



THE WIRE

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January 2023

The Presidents' Letter

I hope everyone had a great Christmas and a happy New Years; and that everyone has been able to stay healthy. It was quite a change from this time last year!

Our December 12th general membership meeting was attended by 54 members who again participated with many questions and comments. Metro Inspector Norb Thorpe put on an excellent presentation regarding dwelling unit peninsulas and islands.

Sadly, there is nothing new to report in regards to the adoption of the 2020 NEC. The 2023 edition is available. The longer the delay in adoption continues the harder it is going to be on the electrical industry.

Our January 9th general membership meeting will continue with open ended questions. So, if you have a code question bring it with you and we will take a look at it.

The 50/50 drawing was for \$61 and was won by Tom Gutgsell. 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.

As mentioned above, our next general membership meeting is Monday January 9th 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

JANUARY 9, 2023 Code Program

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

Our January program will be structured as a Code Panel program. The Code Panel made up of Steve Willinghurst, Dennis Steier, and Norb Thorpe will address previously submitted questions addressing issues with various NEC Articles. They will also take questions from the floor.

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

Dennis will go over the Code Questions in the January 2023 Wire.

See you Monday Evening, January 9th, at 6:30 pm.

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!

JANUARY Code Questions

1. If you were needing to calculate a Branch Circuit load which part of Article 220 would you refer to for information? Where would you find this answer in the 2017 NEC?

Section _____

2. Based on 180va per outlet how many outlets would you be allowed to put on a 15-amp circuit? Where would you find this answer in the 2017 NEC?

- A) 10 C) 6
B) 8 D) None of above

Section _____

3. Can I use a 20-amp rated receptacle in a 15 amp branch circuit? Where would you find this answer in the 2017 NEC?

- YES NO

Section _____

4. Should a raceway installed on the exterior surface of a building be required to have to have a drain installed? Where would you find this answer in the 2017 NEC?

- YES NO

Section _____

5. If there is a cable tray containing service entrance conductor can branch circuit cable be installed in the same tray?

- YES NO

Section _____

6. If you run a spare raceway to a building are you required to seal off this raceway to meet 2017 NEC? Where would you find this answer in the 2017 NEC?

- YES No

Section _____

Code Corner

NEC 2023

Well, it is 2023 and a New Year and another NEC Code cycle which happens every 3 years and we missed the cycle in 2020 in the Commonwealth of Kentucky. There was a lot going on around in our State and around the world in 2020 with the pandemic that a lot of issues were put on the back burner at that time.

There were changes in the 2020 that would have helped the State if the 2020 NEC would have been adopted with some more possible economic development.

You may be asking yourself at this time what would help the State in attracting companies to possibly locate in Kentucky if the 2020 NEC was adopted. The answer is in Article 220, due to energy saving products such as LED lighting, soft start motors and other type energy saving product **Table 220.12 General Lighting Loads by Non-dwelling Occupancy** the Volt-amperes was reduced which would reduce the size of service to the facility, which is cost savings on a large project.

Office building in the 2017 NEC was to be calculated at 3.5 VA per square foot in the 2020 NEC that went down to 1.3 VA per square foot, which is significant cost savings. The new Battery Plant the is being built in Glendale would have to be calculated at 2 VA a square foot under the 2017 NEC. The 2020 NEC if was adopted would allow them to calculate it a 1.5 VA per square foot. That .5 VA does not sound like much but with the size of that facility would be a substantial cost saving for that plant.

When I teach classes I always emphasize the history of the NEC and **Section 90.1 (A) Practical Safeguarding**. *The purpose of this Code is the practical safeguarding of person and property from hazards arising from the use of electricity.* Technology that will enhance and re-enforce the purpose of the NEC and that why changes are may to the NEC every 3 years.

I would also like to Wish You and Yours a Very Happy and Prosperous New Year in 2023!

Submitted by Dennis Steier

Top Three Code Violations Louisville Metro Inspections JANUARY 2023

These violations are costing you time and money.

1. NEC Article # 230.28(B) Attachment

Service-drop or overhead service conductors shall not be attached to a service mast between a weatherhead or the end of the conduit and a coupling, where the coupling is located above the last point of securement to the building or other structure.

2. NEC Article # 210.52(E)(1) Ibe-Family and Two-Family Dwellings.

For a one-family dwelling and each unit of a two-family dwelling that is at grade level, at least one receptacle outlet readily accessible from grade and not more than 2.0 , (6 1/2 ft) above grade level shall be installed at the front and back of the dwelling.

3. NEC Article # 110.3(B) Installation and Use

Listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling.

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

This specifically focuses on underground electric. There currently is an increase in turn downs for underground services. As a reminder, crews will turn down any service that does not meet the correct criteria. The overwhelming issue is not enough cable left over to make the proper connections.

The customer service cable must be installed within 18” of the transformer (secondary side), splice box or pedestal **AND** have a minimum of 6 feet of cable left above ground in order to make connections. The utility will not excavate beyond the required 18”. It’s cheaper to provide a little more wire than lose time and money fixing a problem with a simple solution.

