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WORKING DRAFT OF NEC CODE-MAKING **PANEL 18 MEETING OUTPUT**

**CONTENT NOT FINAL – SUBJECT TO REVISION
PRIOR TO LETTER BALLOT AND PUBLICATION OF
FIRST DRAFT REPORT**

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This is a working draft, prepared by NFPA staff, to record the output generated at the Code-Making Panel 18 First Draft Meeting. It includes draft copies of the First Revisions and any Global Revisions.

It is being made available to Panel members for the purpose of facilitating early review, particularly for those Panel members who may be seeking input from their respective organizations in preparation for the First Draft Ballot.



First Revision No. 7914-NFPA 70-2024 [Global Input]

[See attached word document "70_NEC_CMP18_A2025NEC_Article 406_FR_7914" for reorganization of Article 406]

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
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Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 08:43:34 EST 2024

Committee Statement

Committee Statement: The present scope of Article 404 address all switches, switching devices and circuit breakers used as switches operating at 1000 volts and below unless specifically referenced elsewhere in this Code for higher voltages.

Article 404 scope should be modified to only cover general-use switches, motor-circuit switches, isolating switches, circuit breakers used as switches, and molded case switches. Other types of switches that fit outside of the modified scope of Article 404, i.e., general-use snap switch, pendant switch, surface switch, dimmer, and electronic control switches, and lighting control switches are relocated to Article 406.

This relocation is logical as these types of switches (also referred to as 'wiring devices') are installed similar to how receptacles are installed. It should also be noted that the Standard for Electrical Equipment Maintenance, NFPA 70B, currently has "Wiring Devices" in Chapter 24 and "Switches" in Chapter 17. This revision would create a similar alignment of requirements. This revision will improve usability of Article 404 Switches and facilitate the reassignment of switches to CMP's with the right focus for the equipment (namely, CMP-18 for 'wiring devices' and CMP-10 for larger switches). Additionally, operating at voltages not over 1000 volts ac, 1500 volts dc, nominal was introduced to clarify what is meant by unless specifically referenced elsewhere in this code for higher voltages and for consistency with other parts of the code where 1500 volts dc is used.

Response Message: FR-7914-NFPA 70-2024

[Public Input No. 3705-NFPA 70-2023 \[Section No. 406.3\]](#)

[Public Input No. 1544-NFPA 70-2023 \[Article 406\]](#)

[Public Input No. 3706-NFPA 70-2023 \[Section No. 406.2\]](#)

Article 406 ~~Receptacles, Cord Connectors, and Attachment Plugs (Caps)~~ Wiring Devices

Part I. General

406.1 Scope.

This article covers the rating, type, and installation of wiring devices, ~~receptacles, cord connectors, and attachment plugs (cord caps)~~.

406.2 Listing Requirements.

Wiring devices shall be listed.

~~406.23~~ Reconditioned Equipment.

Reconditioned ~~receptacles, attachment plugs, cord connectors, and flanged surface wiring~~ devices shall not be permitted to be installed.

Part II. Receptacles, Cord Connectors, and Attachment Plugs (Caps)

~~406.311~~ Receptacle Rating and Type.

(A) Receptacles.

Receptacles shall be ~~listed and~~ marked with the manufacturer's name or identification and voltage and ampere ratings.

(B) Rating.

Receptacles and cord connectors shall be rated not less than 15 amperes, 125 volts, or 15 amperes, 250 volts, and shall be of a type not suitable for use as lampholders.

Informational Note: See 210.21(B) for receptacle ratings where installed on branch circuits.

~~(C) CO/ALR Receptacles.~~

~~Receptacles rated 20 amperes or less and designed for the direct connection of aluminum conductors shall be marked CO/ALR.~~

~~(D) Receptacle Wiring Device Terminations. [Move to 406.10]~~

Receptacle Wiring device terminations shall be in accordance with the following:

- (1) Terminals of 15-ampere and 20-ampere ~~receptacles~~ wiring devices not marked CO/ALR shall be used with copper and copper-clad aluminum conductors only.
- (2) Terminals marked CO/ALR shall be permitted to be used with aluminum, copper, and copper-clad aluminum conductors.
- (3) ~~Receptacles~~ Wiring devices installed using screwless terminals of the conductor push-in type construction (also known as *push-in-terminals*) shall be installed on not greater than 15-ampere branch circuits and shall be connected with 14 AWG solid copper wire only unless listed and marked for other types of conductors.

Informational Note: See UL 498, *Attachment Plugs and Receptacles*, for information regarding screwless terminals of various type constructions employed on receptacles. Screwless terminals of the separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 498 as screwless terminals of the conductor push-in type construction (also known as push-in terminals).

(EC) Isolated Ground Receptacles.

Receptacles incorporating an isolated equipment grounding conductor connection intended for the reduction of electromagnetic interference as permitted in 250.146(D) shall be identified by an orange triangle located on the face of the receptacle.

(1) Isolated Equipment Grounding Conductor Required.

Receptacles so identified shall be used only with equipment grounding conductors that are isolated in accordance with 250.146(D).

(2) Installation in Nonmetallic Boxes.

Isolated ground receptacles installed in nonmetallic boxes shall be covered with a nonmetallic faceplate.

Exception: Where an isolated ground receptacle is installed in a nonmetallic box, a metal faceplate shall be permitted if the box contains a feature or accessory that permits the connection of the faceplate to the equipment grounding conductor.

(FD) Controlled Receptacle Marking.

