

## Electrical Code

Chapter 105, of the Code of Ordinances of the City of Rockford, Illinois, is hereby amended as follows:

Section 105-114 is amended as follows:

### **Section 105-114. Adopted by reference.**

The ICC International Building Code/2021 Appendix K and the 2020 National Electrical Code (NFPA 70), are hereby referred to, adopted and made apart hereof as if fully set out in this article with the additions, insertions, deletions and amendments contained in Section 105-115 of this article.

Section 105-115 is amended as follows:

### **Section 105-115 Amendments, additions and deletions.**

Amendments to Appendix K of the International Building Code and the 2020 National Electric Code (NFPA 70) have not been set out herein, but can be found on file with the appropriate department of the city for review and purchase by the public.

### **Amendments to the National Electrical Code:**

#### **The NFPA 70 National Electrical Code 2020 is replaced as follows:**

(1) Section 101.1 created as follows:

**101.1 Title.** These regulations shall be known as the Rockford *Electrical Code – Administrative Provisions* of the City of Rockford, Illinois and shall be cited as such and will be referred to herein as ‘this code’.

(2) Section 102.1 Definitions is created as follows:

**102.1 Definitions.** The following definitions shall be used in Chapter 1 to clarify terms.

**102.1 Electrical contractor.** Whenever the term “electrical contractor” is used, it shall mean any person, firm, or corporation undertaking the execution of electrical work or engaged in the business of installing or altering by contract electrical equipment for utilization of electricity, supplied for light, heat, or power, not including radio apparatus or equipment for wireless reception of sounds and signals, and not including apparatus, conductors and other equipment installed for or by public utilities, including common carriers, which are under jurisdiction of the Illinois Commerce Commission for use in their operation as public utilities; the term “electrical contractor” does not include

employees employed by such contractor to do or supervise such work, nor does it include homeowners who do their own work in their own home.

**102.1 Electrical equipment.** Whenever the term “electrical equipment” is used, it shall mean conductors and equipment installed for the utilization of electricity supplied for light, heat, or power, but does not include radio apparatus or equipment for the wireless reception of sounds and signals, and does not include apparatus, conductors, and other equipment installed for or by public utilities, including common carriers which are under the jurisdiction of the Illinois Commerce commission for use in their operation as public utilities.

(3) Section 103.1 is added as follows:

**103.1 Restriction of employees.** An official or employee connected with the enforcement of this code, except whose only connection is that of a member of the board of appeals established under the provisions of section 113 of this code, shall not be engaged in, or directly or indirectly connected with, the furnishing of labor, materials or appliances for the construction, alteration or maintenance of a building, or the preparation of construction documents thereof, unless that person is the owner of the building; nor shall such officer or employee engage in any work that conflicts with official duties or with the interests of the department.

(4) Section 104.1 is added as follows:

**104.1 Work exempt from permit.** Exemptions from *permit* requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any laws or ordinances of this jurisdiction. *Permits* shall not be required for the following:

1. Listed cord and plug connected temporary decorative lighting, provided they are not within tents requiring a permit.
2. Replacement of plug and switch receptacles, light fixtures and ceiling fans weighing less than 35 lbs. without changing box or wiring.
3. Repair or replacement of branch circuit overcurrent devices of the required capacity in the same location.
4. Temporary wiring for experimental purposes in suitable experimental testing laboratories.
5. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
6. Replacement of lamps or connection of portable electrical equipment to approved permanently installed receptacles.
7. Repair or replacement of interior or exterior wall and ceiling coverings (such as plaster, gypsum board or paneling), provided:

- a. not more than 50% of coverings in a room are removed,
  - b. framing is not exposed to the extent where smoke alarms are required to be wired to the building's electrical system and be interconnected by section 907.2.10 of the *International Building Code*,
  - c. electrical wiring in a hazardous condition is not exposed and the minimum standards for receptacles, light switches and light fixtures established in sections 604 and 605 of the *International Property Maintenance Code* as amended have been met, or
  - d. electrical systems are not being resized, rearranged or added to.
8. Ordinary repairs that do not include:
- a. cutting away of any framing within a ceiling, floor, wall, partition or portion thereof,
  - b. removal or cutting of any structural beam or load bearing support,
  - c. removal or change of any required means of egress, or rearrangement of parts of a structure affecting means of egress requirements,
  - d. addition to, alteration of, replacement or relocation of any electrical wiring or other work affecting public health or general safety.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of this code or other laws or ordinances of this jurisdiction.

