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ECHL THE WIRE

MAY 2024

The Presidents' Letter

Our upcoming May 13th general membership meeting will be the last one until September 9th. The suggestions that members have made recently are very encouraging and I am looking forward to a much stronger ECHL. The open discussions about the future of this organization have shown how important this Clearing House is to our members and to our industry.

The Sponsorship Form is on the website. If you know of any company that may be interested in becoming a sponsor, please print off the form and give it out to any prospective sponsor. Also, some new material will be introduced to the website over our summer break.

Dennis Steier did an excellent job with his presentation on the NFPA 70E Standard for Electrical Safety in the Workplace at the April meeting. It generated a lot of good questions and discussion. I know I took quite a few notes from his presentation. Great job Dennis!!

The presentation for the May 13th meeting will consist of answering code questions within the group at each table. We did this back in February and it generated a lot of good discussion. Submitted questions will be looked at as well.

The feedback that I have recently received from the Department of Housing, Building, and Construction Advisory Committee is that the 2023 National Electrical Code is on track for adoption this fall. The adoption is long overdue, but at least the process has begun.

As mentioned, our next general membership meeting is scheduled for Monday May 13th 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
ECHL President

May 13, 2024 Code Program

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

The presentation for May will be a repeat of our February Program. Members will address code questions from each table.

Bring a friend and enjoy the program.

Dennis Steier will also go over the Code Questions in the May 2024 Wire.

See you Monday Evening, May 13, 2024, at 6:30 pm.

Work Smart: Stay Alert! & Stay Informed!

Mark you calendars - CEU Renewals!

Inform your co-workers, Friends and other electricians about our organization. Encourage them to join and attend our meetings.

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. You can obtain 1.5 CEU Hours toward your Master Electrician License by attending 4 programs and you will have enough to renew your license.

Upcoming ECHL General Membership Meeting Dates

May 13, 2024

Summer Break (June, July & August)

Fall Programs

September 9, 2024	**November 11, 2024**
October 14, 2024	**December 9, 2024**

Mark your calendars for our Fall Programs. Invoice for memberships will be mailed with the September Wire. Or you can become a new member by going to our Wehsite and downloading a application. www.echlky.com

ECHI THE WIRE

MAY 2024

www.echlky.com

MAY Code Questions

1. If you modify service equipment by replacing the main breaker of the switch gear are you required to check or change anything regarding the maximum available fault current? Where would you find this answer the 2017 NEC?

   YES NO

   Section_____

2. How many feet of working space are required on the system with a voltage of 13.8K in a condition 2 installation? Where would you find this answer in the 2017 NEC?

   A) 4' C) 9'
   B) 6" D) None of above

   Section_____

3. What is the percentage of the branch circuit conductor suppling a continuous load and non-continuous load required to be in the 2017 NEC? Where would you find this answer in the 2017 NEC?

   Section_____

4. What is the percentage requirement for feeder conductors in 600 volt system in a supervised installation? Where would you find this answer in the 2017 NEC?

   A. 100 C. 110
   B. 125 D. None of above

   Section_____

5. If you run a spare raceway from a building or structure underground to another structure or building what are you required to do to this raceway? Where would you find this answer in the 2017 NEC?

   Section_____

6. Can you use the overcurrent device being used as the disconnecting means for a permanently connected appliance load of 350va? Where would you find this answer in the 2017 NEC?

   Yes No

   Section_____

Code Corner

Article 680

This being our last meeting before the summer break and with the warm summer months ahead it is time for people and places to re-open their Pools to possibly get some relief for the heat. The pools have been out of use for nine months and may requires some maintenance to be re-opened, this may also include some possible electrical maintenance as well, this is where you may need to use Article 680 for reference.

680.1 Scope. The provisions of this article apply to the construction and installation of electrical wiring for, and equipment in or adjacent to, all swimming, wading, therapeutic and decorative pools; fountains; hot tubs; spas; and hydro massage bathtubs, weather permanently installed or storable, and to metallic auxiliary equipment, such as pumps , filters and similar equipment. The term *body of water* used thought out Part I applies to all bodies of water covered in this scope unless other-wise amended.

Article 100 is definitions and any .2 of any article though-out the NEC is definitions if they are not included in Article 100, and there are 24 definition in 680.2 that may describe what you may be installing or repairing. You may want to refer to the definitions for further clarification.

Section 110.3 States that Listed and Label equipment shall be used in accordance with any written instructions included in the listing or labeling. **680.4 Approval of Equipment.** States al electrical equipment installed in the water, walls, or deck of pool, fountains and similar installation shall comply with the provisions of this article. Equipment and product shall be listed.