Additionally, please check the cable for any damage. If the cable is visibly damaged, it will need to be repaired before it can be connected.

*Submitted by Joel McCauley
Team Leader Electric Design Svcs
LG&E and KU Energy LLC*

!!!! ECHL’S CONTRACTOR CLASS !!!!

Mark your calendar for February 11, 2023 for ECHL’s Annual Contractor Class. Class will be held at the Elk’s Lodge again this year with Lunch provided. Cost has remained the same. There is a registration form enclosed in this Wire or you can find one on our Website. Any questions, please contact Denise Arnold (502) 491-5010 or Marilyn Boudreaux (502) 528-9319.

Avoiding Problems with Battery-Powered Tools

Battery-powered tools reduce cord management dramatically, but still present other safety issues. Battery-powered tools have had a strongly positive effect on productivity in the field. And they confer a safety advantage by eliminating tripping hazards (and, to an extent, shock hazards) from misuse of portable cords. However, the safety advantages can be moot if the use of these tools leads to a “no dangers to even think of” mindset. Other dangers do exist. Consider these categories:

Avoiding Problems - Cont'd

Batteries

- Industrial-grade, battery-powered tools use lithium batteries. Don't leave them out in the sun.
 - If you drop a battery while changing batteries (or drop the tool with the battery attached), stop to give it a careful visual inspection. If the case is cracked or damaged in any way, take that battery out of service.
 - Don't overcharge the batteries. While most charging systems have some form of overcharge protection, you still want to remove batteries once they are charged. Just as you don't toss a hairdryer into an occupied bathtub and rely on the GFCI to protect the occupant, don't rely on automatic protection to cover for sloppy charging practices.
 - Don't run a battery charger near sources of flammable vapors.
- When running the portable cord to a battery charger on a job site, follow the recommended safety procedures for portable cords (i.e., run each cord in a way that doesn't create a tripping hazard).

Bits and blades

- If the job will involve much use of drill bits, saw blades, etc., start the job with a new bit or blade. A slip due to a dull tool might damage more than just the work surface. If there's only a bit of such work to do, then be sure to clean the blade before using it. Dirty blades are almost as bad as dull ones.
 - Use the proper bit or blade for the material being worked on.
- If the tool vibrates, makes an uneven cut, or exhibits other signs of a loose or misaligned cutting bit or blade, stop and correct the problem.

Piece under work

- Whether your tools are battery-powered or cord-connected, always secure the work with clamps or other devices. A tool can be safely handheld, the piece under work never can.
- If working with wood, consider nailing or screwing down a loose workpiece. For metal, it may be prudent to drill a bolt hole or two for the same purpose.
- If cutting wood, score the whole length of the cut mark to about 1/16th or so before using the saw. This will prevent splintering of the top layer of the wood.
- An alternative to scoring is to tape the top and bottom of the board along where you will mark the cut line. Taping is also effective for preventing splinters due to drilling if you are using the correct bit and drilling speed and pressure.

Avoiding Problems - Cont'd

- A third trick is to clamp the wood to a sheet of foam insulation; this is something you're likely to see in residential construction.
 - When sawing wood, don't put the cut mark between supports such that the board will sag inward toward the saw blade. This will cause the blade to bind and give you a serious injury. The typical sidewinder saw has the motor on the left and the blade on the right. You want the supports on the left so the part being cut off (on your right) falls away from the saw. In some cases, the part being cut off is too big and too heavy to not also be supported; set this up so the weight of the saw is not causing the cut line to bow downward.
 - Never hold the work with your free hand; it's a good way to lose a finger. Or two.
 - Wear work gloves when handling the piece or cleaning the work area.
- Clean up scrap, shavings, etc., between each tool operation or sooner if need be.

Work methods

- Never force the tool to work with a low battery. It can easily damage the tool motor and the battery, but it's also a way to cause a slip that causes an injury.
 - Avoid binding with a saw, which can cause the workpiece to fly or the tool to break, by using a smooth motion.
 - To avoid bit jumping, drill a pilot hole.
 - If drilling a deep hole, drill partway and then pull the bit out to clear the hole then resume drilling.
 - If driving a fastener with a drill, apply soap to the shaft before driving it in. This reduces the load on the motor, the load on your wrists, and the load on your shoulder while also reducing the chance of popping a screw into your face. Keep a bar of soap in your bit kit.
 - Don't use a Phillips bit on a square drive screw head; this can cause bits of hardened steel to fly at you.
 - Always wear safety glasses when using power tools. Put them on when you pick the tool up, and take them off only when you are ready to put the tool away.
- If the work will release much dust or the wrong kind of dust, be sure to use the appropriate dust collection attachment. Along with that, wear the appropriate respirator. For example, if using a side grinder to cut a bolt or remove a stripped nut, wear a K95 or better respirator so you don't breathe those particles into your lungs. Keep the mask on until you are done cleaning up the dust.

Source: email from EC&M - Article by Mark Lamendola, dated August 5, 2022