(5) Section 105.1 is added as follows:

**105.1 Application for electrical permit.** Each application for an electrical permit shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location, the proposed occupancy of the building(s) and other information required by the code official. The application shall be submitted by a City of Rockford registered electrician. In the event that more than one registered electrician is employed by a firm or corporation, the registered electrician that is submitting an application shall be listed on that application. Permits are not transferable from one registered electrician to another.

**Exception:** The owner-occupant of a single family dwelling, or owner of a single family dwelling under construction for his or her occupancy upon completion is permitted to plan, install, alter and repair the electrical systems of such dwelling without a license provided that required permits are obtained and such systems comply with the requirements of this code. The owner-occupant shall not employ other than a City of Rockford registered electrician to assist him or her.

(6) Section 105.2 is added as follows:

**105.2 Owner-occupant permit application.** Where an owner-occupant is permitted to perform electrical work by exception to section 405.1, an owner-occupant application shall be made to the code official on form provided by the code official.

(7) Section 105.3 is added as follows:

**105.3 Work commencing before permit issuance.** When a permit is required by this code, and work is started or proceeded fees shall be in accordance with the Fee Schedule of the City of Rockford Code of Ordinances. No permit can be issued for any person, company or contractor until any outstanding permit fines/fees have been paid in full.

(8) Section 106.1 is added as follows:

**106.1 Registration of electrical contractors.** Before any person, firm, or corporation shall engage in the business as an electrical contractor in the City of Rockford, Illinois, and before any person, firm, or corporation now engaged in said business shall continue in said business, such person, firm, or corporation shall apply for registration stating the name and place of business of the applicant and pay the annual registration fee of \$25.00.

**Exception:**

1. A person, firm or corporation who can show proof of registration for the current year in any City, Village or County in the State of Illinois, shall not be required to pay the registration fee, but shall apply for and obtain registration from the City of Rockford. Said certificate of registration issued thereunder shall expire on the 31st of December of the year in which it is issued, and may be renewed on or before the date of expiration. The Senior Electrical Inspector shall keep a suitable record of all registrations.
2. The owner-occupant of a single family dwelling, or the owner of a single family dwelling under construction for his or her occupancy upon completion shall be permitted to plan, install, alter or repair the electrical systems of such dwelling without registration provided that required permits are obtained such systems comply with the requirements of this code. The owner-occupant shall not employ other than a City of Rockford registered electrician to assist him or her.

(9) Section 106.2 is added as follows:

**106.2 Revocation.** Certificate of registration issued by the Electrical Commission shall not be loaned, rented, assigned or transferred. Each and every certificate of registration may, after hearing, be suspended or revoked by the Electrical Commission upon failure or refusal of the electrical contractor to comply with the rules and regulations of the Commission, or the provisions of this ordinance.

(10) Section 107.1 is added as follows:

**107.1 Temporary connection.** The code official shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel or power with conditional certificate of approval for a reasonable time to supply and use current in part of an

electrical installation before such installation has been fully completed and the final certificate of approval has been issued. The part covered by the temporary certificate shall comply with all the requirements specified for temporary lighting, heat or power in the 2014 *National Electrical Code*. Such temporary use permits are subject to discontinuance and complete revocation upon expiration, and to condemnation and revocation at any time during use.

(11) Section 108.1 Violation penalties is as follows:

**108.1 Violation penalties.** Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to as penalties prescribed by law and punishable by a fine of not less than \$50.00 and not more than \$750.00 dollars.

