondike Lane. The meeting starts at 7:00 pm with sign-ins beginning at 6:30 pm. Hope you will be able to attend. If the opportunity arises, mention the Clearing House to your coworkers. I think they would be pleased with the continuing education presentations.

As Always Stay Safe and Work Safe  
Steve Willinghurst  
ECHL President

### **DECEMBER 12, 2022 Code Program**

**Sign-in 6:30 P.M. - Program at 7:00 P.M.**  
**ELKS LODGE # 8 - 2824 KLONDIKE LN -**

Steve Willinghurst and Dennis Steier will moderate a team of Code Panel experts and present a program on December 12.

If you have a questions, please come early and submit the question to the "sign-in" desk.

We encourage you to participate by asking questions.

See you Monday Evening, December 12, at 6:30 pm. Dennis will go over the Code Questions in the December 2022 Wire.

Stay Alert! Stay Informed! & Work Smart!

### **Supporting our Industry**

**\*\* Electrical Equipment Needed \*\***

ECHL is committed to supporting the electrical industry and the training required to further the trade. In doing so, we ask for your old equipment / inventory to use for training.

ECHL contractors and or suppliers - if you are cleaning out your old Inventory and have material (electrical equipment) that is taking up space in your warehouse, the Iroquois High School Electrical Program is seeking material that can be used for teaching students about electrical products they may encounter in the field. Educating our future apprentices is the goal.

IEC is the hub for most of the surrounding area's for the electrical trade training schools. She has contacts for Jefferson County, Bullitt County, to Hardin County.

If you would call, Erin Pretorius or Stephanie at 502-493-1590 or email Erin at erin@iec-kyin.com to make arrangements for pick up or delivery.

Old or new! - Thanks for your support!

### DECEMBER Code Questions

1. What Code making Panel is responsible for Article 517?  
Code Panel \_\_\_\_\_
2. What page of the 2017 NEC has listing requirements for Communications Systems?  
Page \_\_\_\_\_
3. What is the allowable continuous load amps for a #18 copper conductor? Where would you find this answer in the 2017 NEC?  
Load Amps \_\_\_\_\_  
Section \_\_\_\_\_
4. Can fuses or Circuit breaker be permitted to be connected in parallel? Where would you find this answer in the 2017 NEC?  
Yes                      No  
Section \_\_\_\_\_
5. How many feet are you allowed for the secondary conductors in an Industrial application supplying a switchboard? Where would you find this answer in the 2017 NEC?  
Feet Allowed \_\_\_\_\_  
Section \_\_\_\_\_
6. You have a column-width Panelboard Enclosure is the neutral conductor required to originate from the panelboard with a pull box with a neutral termination? Where would you find this answer in the 2017 NEC?  
Yes                      NO  
Section \_\_\_\_\_

### Code Corner

#### Article 312

Article 312 of the NEC is titled **Cabinets, Cutout Boxes and Meter Socket Enclosures**. If you are designing or size a Cabinet or Box for you application you need to refer to this Article for the requirements set by the 2017 NEC.

**312.1 Scope.** Covers the installation and construction specifications of cabinets, cutout boxes and meter sockets **enclosures**. It does not apply to equipment operating at over 1000 volts, except as specifically elsewhere in the *Code*.

**312.2 Damp and Wet Locations.** If you read the Section you will see where you may have violated the Code at some time in your career. Did you mount the Box or Enclosure with a 1/4" of airspace between the Box and Enclosure? Well this section requires that you install it in that fashion. You are also required to use a Box or Enclosure that is listed for Wet Location.

**312.3 Position in Wall.** This requires you to install boxes on or enclosure to be not set back more than a 1/4" in noncombustible material wall and are require to be flush in combustible material walls.

**312.6 (B) Wire Bending Space at Terminal.** This was an issue raised by Toyota engineering recently and their facility in Georgetown and they were correct in calling this out to the contractor. Table 312.6(B) has the Bending radius for the size conductor you may be installing. Don't have the end user call you out on violating the NEC.

**312.8(B) Power Monitoring Equipment.** This is a new section added in the 2107 NEC this allows you to mount these type of devices in the wring space on you enclosure or panelboard. The monitoring equipment shall be identified as a field installable accessory as part of a listed equipment or is a listed kit evaluated for installation in a switch or overcurrent device enclosure. The total area of this equipment cannot exceed 75% of the cross sectional area of this space.

This Article can be overlooked and need to be used in sizing and type of box or enclosure and the installation requirements you may need in your application.

### **Top Three Code Violations Louisville Metro Inspections DECEMBER 2022**

**These violations are costing you time and money.**

1. NEC Article # 210.62 - Show Windows

At least one 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet shall be installed within 450 mm (18 in) of the top of a show window for each 3,7 linear m (12 linear ft) or major fraction thereof of show window area measured horizontally at its maximum width.

2. NEC Article # 210.52'(C)(2) - Island Countertop Spaces

At least one receptacle shall be installed at each island countertop space with a long dimension of 600 mm (24 in.) or greater and a short dimension of 300 mm (12 in.) or greater.

3. NEC Article # 210.52(A)(3) - Floor Receptacles

Receptacle outlets in or on floors shall not be counted as part of the required number of receptacle outlets unless located within 450 mm (18 in.) of the wall.

Each of these articles listed above are associated with a violation. Please review the articles for compliance and keep in mind to follow through with the current approved CODE.

Being Turned down on a project, you lose money and time required to return to the job site for repairs to correct the violation.

We hope this will help save you time and money on inspection fees by reviewing the articles and making sure you have not violated the code before calling for the initial inspection.

