



Office of Building Services

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National Electric Code (NEC)

2014- 2017 Significant Changes

GFCI -Ground-Fault Circuit-Interrupter Protection - Dwelling Units

Section 210.8(B) GFCI Protection

In other than dwelling units: All single-phase receptacles 150V to ground or less, 50A or less AND three phase receptacles 150V to ground or less and 100A or less shall have GFCI protection in Bathrooms, Kitchens and Rooftops.

Section 210.11 Branch Circuits Required (10)

This new section requires the garage branch circuit to be 20A and service only the garage and readily accessible outdoor receptacle outlets.

AFCI- Arc Fault Circuit Interrupter Protection- Dwelling Units

210.12 Arc-Fault Circuit-Interrupter Protection

The ACFI requirements have been expanded to include Dormitories, Guest Rooms and Suites.

Branch Circuits

210.52 Dwelling Unit Receptacle Outlet Requirements

A receptacle is required at the end of a kitchen counter peninsular.
A receptacle is required in each garage bay.

210.71 Meeting Rooms

A new section to Article 210 has been add to address outlets required in meeting rooms.

Conductors

310.15 Conductor Ampacity

Raceways or cables must be installed a minimum distance of 7/8-inch above the roof or have to add 60°F to the ampacity correction factor which could greatly increase the wire size needed.

Switches

404.2 Switch Connections.

Bathrooms, hallways, stairways and rooms suitable for human habitation require the grounded conductor to be installed. This is to ensure at least one neutral is present in a lighting circuit in case a dimmer or any switch that may require a grounded conductor has one.

Receptacles

406.12 Tamper-Resistant Receptacles

All 125- and 250V, nonlocking-type, 15- and 20-ampere receptacles. New occupancies have been added to the receptacle tamper-resistant requirements: Preschools and elementary education; business offices; corridors; waiting rooms, medical and dental offices and outpatient facilities; assembly occupancies described in Section 518.2; and dormitories.

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Appliances

422.16 Flexible Cords

The receptacle for a built-in dishwasher must be located in the space adjacent to the space occupied by the dishwasher not behind the dishwasher and not more than 6 1/2' from the edge of the dishwasher.

422.31 Permanently Connected Appliance Disconnects

The disconnect rules for appliances are now all the same, regardless of VA or HP rating. This will affect range hoods that are hard wired in. A breaker lock or disconnect will be required.

Air Conditioning and Refrigerating Equipment

440.9 Grounding and Bonding

Air-conditioning installations on metal racks may require a bonding wire to it.

Mobile Homes

550.13 Receptacle Outlets

Dishwashers in mobile and manufactured homes must now be GFCI protected.

550.25 AFCI Protection

The AFCI protection requirements for manufactured and mobile homes now mirror the rules for dwellings in 210.12.

Docks

555.24 Electronic Shock Hazard Sign

Permanent warning signs are required at boat docks and marinas and this includes residential. Sign shall state "WARNING – POTENTIAL SHOCK HAZARD – ELECTRICAL CURRENTS MAY BE PRESENT IN THE WATER".

Pools

680.12 Equipment Rooms and Pits

A reminder that pools and similar installations are in corrosive environments was added.

680.14 Corrosive Environment

New section defines corrosive environment and requirements for equipment and wiring methods.

680.21 Motors

Pool motors do not require an insulated ground unless installed in a corrosive environment.

680.25 Feeders

The wiring methods for feeders supplying pools were changed. Where the feeder is located in a corrosive environment as described in 680.14 an insulated copper equipment grounding conductor shall be required. When installed in a noncorrosive environment, feeders shall comply with general requirements in Chapter 3 and use of SE or Romex.

680.28 Gas-Fired Water Heaters

GFCI protection is now required for Gas-fired water heaters.