

THE WIRE

*Published by
The Electrical Clearing House of Louisville*

P.O. Box 2085
Clarksville, IN 47129
www.echlky.com

September 2026

President's Letter

I hope all our members had a very enjoyable and safe summer. We are kicking off our next nine months of general membership meetings on Monday September 14th at 7:00. Last year's meetings were very encouraging with an average monthly attendance of around 35 people. If you know of anyone that might be interested in becoming a member, please invite them to attend one of our meetings at no cost.

Please try to pay your membership dues of \$60.00 at the first meeting you attend. Having an accurate count of paid members is crucial to the functioning of this organization. We will open the September meeting with an update on some changes to the website along with ideas on recruitment for membership. We will go over the status of the 2026 Electrical Code as well as the status of delays for enforcement with some of the sections in the 2023 Code.

Our program for September will have Dennis Steier and I continue to go over code questions that have been posted on the website. Most everyone we talked with really enjoyed this format as it usually generates lively discussion with interesting questions and comments.

The Department of Housing, Building, and Construction has transitioned to a new data base. Please do not be surprised if you have issues with your next license renewal. If you do experience any issues, please contact one of the Board members for assistance or call Housing, Building, and Construction at (502) 782-6700.

The Sponsorship Form is on the website. If you know of any company that may be

September 14, 2026 Code Program

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

The code program for September will be Steve & Dennis continuing the presentation of the 47 Code Questions that were started earlier this year before the summer break. Answers and discussion will continue at the September meeting starting at question 24. The 47 Code Questions are available at echlky.com on the Newsletter tab. The yearly dues (\$60.00) will be due in September (or the first meeting you attend during the year). The membership form for renewal is attached to this newsletter.

Our General Membership meetings are held at the Elks Lodge located at 2824 Klondike Lane. The meeting starts at 7:00 pm with sign-ins beginning at 6:30 pm.

Stay Alert! Work Smart & Stay Informed!

News from Frankfort

As mentioned in last month's "Wire", the Department of Housing, Building, and Construction (DHBC) had an Advisory Committee on Tuesday June 30, 2026. The Commissioner, Max Fuller, reported that the 2026 NEC Task Force had recommended adopting the 2026 National Electrical Code with a few sections having delayed enforcement.

As a result of this recommendation, the DBHC has decided to move forward with the adoption process. This process will be in conjunction with the updating of the State Building Code. If there is no opposition, the best-case scenario is the 2026 NEC would go into effect in late 2027.

See you at the September meeting.

September 2026 Code Questions

1. All appliances supplied by _____ volts or higher shall be listed. Where would you find this answer in the 2023 NEC?

- A. 100
- B. 150
- C. 50
- D. 240

2023 NEC Section _____

2. What type of portable cord would be allowed for temporary wiring at a carnival, circus, fair or similar event subject to physical damage? Where would you find this answer in the 2023 NEC?

- A. SPT-2
- B. SP-1
- C. SEOW
- D. SJ

2023 NEC Section _____

3. Can a NEMA 12 rated junction box be installed in a Class 1 Division 2 environment? Where would you find this answer in the 2023 NEC?

- A. Yes
- B. No

2023 NEC Section _____

4. How many amps can a 3 conductor #14 SJO flexible cord feeding a single phase 240 volt to utilization equipment? Where would you find this answer in the 2023 NEC?

- A. 12
- B. 15
- C. 18
- D. None of above

2023 NEC Section _____

5. What is the minimum bending radius of a Tray cable that is 3 inches in diameter? Where would you find this answer in the 2023 NEC?

- A. 15"
- B. 12"
- C. 18"
- D. None of above

2023 NEC Section _____

Code Corner

Article 250 Grounding and Bonding

Article 250 is the largest Article in the National Electrical Code and is one of the most dreaded by even those who have dealt with the code for years. I am not going to cover every section of Article 250, but concentrate on what you may most commonly use in this Article.

One of the first things most inspectors are going to look at when performing an inspection on a service is it properly grounded. If it is not grounded properly then you are going to fail that inspection. That is why it is important to know what is in Article 250 to properly ground and the importance of be done in a proper manner.

There are two definitions to consider in order understanding the principles of grounding.

Effective Grounded-Fault Current Path: which is an intentionally constructed, low impedance electrically conductive path designed and intended to carry current under ground-fault from the point of a ground fault on a wiring system to the electrical supply source and that facilitates the operation of the overcurrent protective device or ground-fault detectors on high impedance grounded systems.

Ground-Fault Current Path: An electrically conductive path from the point of a ground fault system through normally on-current-carrying conductors, equipment, or the earth to the electrical source.