*Submitted by Arnold Hornback  
Assistant Chief Electrical Inspector  
Louisville Metro Dept. of Codes and Regulations*

### **LG&E NEWS**

Upon doing service changes and upgrades LGE requires a meter location prior to the electrical work being done. This is important as codes typically change over the time from which the service was originally installed. By contacting the LGE locator first, the contractor knows what is needed to meet the new code and prevent reinstallation otherwise. Most important is that downtime and interruptions for the customer is kept to a minimum.

As for the operations within LGE, our locators' goal is to make call backs within 24hours. If you don't feel that is happening please contact the supervisor Henry Ford at 502-364-8228. Our goals are the same, to provide the most timely and efficient service we can for the customer.

*Submitted by Henry Ford  
Team Leader Electric Design Svcs  
LG&E and KU Energy LLC*

### **The 2023 National Electrical Code (NEC) - 5 Big Changes Coming Soon!**

The 2023 National Electrical Code (NEC) is here! Every three years, 18 NEC Code Making Panels (CMPs) comprised of electrical equipment manufacturers, inspectors, installers, testing laboratories, and other electrical experts converge to flesh out the latest and greatest in safe installation techniques for the newest and most elaborate electrical technologies to-date.

JADE Learning is here, as the tip of the spear, to bring you five of the most radical changes found between the covers of the 2023 National Electrical Code (NEC).

Article 100, *Definitions*, is now home to all definitions contained in the NEC. In the 2020 NEC, definitions were also located in XXX.2 sections of other articles. Those definitions applied only where the term was used in the article, and the terms were usually found nowhere else in the Codebook. In the 2023 NEC, all definitions are now located in Article 100, *Definitions*. Any definition exclusive to a single article now includes the article number in parentheses following the definition.

#### **1. Article 100, Definitions**

Article 100, *Definitions*, is now home to all definitions con-

### 2023 NEC - 5 Big Changes Cont'd

tained in the NEC. In the 2020 NEC, definitions were also located in XXX.2 sections of other articles. Those definitions applied only where the term was used in the article, and the terms were usually found nowhere else in the Codebook. In the 2023 NEC, all definitions are now located in Article 100, Definitions. Any definition exclusive to a single article now includes the article number in parentheses following the definition.

#### 2. Section 110.17, Servicing and Maintenance of Equipment

Section 110.17, Servicing and Maintenance of Equipment is brand-new to the 2023 NEC, and as part of Article 110, General Requirements for Electrical Installations, it applies to all types of service and maintenance work. This new Code section states that all service and electrical preventive maintenance work must be performed by qualified persons trained in the servicing and maintenance of electrical equipment. Section 110.17 also requires that service and electrical preventive maintenance be performed in accordance with the original equipment manufacturer's instructions along with any information provided in the equipment listing, applicable industry standards, or as approved by the authority having jurisdiction (AHJ). All work must be performed using identified replacement parts. Section 110.17 will keep us on our toes as we approach service and maintenance work in the 2023 Code cycle! Only qualified persons can perform maintenance.

#### 3. Section 210.8(A)(6), GFCI Protection for Personnel Dwellings, Kitchens.

In the 2020 NEC, only kitchen receptacles serving countertops required ground-fault circuit-interrupter (GFCI) protection. That is no longer the case. In the new 2023 NEC, ALL 125- to 250-volt receptacles located inside a kitchen require GFCI protection. Yes, you heard correctly. Section 210.8(A)(6) in the 2023 NEC, requires ground-fault protection for all receptacles installed in the kitchen, regardless of their location or purpose!

ALL receptacles must be GFCI protected.

#### 4. Section 210.18, Branch Circuits not over 1000 Volts ac..... Ratings

Until the release of the 2023 NEC, the smallest branch circuit recognized by the NEC for power and lighting loads has been 15-amps, but that has all changed for the 2023 Code cycle. The NEC now recognizes 10-ampere branch circuits for select power and lighting loads! This is ground-breaking for the NEC and the industry as a whole. This transition by the NEC

### 2023 NEC - 5 Big Changes Cont'd

to recognize 10-amp branch circuit conductors and overcurrent devices is likely in response to the availability of new higher efficiency lighting systems.

In addition to this new Code section, NEC Section 210.23, *Permissible Loads, Multiple-Outlet Branch Circuits*, clarifies the topic further by granting permission for 10-amp branch circuits to supply one or more of the following loads:

1. Lighting Outlets
2. Dwelling unit exhaust fans on bathroom or laundry room lighting circuits
3. Gas fireplace units supplied by an individual branch circuit

The Section goes on to expressly prohibit receptacle outlets, fixed appliances (except as permitted elsewhere), garage door openers, and laundry equipment from utilizing these newly recognized 10-amp branch circuits.

#### 5. Section 210.52(C)(2), Dwelling...Receptacles... Island and Peninsular...

Hold on to your hats—because the 2023 NEC no longer requires receptacle outlets to serve kitchen islands and peninsulas in dwelling units!

In the 2020 NEC, electricians were required to go the extra mile, installing one outlet to serve the first 9 square feet of island or peninsula countertop, and an additional outlet for every 18 square feet thereafter. In the 2023 NEC, the Code section has been radically altered to say:

*Receptacle outlets, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with 210.52(C)(3). If a receptacle is not provided to serve an island or peninsular countertop or work surface, provisions shall be provided at the island or peninsular for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.*

It will be up to the authority having jurisdiction (AHJ) as to what constitutes “provisions” for adding a future receptacle outlet, since the NEC doesn't specify. But it will be up to the homeowner to respond peaceably to the idea of not having a receptacle outlet on their new kitchen island or peninsula. Just because the Code says we can, doesn't necessarily mean we should. Contractors may want to tread lightly around this radical change from the NEC!

**Source: Internet search on NEC Code – Article by Robert Key | Nov 28, 2022**