(12) Section 109.1 Electrical Commission is added as follows:

**109.1 Electrical Commission.** In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to application and interpretation of this code, there shall be and is hereby created an Electrical Commission. The Electrical Commission shall be appointed by the mayor, with the advice and consent of the city council and hold office at its pleasure. The Commission shall adopt rules of procedure for conducting business, and shall render all decisions and findings in writing to the appellant with duplicate copy to the code official.

**109.1.1 Membership on commission.** The Electrical Commission shall consist of five members appointed by the mayor as follows: three (3) for three (3) years and two (2) for two years. The successor to any member of the commission shall be appointed to serve the balance, if any, of his predecessor's appointed term. Otherwise, all successor members of the commission shall be appointed for three (3) year terms.

**109.1.2 Qualifications.** The Electrical Commission shall consist of six individuals, one from each of the following professions or disciplines. 1) The senior electrical inspector as the ex officio chairman, 2) a registered Professional Engineer, 3) an electrical contractor, 4) a journeyman electrician, 5) a representative of an inspection bureau maintained by the fire underwriters or the Chief of the Fire Department or his appointee, 6) a representative of an electricity supply company. The chairman of the electrical commission shall be elected by the commission members.

(13) Section 109.2 Decisions is added as follows:

**109.2 Duties of commission.** The Electrical Commission shall serve as follows:

1. The Electrical Commission shall recommend the following providing they are consistent with the provisions of the City of Rockford Code of Ordinances:

- a. Safe and practical standards and specifications for the installation, alteration and use of electrical equipment designed to meet the necessities and conditions that prevail in the city;
  - b. Reasonable rules and regulations governing the issuance of permits by the electrical division of the Building Department;
  - c. Reasonable fees to be paid for inspection of all electrical equipment installed or altered within the city.
2. The Electrical Commission shall act as the board of appeals for the electrical division.

(14) Section 109.3 Decisions is added as follows:

**109.3 Decisions.** The Commission shall modify or reverse the decision of the code official by a concurring vote of a majority of members present. Quorum of the Commission shall be by three (3) voting members.

**Section 6-53 Adoption of Electrical Code:**

The 2020 National Electrical Code is adopted by reference and amended as follows:

(1) Article 210.8(A) shall be deleted in part and replaced as follows:

**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. (A) Dwelling Units.** All 125-volt ~~through 250-volt~~ receptacles installed in the locations specified in 210.8(A)(1) through (A)(11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(1) Bathrooms

(2) Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use (3) Outdoors Exception to

(3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

(4) Crawl spaces — at or below grade level

(5) Basements

Single outlets for sum pump and sewer ejector may be installed and are not required to have GFCI protection.

*Exception to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault circuit-interrupter protection.*

*Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems.*

*Receptacles installed under the exception to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).*

(6) Kitchens — where the receptacles are installed to serve the countertop surfaces

(7) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

(8) Boathouses

(9) Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft.) of the outside edge of the bathtub or shower stall

(10) Laundry areas

*Exception to (1) through (3), (5) through (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.*

(11) Indoor damp and wet locations

(2) Article 210.8(B) shall be deleted in part and replaced as follows:

**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. (B) Other Than Dwelling Units.** All 125-volt ~~through 250-volt~~ receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less, installed in the locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel. (Remainder of article unchanged)

(3) Article 210.12 (A) shall be deleted in part as follows:

**210.12 Arc-Fault Circuit-Interrupter Protection. (A) Dwelling Units.** All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit ~~kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas,~~ or similar rooms or areas shall be protected by any of the means described in **210.12(A)(1)** through (6): (Remainder of article unchanged)

(4) Article 210.19(A) (5) shall be added as follows:

**210.19 Conductors—Minimum Ampacity and Size. (A) Branch Circuits Not More Than 600 Volts. (5) Microwave Circuits.** The wiring used to supply power to a permanently installed microwave oven shall consist of a dedicated circuit installed with 12 AWG or larger conductors.