680.5 Ground Fault Circuit Interrupters. Ground fault circuit interrupters (GFCI's) shall be self-contained units, circuit breakers or receptacle type or other listed types. We all know the importance of this type of protection around water, and remember the receptacles shall be readily assessable to allow them be tested in accordance with the instructions provided.

There all a lot of other requirements that need to be followed in Article 680 for Swimming Pools, Fountains, and Similar Installations, that you may need to refer to I just highlighted

Continued on page 3

Top Three Code Violations Louisville Metro Inspections

MAY 2024

These violations are costing you time and money.

1. **NEC Article # 210.71 - Meeting Rooms**

   210.71(A)

   Each meeting rom of not more than 93 m2 (1000 ft2) in other than dwelling units shall have outlets for nonlocking type, 125-volt, 15– or 20–ampere receptacles. The outlets shall be installed in accordance with 210.71(B) Where a room or space is provided with moveable partition(s) each room size shall be determined with the partition in the position that results in the smallest size meeting room.

2. **NEC Article # 210.64 - Electrical Service Areas.**

   At least one 125-volt, single-phase, 15– or 20-ampere-rated receptacle outlet shall be installed in an accessible location within 7.5 m (25 ft) of the indoor electrical service equipment. The required receptacle outlet shall be located within the same room or area as the service equipment.

3. **NEC Article #210.63 - Heating, Air-Conditioning, and Refrigeration Equipment Outlet,**

   A 125-volt, single-phase, 15– or 20– ampere-rated receptacle outlet shall be installed at an accessible location for the servicing of heating, air-conditioning, and refrigeration equipment. The receptacle shall be located on the same level and within 7.5m (25 ft) of the heating, air-conditioning and refrigeration equipment. The receptacle outlet shall not be connected to the load side of the equipment disconnecting means.

You lose money when you are turned down on a project. It also cost you time, when you have to return to the job site to make the necessary changes to correct the violation, that too, cost you money. Time is money.

Top Three Code Violations Cont'd

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

Code Corner Cont'd

a few of them since it is that time of year when pools are starting to re-open. Let make sure that cooling dip you may be taking this summer is not a "SHOCKING" experience for you or someone else. Enjoy your summer and stay safe, hope to see you again in September as the old song say's!

Submitted by Dennis Steier

LG&E NEWS

Connecting Permanent Services

Just a reminder for you when your job is inspected. When Louisville Gas & Electric crews come to connect your permanent service to the project, if there is something being fed from the temporary pole to the house such as (A furnace to keep the house warm) the crew is not allowed to disturb that connection and "WILL NOT" connect the permanent service. Thus, your hook up time will be delayed for another day or so, Please make sure nothing is connected or give the impression that something is in order to prevent any delays.

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

Doing Electrical Work for Friends and Family

Many jurisdictions across North America allow you to do your own electrical work in your home. As long as it passes inspection, there's no code violation concerns for DIYers handling their own wiring. Trouble is, once friends and family hear you're good at electrical work, requests to help with theirs may start coming. This is a code violation in most places. Working on your own electrical system is fine, but only licensed electricians can work on someone else's. However, make sure to check with your local municipality before performing any electrical repair work on your own.

Choosing the Wrong Circuit Breaker

To help you understand which electrical protection goes where, consider what each type of breaker was designed to do and make sure to follow the national electric code.

Standard Circuit Breaker

Circuit breakers protect home electrical wiring and equipment like furnaces, air conditioners, dryers and stoves. Standard circuit breakers are better at protecting wiring and equipment than preventing fires and protecting people. That's why they have largely been replaced by GFCIs and AFCIs. There are only a few places left where standard circuit breakers can be used, typically for large home electrical appliances.

Ground Fault Circuit Interrupter

Ground fault circuit interrupters (GFCIs) protect people in areas where they are likely to be using small appliances and where water is present. GFCI breakers and outlets have been around for a while, and most people know they're required in bathrooms, kitchens and outdoors. But our experts are still finding home electrical violations, especially in garages, crawl spaces, storage/work areas in unfinished basements, wet bars (within six feet of a sink) and sump pumps.

And don't forget that GFCIs need to be readily accessible to be reset. This means they shouldn't be installed on the ceiling or buried under a hydro massage tub without an access panel.

Arc fault circuit interrupter

Arc fault circuit interrupters (AFCIs) prevent fires in living areas where appliance cords are prone to be pinched or crimped, or chewed by pets. They used to be required only on bedroom circuits, but the National Electrical Code now requires AFCI protection in all living areas. They're equipped with sophisticated electronics that can detect an arcing condition (like in a frayed lamp cord), which may not be detected by a standard circuit breaker until after a fire has started.

AFCI protection is not just required for new construction. It's also required where branch-circuit wiring is modified, replaced or extended into existing homes. It's important to know the difference between GFCIs and AFCIs.

Source: Internet Search Circuit Breakers