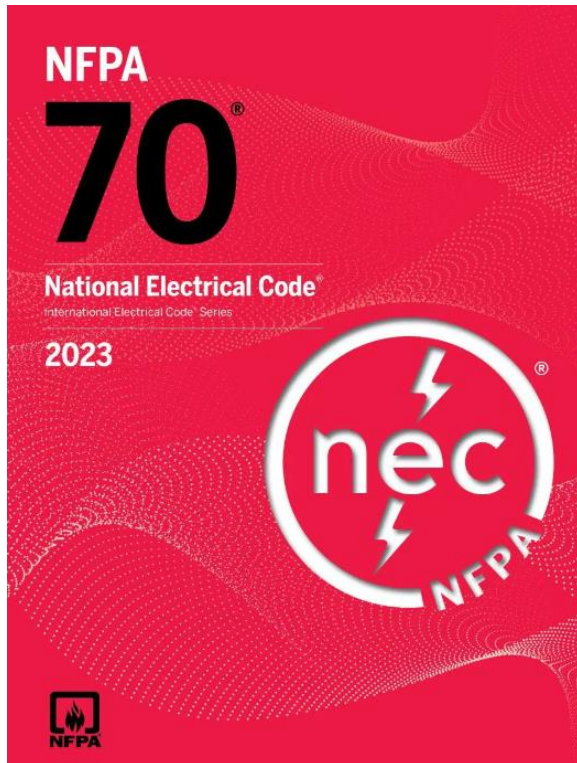


# 2023 NATIONAL ELECTRIC CODE SIGNIFICANT CHANGES



The State of Texas and TDLR have adopted the 2023 Edition of the National Electric Code (NEC) to be the mandatory minimum standard State-wide, effective September 1, 2023. All permits applied for on or after that date must comply with the 2023 NEC. The following are significant changes to the NEC.

- **Article 100 - Definitions**
  - **Reformatting:** All definitions are now contained within this article, including those that were previously located in XXX.2 sections of their respective chapters.
- **Article 100 – Definitions of Work Surface & Countertop**
  - **New:** The difference is based on the amount of potential spillage and affects the type of electrical equipment used at the surface (i.e. flanged, sealed pop-up receptacles).
- **Article 100 – Definition of Engineering Supervision (NCTCOG Amendment)**
  - **Addition:** Expands on definition of Engineering Supervision to stipulate a Qualified State of Texas Licensed Professional Engineer as referenced by TBPELS 137.59(a)(b) as acceptable by the AHJ.
- **110.17 – Servicing and Maintenance of Equipment**
  - **New:** This new section differentiates reconditioning, servicing, and maintenance activities, and requires that all persons performing service or maintenance must be qualified and trained, and all replacement parts and equipment must be identified and approved.

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- **110.20 – Reconditioned Equipment**
  - **New:** Clarifies when equipment can or cannot be reconditioned, does or doesn't need to be listed or labeled, and terms of approval by the AHJ.
  
- **110.26(A)(4) – Working Space Around Electrical Equipment**
  - **Revised:** Working depth must be maintained to the floor, open equipment doors cannot decrease the clear width of the remaining egress space to less than 24 in, and side reach should not exceed 6 in. to work in the panel.
  
- **210.8(A)(7) & 210.8(B)(3) – GFCI Protection**
  - **Revision:** GFCI receptacles are required in “areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking” that aren't necessarily kitchens (i.e. wet bars, beverage prep areas in a convenience store, etc.).
  
- **210.8(D) – Specific Appliances**
  - **New:** A newly-expanded list of “specific appliances” was added that will require GFCI protection, regardless of whether they are hardwired or cord-and-plug connected (new additions include electric range, wall-mounted oven, counter-mounted cooking unit, clothes dryer, and microwave).
  
- **210.8(A)(6) – GFCI Protection for Personnel, Dwellings, Kitchens**
  - **New:** All 125- to 250-volt receptacles in a kitchen must be GFCI protected, regardless of their location or purpose. This includes receptacles that do not serve countertops and are not adjacent to the sink. 210.8(D) goes on to list specific appliances that require GFCI protection.
  
- **210.11(C)(4) – Garage Branch Circuits**
  - **Addition:** Clarifies requirements for 20 amp branch circuits in garages. Additional branch circuits 15 amps or greater may be installed in garages to serve receptacles other than those required in Sec. 210.52(G)(1).
  
- **210.12(F) – AFCI Protection**
  - **New:** Sleeping quarters in fire houses, police stations, and the like will be treated like dormitories and require AFCI protection.
  