Part III of Article 250 *Grounding Electrode System and Grounding Electrode Conductor*; This is a good starting point when using this Article in help understanding what is needed for a good connection is made to earth. There are eight different types of electrodes listed in this section. The most common are the Concrete-encased electrode on new construction and the ground rod on existing where you do not have access to a concrete encased electrode.

The preferable electrode for new construction is the Concrete encased electrode, due to the fact the concrete continues to extract moisture from the surrounding soil and has great contact to the earth simply because of it's weight.

Code Corner (continued)**Article 250
Grounding and Bonding**

The second most common is the driven ground which can be a galvanized pipe or conduit not smaller than 3/4" or a **Listed** 5/8" Ground Rod not less than 8 foot in length.

Article 250 is as I said earlier is the largest in the National Electrical Code and a very important Article, get to know it and it will help you understand its importance. I will have more on 250 in upcoming articles.

Submitted by Dennis Steier

**Code questions / answers from
Electrical Contractor Magazine ®**

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Arc energy reduction

Does a 1,200A fusible disconnect with 1,000A fuses require a means of arc energy reduction?

No, see Section 240.67. This requirement is based on the installed fuse's rating and does not address the size of the disconnect. Where fuses rated 1,200A or higher are installed and the fuse does not have a clearing time of 0.07 seconds or less at the available arcing current, a means of arc energy reduction in accordance with 240.67(B) is required.

Any grounding electrode?

Where a lightning protection system is installed at a barn, are we permitted to tie our grounding electrode conductor to that grounding when taking a feeder to the barn?

No, see Section 250.60, which prohibits the use of conductors and driven pipes, rods or plate electrodes used for grounding strike termination devices instead of the grounding electrodes required for grounding wiring systems and equipment. It is important to note that this requirement recognizes that these grounding electrode systems must be bonded together.

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Presidents Letter - Cont.

interested in becoming a sponsor, please print off the form and give it out to any prospective sponsor. The cost for a company or organization to become a sponsor is \$100. As mentioned, our next general membership meeting is scheduled for Monday September 14, 2026 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 to see you there.

As Always Stay Safe and Work Safe

Steve Willinghurst

LG&E NEWS**CHECK THOSE DETECTORS!**

The seasons are going to change again, which makes it a good time to check those smoke detectors and carbon monoxide detectors. As we head into the winter months, you'll be spending more time in-

doors, and you need to be sure your detectors are working properly. • Detectors should be tested once a month. • Detector batteries should be checked or changed twice a year. • Get new smoke detectors every 10 years. • Get new carbon monoxide detectors every five years. Smoke and carbon monoxide detectors provide an extra layer of protection for you and your family. These devices can save lives by alerting you to a fire or carbon monoxide leak while you're sleeping. A detector may be the only warning sign of danger when it comes to carbon monoxide because it is both odorless and colorless. And if an alarm sounds, don't ignore it – a few precious seconds of warning can make all the difference.

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Keeping Up With Changes: Requirements for services and other equipment for dwellings



Over the past few NEC cycles, there have been numerous changes to the requirements for electrical dwelling services from emergency disconnects outside of the home, surge protective devices, GFCI and AFCI protection and specialized devices.

Over the past few NEC cycles, there have been numerous changes to the requirements for electrical dwelling services from emergency disconnects outside of the home, surge protective devices, GFCI and AFCI protection and specialized devices. With the 2026 NEC fresh off the printing press, reexamining many of these changes from the past few cycles and looking at new changes in the 2026 NEC is a good idea. This refresh should ensure we are not overlooking previous changes and can implement any new ones.

Load calculations

Let's start at the beginning with a look at NEC Article 120 (formerly Article 220) that applies to dwellings. NEC 120.5(A), dealing with calculations, has a new informational note that states DC "electrical systems are often described with a nominal voltage and a wide voltage band. For DC electrical systems with a wide voltage band, both the upper and lower limits of the bands are important considerations for load calculations." A wide voltage band is a device or equipment that can provide a wider variable of DC voltages, such as 9V to 160V. This primarily applies to photovoltaic installations.

A major change that occurred in NEC 220.11 in the 2020 edition and in 120.5(C) in 2023 and 2026 that many people may have overlooked is the rewording for calculating the floor area of a dwelling. The first sentence of this section in all three editions is the same with no changes, as follows: "The floor area for each floor shall be calculated from the outside dimensions of the building, dwelling unit, or other area involved." Changes to the second sentence occurred in all three cycles. Researching the history of the requirements for dwelling calculations reveals what has happened in the past three code cycles.