(5) Article 210.52 shall be deleted and replaced as follows:

**210.52 Dwelling Unit Receptacle Outlets. (C) Countertops and Work Surfaces. (2) Island and Peninsular Countertops and Work Surfaces.** ~~Receptacle outlets shall be installed in accordance with 210.52(C)(2)(a) and (C)(2)(b).~~

~~(a) At least one receptacle outlet shall be provided for the first 0.84 m<sup>2</sup> (9 ft<sup>2</sup>), or fraction thereof, of the countertop or work surface. A receptacle outlet shall be provided for every additional 1.7 m<sup>2</sup> (18 ft<sup>2</sup>), or fraction thereof, of the countertop or work surface.~~

~~(b) At least one receptacle outlet shall be located within 600 mm (2 ft) of the outer end of a peninsular countertop or work surface. Additional required receptacle outlets shall be permitted to be located as determined by the installer, designer, or building owner. The location of the receptacle outlets shall be in accordance with 210.52(C)(3).~~

~~A peninsular countertop shall be measured from the connected perpendicular wall.~~

At least one receptacle outlet shall be installed at each peninsular countertop space with a long dimension of 600 mm (24 in.) or greater and a short dimension of 300 mm (12 in.) or greater. A peninsular countertop is measured from the connecting edge.

(6) Article 210.70(A) (1) shall be amended as follows:

**210.70 Lighting Outlets Required. (A) Dwelling Units. (1) Habitable rooms.** At least one lighting outlet controlled by a listed wall-mounted control device shall be installed in every habitable room, kitchen, and bathroom. The wall-mounted control device shall be located near an entrance to the room on a wall. The main lighting outlet in each room shall not be fed from the load side of a GFCI device. Unless 210.70(A)(1) Exception No. 1 is applied, provision shall be made in the wiring of each ceiling box of all habitable rooms (excluding dining rooms) for a luminaire to operate independently from a fan.



(6) Article 210.70 (C) shall be amended as follows:

**210.70 Lighting Outlets Required. (C) All Occupancies.** For attics and underfloor spaces, utility rooms, and basements, at least one lighting outlet containing a switch or controlled by a wall switch or listed wall-mounted control device shall be installed where these spaces are used for storage or contain equipment requiring servicing. A point of control shall be at each entry that permits access to the attic and underfloor space, utility room, or basement. Where a lighting outlet is installed for equipment requiring service, the lighting outlet shall be installed at or near the equipment. The switches shall not be fed from the load side of a GFCI device.

(7) Article 230.11 shall be added as follows:

**230.11 Service Modifications.** When any part of the service entrance equipment, branch circuit panel, or service conductor is replaced, modified, or required to be repaired, the service in its entirety must be installed to comply with the current codes. The main branch circuit panel shall be at least 16 spaces.

Exception: Replacement or addition of a branch-circuit overcurrent protective device.

(8) Article 230.43 shall be deleted and replaced as follows:

**230.43 Wiring Methods for 1000 Volts, Nominal, or Less.** Service-entrance conductors and service laterals overhead shall be installed in accordance with the applicable requirements of this Code covering the type of wiring method used and shall be limited to rigid metal conduit (RMC) or intermediate metal conduit (IMC). Electrical metallic tubing (EMT) may be used inside a building or structure.

(9) Article 230.67 shall be deleted.

**230.67 Surge Protection.**

**(A) Surge-Protective Device.** All services supplying dwelling units shall be provided with a surge-protective device (SPD).

**(B) Location.** The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto.

Exception: The SPD shall not be required to be located in the service equipment as required in (B) if located at each next level distribution equipment downstream toward the load.

**(C) Type.** The SPD shall be a Type 1 or Type 2 SPD.

**(D) Replacement.** Where service equipment is replaced, all of the requirements of this section shall apply.

(10) Article 230.70 (A) (1) shall be deleted and replaced as follows:

**230.70 General. (A) Location. (1) Readily Accessible Location.** The service disconnecting means shall be installed at a readily accessible location, either outside of a building or structure, or inside at or within 5 feet of the meter enclosure.

