ELECTRIC LEAGUE OF MARYLAND, INC.

ELM

Serving all of MD since 1955

To Our Members, Supporters, Readers, and Friends: April, 2020

We know that the Covid-19 Virus has curtailed a large segment of our industry and makes doing business difficult. The League has been fielding calls about these problems and pondering what we can do to help the situation.

Hopefully, you are aware that guidelines established by President Trump and Governor Hogan allow the building trades to continue providing essential services to the public and also the supply houses to furnish materials.

Our serving utilities have been, and are working, diligently to keep electrical and communications systems functional, secure, and serviceable for the public's welfare and use.

Most subdivisions have put into place innovative and critical methods to help builders and contractors, etc. to secure proper permits and necessary inspections (see each subdivision's websites for further information).

Please Note – The Board of Directors of the League has been sending responses to proposed legislation, public service requests, and other matters that affect our industry (please review our prior *News and Notes*).

Because of the 10-person and six-foot distancing rules, classroom instruction for exam prep code changes and reviews has been temporarily suspended. So, at this time, the Board thought it might be a good idea to start of a new category on our website which will be called **"ELM Code Helps".**

Milford Badders, Lee Jolley, Marty Schumacher, and Gil Thompson have agreed to provide some helpful information until those courses can resume. They feel that this type of continuing education will help designers and installers in their ability to provide safe electrical installations.

Although these persons are well-versed in the subjects presented and may give comments based on their years of experience, do not take the material presented as an official interpretation of the Codes. The final approval for materials and electrical systems being installed rests with the local jurisdiction that has authority. Remember, before you start any work, request a copy of any local amendments and find out what year or edition of the NEC is being enforced in that particular local area.

Now, click on the drop down menu titled **ELM Code Helps** to view important information that could be useful in these challenging times.

The League wants to share some informative material with our members, supporters, and readers.

This is a follow up to a recent presentation by Mr. Lee Jolley (Chief Electrical Inspector for Baltimore County) at an ELM Lunch and Learn concerning GFCIs, AFCI, and the new disconnecting means that will be required for the 2020 NEC – hope you did not miss that informative meeting.

Mr. Jolley has compiled comprehensive information concerning NEC Code Sections for GFCIs. What a wealth of information that he is willing to share! Be sure to make a copy; it will help you.

2020 Edition NEC GFCIs

100 Ground-Fault Circuit Interrupter (GFCI).

A device intended for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a ground-fault current exceeds the values established for a Class A device.

Informational Note: Class A ground-fault circuit interrupters trip when the ground-fault current is 6 mA or higher and do not trip when the ground-fault current is less than 4 mA.

All GFCI's are to be readily accessible

Section 210.8 GFCI protection for personnel (Class A device)

210.8(A) Dwelling units

All 125- through 250-volt, no max amp, receptacles in the following locations that are supplied by 1Ø branch circuits rated 150 volts or less to ground are required to have GFCI protection for personnel.

210.8(A)(1) Bathrooms
210.8(A)(2) Garages and accessory buildings
210.8(A)(3) Outdoors
210.8(A)(4) Crawl spaces
210.8(A)(5) Basements (finished and unfinished)
210.8(A)(6) Kitchens
210.8(A)(7) Sinks
210.8(A)(8) Boathouses
210.8(A)(9) Bathtubs or shower stalls
210.8(A)(10) Laundry areas
210.8(A)(11) Indoor damp and wet locations

Other than dwelling units 210.8(B)

All 125-volt through 250-volt receptacles supplied by 1Ø branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by 3Ø branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the following locations are required to have GFCI protection for personnel.

210.8(B)(1) Bathrooms
210.8(B)(2) Kitchens or areas with sink and permanent provisions for food preparation or cooking
210.8(B)(3) Rooftops
210.8(B)(4) Outdoors
210.8(B)(5) Sinks- W/6'
210.8(B)(6) Indoor damp and wet locations
210.8(B)(7) Locker rooms w/shower facilities
210.8(B)(8) Garages and accessory buildings
210.8(B)(9) Crawl spaces — at or below grade
210.8(B)(10) Unfinished areas of basements
210.8(B)(11) Laundry areas (Laundromats)
210.8(B)(12) Bathtubs and shower stalls- W/6'

For dwellings and non-dwellings

210.8(C) 120-volt Crawl space lighting
210.8(D) Specific appliances, see 422.5
210.8(E) Receptacles for equipment requiring servicing, see 210.63
210.8(F) Dwelling outdoor outlets A/C units etc..- Does not include lighting

Feeders

215.9 Feeders can have GFCI protection in lieu of protection required per 210.8

422 Appliances
422.5(A) Appliances rated 150 volts or less to ground and 60 amperes or less, 1Ø or 3Ø, shall be provided with Class A GFCI protection for personnel.
422.5(A)(1) Automotive vacuums
422.5(A)(2) Water coolers and bottle fill stations
422.5(A)(3) High-pressure spray washers
422.5(A)(4) Tire inflation machines
422.5(A)(6) Sump pumps
422.5(A)(7) Dishwashers

525.23 GFCI protection for Carnivals and Fairs
547.5(G) GFCI protection for Agricultural Buildings
555 Marinas
555.9 Boat hoist outlets max 240 volts
555.33(B)(1) Receptacles for other than shore Power GFCI Class A
555.35(A)(1) Shore power receptacles GFPE max 30 mA
555.35(A)(3) Feeder and Branch Circuit w/GFPE - MAX 100 mA
590 Temporary Wiring
590.6 Temporary receptacles GFCI for personnel- 125 volt, 1Ø, 15, 20, or 30 Amps

620.6	GFCI protection for Elevators
625.54	All receptacles installed for Electric Vehicle Charging require GFCI protection.
647	Sensitive Electronic Equipment
647.7(A)(1)	Receptacles shall be GFCI protected
680	Pools
680.21(C)	Outlets for pool motors, 150 volts to ground and up to 60 amps, 1Ø or 3Ø protected by GFCI
680.22(A)(2)	Circulation and sanitation pump motor receptacles need GFCI protection
680.22(A)(4)	All 125 volt, 1Ø, 15 or 20 amp receptacles w/20' of pools need to be GFCI protected
680.22(A)(5)	All 150 volts to ground or less receptacles in a pool equipment room shall be GFCI protected
680.22(B)	Rules for GFCI protection for lighting in around pools
680.43	Hot tub GFCI rules
680.58,59	Fountain GFCI rules
680.62(A)	Therapeutic tub GFCI rules
680.82	Pool lift GFCI rules
682.15	GFCI rules for natural and artificial bodies of water

Several other sections throughout the NEC refer back to 210.8.

There are multiple rules for GFPE also.