Section 220.11 in the 2020 NEC read as follows: "For dwelling units, the calculated floor area shall not include open porches, garages, or unused or unfinished spaces not adaptable for future use." That same text was moved to 220.5(C) in the 2023 NEC and simply stated that "for dwelling units, the calculated floor area shall not include open porches or unfinished areas not adaptable for future use as a habitable room or occupiable space." The word "garage" was no longer in the sentence for 2023, and a detached garage was never even mentioned until the 2026 edition. In 2026, the text reads as follows: "For dwelling units, the calculated floor area shall not include detached garages, open porches, or unfinished areas not adaptable for future use as a habitable room or occupiable space."

So an attached garage must be included, but not a detached one. Since some garages are used for bedrooms, media rooms and more, they are often occupiable spaces and must be included in any load calculations. I bet many people missed that tiny one-word deletion and have not been including the garage in calculations for dwelling units.

Service equipment barrier

As an electrician and former electrical contractor, I am very happy about the requirement in NEC 230.62(C) that an identified barrier must be placed in service equipment. The purpose is to ensure there aren't any energized and

uninsulated, ungrounded service busbar or service terminals exposed to inadvertent contact between people with the service disconnect in the open position. In addition, when sliding off or removing the cover from service panelboards, the cover could easily come in contact with the energized utility conductor terminals. With the available fault currents being increased on many dwelling units, contact with energized utility company conductors or terminals can be extremely dangerous.

Surge protection devices

Surge protective devices are required by NEC 230.67 for all dwelling services and must be an integral part of the service equipment or located immediately adjacent to it. An exception in 230.67(A) states if the dwelling service supplies only feeders, the surge protective device is not required at the service but must be located at the load side of each feeder.

An example is where the service is located at a detached garage and feeders are installed to supply the dwelling or from a multimeter and multiple service disconnecting means with feeders to each dwelling unit. Where older equipment is replaced, the requirement for surge protection must also be provided. These surge protective devices must also have a minimum short-circuit current (withstand) rating of at least 10 kA.

Be sure to review the major and minor issues before construction or reconstruction work on dwellings begin.

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Code questions / answers from Electrical Contractor Magazine ®

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Cybersecurity protections

What type of protection is provided for circuit breakers in a switchboard that can be monitored and operated over the internet? It would seem easy for someone to hack into the system and create havoc.

All electrical equipment must be approved by the authority having jurisdiction (AHJ). Typically, listed equipment will be judged to be satisfactory when installed in accordance with the product listing and labeling. See Section 110.3(A) list item (8), which requires network-connected life safety equipment to address its ability to withstand unauthorized updates and malicious attacks while continuing to perform its intended safety functionality. While this requirement is focused on life safety equipment, all network-connected devices should be evaluated.

Two informational notes send the code user to UL 5500, Standard for Remote Software Updates, and NEMA CY 70001, Cybersecurity Implementation Guidance for Connected Electrical Infrastructure, for more information. mechanical reset.

Type IC required?