- **210.17 – Guest Rooms and Suites**
  - **Clarification:** Rooms and suites in hotels, motels, and assisted living facilities (added) that have permanent provisions for cooking must meet the same branch circuit requirements of a dwelling unit kitchen.

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- **210.18 – Branch Circuits Not Over 1000 Volts**
  - **New:** The NEC now recognizes 10-amp branch circuits for certain power and lighting loads. 210.23 goes on to clarify specific types of acceptable loads.
- **210.23 – Permissible Loads**
  - **New:** Expressly prohibits receptacle outlets, fixed appliances (except as permitted elsewhere), garage door openers, and laundry equipment from utilizing the newly-recognized 10-amp branch circuits.
- **210.52(C)(2) – Dwellings, Receptacles, Island and Peninsular**
  - **New:** The NEC no longer requires receptacle outlets to serve kitchen islands and peninsulas in dwelling units. Instead, there must be provisions for a “future” receptacle to be installed to serve the work surface, as determined by the AHJ.
- **210.52(C)(3) – Receptacles**
  - **New:** Receptacles serving the kitchen countertop are no longer allowed to be located below the work surface. All receptacles required for the kitchen counter space must be located above the surface, or else be approved counter-mounted or pop-up receptacles.
- **215.18 – Surge Protection for Feeders**
  - **New:** New language addresses proper surge protection for areas that may be an extended distance from the service.
- **220.7 – Load Calculations (NCTCOG Amendment)**
  - **New:** A load calculation shall be provided upon request when modifications to the electrical installation occur.
- **220.57 – Load Calculations for Electric Vehicle Supply Equipment (EVSE)**
  - **Revision:** When doing a load calculation, new requirements call for EVSE loads to be calculated at either 7200 watts or the nameplate rating of the equipment, whichever is larger.
- **220.70 – Energy Management Systems (EMSs)**
  - **New:** This new section was added to address digital controls for energy management systems that regulate the maximum load on a service.
- **225.41 – Emergency Disconnects**
  - **New:** Outside emergency disconnects are required for feeders supplied to one- and two-family dwelling units.

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- **404.16 – Reconditioned Equipment**
  - **Clarification:** Switches cannot be reconditioned and must be replaced.
  
- **406.9(C) - Receptacles Installed around Tub and Shower Spaces**
  - **Revision:** New language clarifies the zone around tubs and showers in which receptacles are prohibited.
  
- **406.12(1) – Temper-Resistant Receptacles**
  - **Addition:** Required locations for tamper-resistant receptacles in residential occupancies have been expanded to include areas such as boathouses, mobile homes, manufactured homes, and detached garages and accessory structures serving dwellings.
  
- **440.11 – Disconnects in Residential Spaces**
  - **New:** Where the disconnecting means has a door that can be opened to expose live parts and is in an area exposed to unqualified personnel, the door must be closeable with a lock or require tools to open.
  
- **445.18(A) & 445.19 – Disconnecting Means and Prime Shutdown**
  - **Revision:** The disconnecting means for a generator may be located inside the generator with a hinged door, cover, or panel, provided that it is labeled to indicate the location to emergency responders.
  
- **501-503 – Classified and Unclassified Areas**
  - **Revision:** Clarifies that area classification documentation must be available for both classified and adjacent areas, including language requiring that an area classification drawing must be submitted to the AHJ.
  
- **517.6 – Patient Care-Related Electrical Equipment, Reconditioned**
  - **New:** The NEC provisions governing reconditioned electrical equipment do not apply to patient-care equipment.
  
- **625.40 – Electric Vehicle Branch Circuit**
  - **New:** New exception permits multiple units of EVSE drawing 16A or less, at 120V, to share a circuit when operating in island mode.
  
- **680.5 – GFCI and SPGFCI Protection**
  - **Revision:** This section was revised and expanded to include SPGFCIs and broken up into three sections. The revision’s intent is to clarify protection for pool equipment in commercial installations that have higher voltages.

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- **680.54(C) - Equipotential Bonding of Splash Pads**
  - **New:** Clarifies the area to be bonded for a splash pad.
  
- **700.3(A) – Tests and Maintenance**
  - **Revision:** Now requires commissioning and not just testing of the emergency system.
  
- **706.7 – Commissioning and Maintenance of Energy Storage System**
  - **Revision:** This section was divided into commissioning and maintenance requirements. ESSs must be commissioned upon installation in other than one- and two-family dwellings.