(11) Article 230.85 shall be deleted.

~~**230.85 Emergency Disconnects.** For one and two family dwelling units, all service conductors shall terminate in disconnecting means having a short-circuit current rating equal to or greater than the available fault current, installed in a readily accessible outdoor location. If more than one disconnect is provided, they shall be grouped. Each disconnect shall be one of the following:~~

~~(1) Service disconnects marked as follows:~~

~~EMERGENCY DISCONNECT,~~

~~SERVICE DISCONNECT~~

~~(2) Meter disconnects installed per 230.82(3) and marked as follows:~~

~~EMERGENCY DISCONNECT,~~

~~METER DISCONNECT, NOT SERVICE EQUIPMENT~~

~~(3) Other listed disconnect switches or circuit breakers on the supply side of each service disconnect that are suitable for use as service equipment and marked as follows:~~

~~EMERGENCY DISCONNECT, NOT SERVICE EQUIPMENT~~

~~Markings shall comply with 110.21(B).~~

(12) Article 250.52 shall be amended as follows:

**Article 250.52 Grounding electrodes.** A concrete-encased electrode that complies with 250.52(A) (3) will be required in all new construction and shall be clearly marked for inspection. (Remainder of article unchanged)

(13) Article 250.53 (A)(2) shall be deleted in part as follows:

**250.53 Grounding Electrode System Installation. (A) Rod, Pipe, and Plate Electrodes. (2) Supplemental Electrode Required.** A single rod, pipe, or plate electrode shall be supplemented

by an additional electrode of a type specified in 250.52(A)(2) through (A)(8). The supplemental electrode shall be permitted to be bonded to one of the following:

- (1) Rod, pipe, or plate electrode
- (2) Grounding electrode conductor
- (3) Grounded service-entrance conductor
- (4) Nonflexible grounded service raceway
- (5) Any grounded service enclosure

~~Exception: If a single rod, pipe, or plate grounding electrode has a resistance to earth of 25 ohms or less, the supplemental electrode shall not be required.~~

(14) Article 300.1(D) shall be added as follows:

**300.1 Scope. (D) Mixed Use and Occupancy Buildings.** The entire mixed use and occupancy building shall be wired by the most restrictive code.

(15) Article 300.5 (D) (3) shall be amended as follows:

**300.5 Underground Installations. (D) Protection from Damage (3) Service Conductors.**

Underground service conductors shall be installed in galvanized or stainless steel rigid metal conduit (RMC) or intermediate metal conduit (IMC). Underground service conductors that are not subject to physical damage may be installed in Schedule 80 rigid electrical nonmetallic conduit (PVC), protected by galvanized or stainless steel rigid conduit (RMC) or intermediate metal conduit (IMC) to a minimum of 450 mm (18 inches) below grade. No exposed nonmetallic conduit shall be allowed. Underground service conductors that are not encased in concrete and that are buried 450 mm (18 inches) or more below grade shall have their location identified by a warning ribbon that is placed in the trench at least 300 mm (12 inches) above the underground installation.

(16) Article 300.11(A) (1) shall be added as follows:

**300.11 Securing and Supporting. (A) Secured in Place. (1) Tie Wire.** Tie wire shall not be allowed as a sole means of supporting or securing conduit or cable in above ground applications.

(17) Article 300.13(C) shall be added as follows:

**300.13 Mechanical and Electrical Continuity--Conductors. (C) Multiple Conductors.** A device designed to be used for switching or as a receptacle may not be used to provide electrical continuity to any circuit conductor.

(18) Article 300.13(D) shall be added as follows:

**300.13 Mechanical and Electrical Continuity-Conductors. (D) Push-Type Clamping Devices.**

No push-type or clamp-type connections for splices or for terminating to devices will be allowed unless the wire connection is secured with a screw or crimping tool.

Exception 1: Disconnecting means for ballasts.

Exception 2: Factory installed terminations in luminaires.