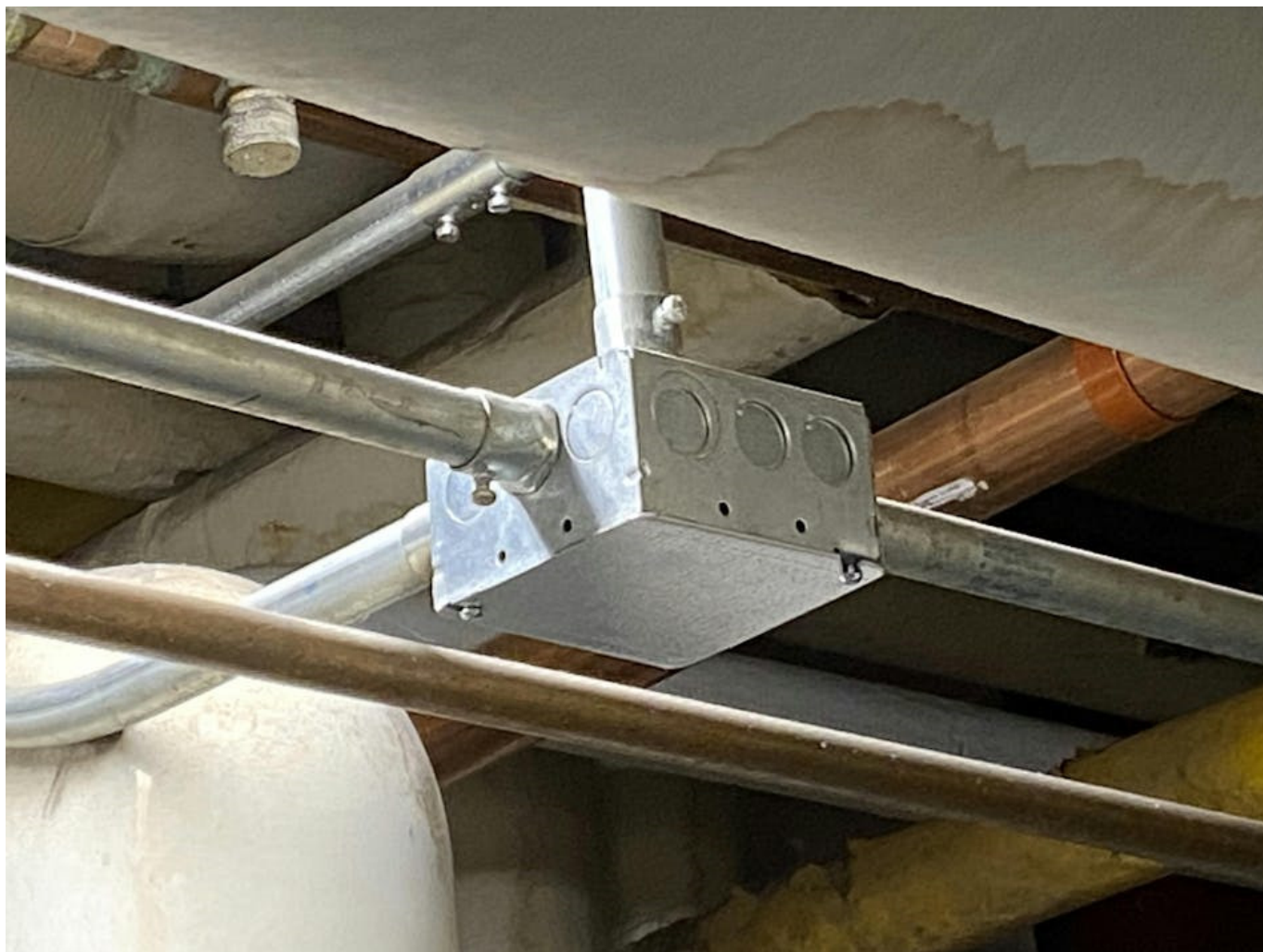
Are small, recessed LED type lights required to be IC-rated? While they will contact insulation in some areas, they do not create heat like an incandescent lamp.

Yes, recessed LED luminaires that will be in contact with thermal insulation are required to be IC-rated. Thermal insulation is not permitted to be installed above a recessed lighting fixture (luminaire) or within 3 inches of the recessed luminaire's enclosure, wiring compartment, ballast, transformer, LED driver or power supply unless the luminaire is identified as Type IC for insulation contact. See Section 410.116(B).

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What's Wrong Here?



EMT is great for a lot of things, but it will never be enough for supporting of boxes. This 4 11/16-inch metal box has 4 EMTs connected to it, but no matter how many EMTs are connected to this box it will never be enough! Section 358.12(2) prohibits using EMT for support of luminaires or other equipment except conduit bodies that are no larger than the largest trade size of the EMT. This box is not a conduit body and is not properly supported in accordance the provisions specified in Sec. 314.23(A) through (H). Sections 314.23(E), (F) and (H)(2) allow threaded conduits such as RMC or IMC to support boxes having threaded entries but they do not permit tubing such as EMT to support boxes. Perhaps some threaded rod or support wires could be installed as a means of support for this box and provide a Code-compliant installation.

ECHL

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Organized in 1912

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Application for Membership

I hereby make an application for membership into the Electrical Clearing House of Louisville: Date: _____

First Name M.I. Last Name Birth Date: Month / Day / Year

Home Address City State Zip Code

Contact Phone # Email Address

Organization: IEC ☐ ABC ☐ IBEW ☐ NECA ☐ N/A ☐ Other: _____

Member Type: Contractor ☐ Supplier ☐ Inspector ☐ Fire Prevention ☐
Electrician ☐ Utility ☐ Maintenance ☐ Other ☐

Please check all that apply.

License Number: EE: _____ ME _____ CE _____

Place of Employment

Employer Address City State Zip Code

Employer Phone Employer Email Address

I agree to abide by the Constitution, By-Laws and Rules of the Clearing House

Signature

Annual Membership Dues are \$60.00

Payable with application and renewed every September

Make checks payable to:

**Electrical Clearing House of Louisville
P.O. Box 2085
Clarksville, Indiana 47129**

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