(19) Article 310.3 (B) shall be deleted and replaced as follows:

**310.3 Conductors. (B) Conductor Material.** Conductors in this article shall be aluminum, copper-clad aluminum, or copper unless otherwise specified. Aluminum and copper-clad aluminum conductors shall be prohibited to be installed in sizes smaller than 4 AWG. Stranded aluminum conductors 4 AWG through 1000 kcmil marked as Type RHH, RHW, XHHW, THW, THHW, THWN, THHN, service-entrance Type SE Style U and SE Style R shall be made of an AA-8000 series electrical grade aluminum alloy conductor material.

(20) Article 314.27 (A) (2) shall be amended as follows:

**314.27 Outlet Boxes. (A) Boxes at Luminaire or Lampholder Outlets. (2) Ceiling Outlets.** At every outlet used exclusively for lighting, the box shall be designed or installed so that a luminaire or lampholder may be attached. Boxes shall be required to support a luminaire weighing a minimum of 23 kg (50lb). A luminaire that weighs more than 23 kg (50lb) shall be supported independently of the outlet box, unless the outlet box is listed and marked on the interior of the box to indicate the maximum weight the box shall be permitted to support. In all habitable rooms with a ceiling fixture (other than recessed fixtures) in a location acceptable for a ceiling-suspended (paddle) fan in single-family, two-family or multi-family dwellings, a box rated for ceiling fan support shall be installed.

(21) Article 334.10 shall be added as follows:

**334.10 Uses Permitted.** Type NM, Type NMC, and Type NMS cables shall be permitted to be used only in the following: R-2, R-3, and R-4 structures (as defined by the International Building Code) not exceeding three floors above grade.

(22) Article 334.15(D) shall be added as follows:

**334.15 Exposed Work. (D) All Unfinished Areas.** Any exposed cable 7 feet (213.36cm) or closer to the floor must be protected with a durable building material or sleeved in an approved manner.

(23) Article 334.40 (B) shall be deleted in part:

**334.40 Boxes and Fittings. (B) Devices of Insulating Material.** Delete “and for repair wiring in existing buildings where the cable is concealed.”

(24) Article 338.10 (A) shall be deleted and replaced as follows:

**338.10 Uses Permitted. (A) Service-Entrance Conductors.** Type NM, Type NMC, SE, and Type NMS cables shall be permitted to be used only in the following: R-2, R-3, and R-4 structures (as defined by the International Building Code) not exceeding three floors above grade.

(25) Article 408.54 shall be amended as follows:

**408.54 Maximum Number of Overcurrent Devices.** A panelboard shall be provided with physical means to prevent the installation of more overcurrent devices than that number for which the panelboard was designed, rated, and listed. Newly installed panelboards shall not have tandem breakers or similar breakers.

For the purposes of this section, a 2-pole circuit breaker or fusible switch shall be considered two overcurrent devices; a 3-pole circuit breaker or fusible switch shall be considered three overcurrent devices.

(26) Article 406.9 (2) (C) shall be deleted and replaced as follows:

**406.7 Attachment Plugs, Cord Connectors, and Flanged Surface Devices. (2) Other Receptacles. (C) Bathtub and Shower Space.** ~~Receptacles shall not be installed within a zone measured 900 mm (3 ft) horizontally and 2.5 m (8 ft) vertically from the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the tub or shower stall.~~ Receptacles shall not be installed within or directly over a bathtub or shower stall.

~~*Exception: In bathrooms with less than the required zone the receptacle(s) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.*~~

(27) Article 408.8 shall be deleted in part and replaced as follows:

**408.8 Reconditioning of Equipment.** Reconditioning of equipment shall not be permitted. ~~within the scope of this article shall be limited as described in **408.8(A)** and (B). The reconditioning process shall use design qualified parts verified under applicable standards and be performed in accordance with any instructions provided by the manufacturer. If equipment~~

~~has been damaged by fire, products of combustion, or water, it shall be specifically evaluated by its manufacturer or a qualified testing laboratory prior to being returned to service.~~

~~**(A) Panelboards.** Panelboards shall not be permitted to be reconditioned. This shall not prevent the replacement of a panelboard within an enclosure. In the event the replacement has not been listed for the specific enclosure and the available fault current is greater than 10,000 amperes, the completed work shall be field labeled, and any previously applied listing marks on the cabinet that pertain to the panelboard shall be removed.~~

~~**(B) Switchboards and Switchgear.** Switchboards and switchgear, or sections of switchboards or switchgear, shall be permitted to be reconditioned. Reconditioned switchgear shall be listed or field labeled as *reconditioned*, and previously applied listing marks, if any, within the portions reconditioned shall be removed.~~

(28) Article 410.36(B) shall be amended as follows:

**410.36 Means of Support. (B) Suspended Ceilings.** Framing members of suspended ceiling systems used to support luminaires shall be securely fastened to each other and shall be securely attached to the building structure at appropriate intervals. Luminaires smaller than 610 mm by 610 mm (24 inches by 24 inches) shall be securely fastened to the ceiling framing member by mechanical means such as bolts, screws, or rivets. Listed clips identified for the use with the type of ceiling framing member(s) and luminaire(s) shall also be permitted. Fixtures 610 mm by 610 mm (24 inches by 24 inches) or larger shall be supported independently of the ceiling grid by at least two wires on opposite corners of the fixture. The same size (or larger) wire used to support the ceiling system shall be used to support the fixture, but in no case shall the wire size be smaller than size No. 12 AWG steel.

(29) Article 690.13 (E) shall be deleted in part as follows:

**690.13 Photovoltaic System Disconnecting Means. (E) Type of Disconnect.** The PV system disconnecting means shall simultaneously disconnect the PV system conductors that are not solidly grounded from all conductors of other wiring systems. The PV system disconnecting means or its remote operating device or the enclosure providing access to the disconnecting means shall be capable of being locked in accordance with 110.25. The PV system disconnecting means shall be one of the following:

(1) A manually operable switch or circuit breaker

~~(2) A connector meeting the requirements of 690.33(D)(1) or (D)(3)~~

(3) A pull-out switch with the required interrupting rating

(4) A remote-controlled switch or circuit breaker that is operable locally and opens automatically when control power is interrupted

~~(5) A device listed or approved for the intended application~~

(30) Article 705.11 (D) shall amended as follows:

**705.11 Supply-Side Source Connections. (D) Connections.** The connection of power source output circuit conductors to the service conductors shall be made using listed connectors as described in **110.14** and comply with all enclosure fill requirements Any modifications to existing equipment shall be made in accordance with the manufacturer’s instructions or the modification must be evaluated for the application and have a field label applied. For meter socket enclosures or other equipment under the exclusive control of the electric utility, only connections approved by the electric utility shall be permitted. No more than one tap per conductor.

(31) Article 705.20 shall be deleted in part as follows:

**705.20 Disconnecting Means, Source.** Means shall be provided to disconnect power source output circuit conductors of electric power production equipment from conductors of other systems.

The disconnecting means shall comply with the following:

(1) Be one of the following types:

(a) A manually operable switch or circuit breaker

(b) A load-break-rated pull-out switch

(c) A power-operated or remote-controlled switch or circuit breaker that is manually operable locally and opens automatically when control power is interrupted

~~(d) A device listed or approved for the intended application~~

(2) Simultaneously disconnect all ungrounded conductors of the circuit

(3) Located where readily accessible

(4) Externally operable without exposed live parts

(5) Enclosures with doors or hinged covers with exposed live parts when open that require a tool to open or are lockable where readily accessible to unqualified persons

(6) Plainly indicate whether in the open (off) or closed (on) position

(7) Have ratings sufficient for the maximum circuit current, available fault current, and voltage that is available at the terminals

(8) Be marked in accordance with the warning in 690.13(B), where the line and load terminals are capable of being energized in the open position