All nonlocking-type, 125-volt, 15- and 20-ampere receptacles that are controlled by an automatic control device, or that incorporate control features that remove power from the receptacle for the purpose of energy management or building automation, shall be permanently marked with the symbol shown in Figure 406.311(D) and the word “controlled.”

For receptacles controlled by an automatic control device, the marking shall be located on the receptacle face and visible after installation.

In both cases where a multiple receptacle device is used, the required marking of the word “controlled” and symbol shall denote which contact device(s) are controlled.

Figure 406.311(FD) Controlled Receptacle Marking Symbol.



Exception: The marking shall not be required for receptacles controlled by a wall switch that provide the required room lighting outlets as permitted by 210.70.

(EG) Receptacle with USB Charger.

A 125-volt 15- or 20-ampere receptacle that additionally provides Class 2 power shall be listed and constructed such that the Class 2 circuitry is integral with the receptacle.

406.412 General Installation Requirements.

Receptacle outlets shall be located in branch circuits in accordance with Part III of Article 210. General installation requirements shall be in accordance with 406.412(A) through (G).

(A) Grounding Type.

Except as provided in 406.412(D), receptacles installed on 15- and 20-ampere branch circuits shall be of the grounding type. Grounding-type receptacles shall be installed only on circuits of the voltage class and current for which they are rated, except as provided in 210.21(B)(1) for single receptacles or Table 210.21(B)(2) and Table 210.21(B)(3) for two or more receptacles.

(B) Connection to Equipment Grounding Conductor.

Receptacles and cord connectors that have equipment grounding conductor contacts shall have those contacts connected to an equipment grounding conductor.

Exception No. 1: Receptacles mounted on portable and vehicle-mounted generator sets and generators in accordance with 250.34.

Exception No. 2: Replacement receptacles as permitted by 406.412(D).

(C) Methods of Connection to Equipment Grounding Conductor.

The equipment grounding conductor contacts of receptacles shall be connected to an equipment grounding conductor of the circuit supplying the receptacle in accordance with 250.146.

Cord connectors shall be connected to the equipment grounding conductor of the circuit supplying the cord connector.

Informational Note No. 1: See 250.118 for acceptable grounding means.

Informational Note No. 2: See 250.130 for extensions of existing branch circuits.

(D) Replacements.

Replacement of receptacles shall comply with 406.412(D)(1) through (D)(8), as applicable. Arc-fault circuit-interrupter type and ground-fault circuit-interrupter type receptacles shall be installed in a readily accessible location.

(1) Grounding-Type Receptacles.

Where a grounding means exists in the receptacle enclosure or an equipment grounding conductor is installed in accordance with 250.130(C), grounding-type receptacles shall be used and shall be connected to the equipment grounding conductor in accordance with 406.412(C) or 250.130(C).

(2) Non-Grounding-Type Receptacles.

Where attachment to an equipment grounding conductor does not exist in the receptacle enclosure, the installation shall comply with 406.412(D)(2)(a), (D)(2)(b), or (D)(2)(c).

- (a) A non-grounding-type receptacle(s) shall be permitted to be replaced with another non-grounding-type receptacle(s).
- (b) A non-grounding-type receptacle(s) shall be permitted to be replaced with a ground-fault circuit interrupter-type of receptacle(s). These receptacles or their cover plates shall be marked "No Equipment Ground." An equipment grounding conductor shall not be connected from the ground-fault circuit-interrupter-type receptacle to any outlet supplied from the ground-fault circuit-interrupter receptacle.
- (c) A non-grounding-type receptacle(s) shall be permitted to be replaced with a grounding-type receptacle(s) where supplied through a ground-fault circuit interrupter. Where grounding-type receptacles are supplied through the ground-fault circuit interrupter, grounding-type receptacles or their cover plates shall be marked "GFCI Protected" and "No Equipment Ground," visible after installation. An equipment grounding conductor shall not be connected between the grounding-type receptacles.

Informational Note No. 1: Some equipment or appliance manufacturers require that the branch circuit to the equipment or appliance includes an equipment grounding conductor.

Informational Note No. 2: See 250.114 for a list of a cord-and-plug-connected equipment or appliances that require an equipment grounding conductor.

(3) Ground-Fault Circuit-Interrupter Protection.

Ground-fault circuit-interrupter protection for receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this *Code*. Ground-fault circuit interrupters shall be listed.

Exception: Where the outlet box size will not permit the installation of the GFCI receptacle, the receptacle shall be permitted to be replaced with a new receptacle of the existing type, where GFCI protection is

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provided and the receptacle is marked "GFCI Protected" and "No Equipment Ground," in accordance with 406.412(D)(2)(a), (D)(2)(b), or (D)(2)(c), as applicable.

(4) Arc-Fault Circuit-Interrupter Protection.

If a receptacle located in any areas specified in 210.12(A), (B), or (C) is replaced, a replacement receptacle at this outlet shall be one of the following:

- (1) A listed outlet branch-circuit type AFCI receptacle
- (2) A receptacle protected by a listed outlet branch-circuit type AFCI type receptacle
- (3) A receptacle protected by a listed combination type AFCI circuit breaker

Exception: Section 210.12(E), Exception, shall not apply to replacement of receptacles.

(5) Tamper-Resistant Receptacles.

Listed tamper-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be tamper-resistant elsewhere in this *Code*, except in one of the following cases:

- (1) Where a nongrounding receptacle is replaced with another nongrounding receptacle
- (2) Where aluminum branch-circuit conductors are directly terminated on a CO/ALR receptacle, installed as replacement

(6) Weather-Resistant Receptacles.

Weather-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this *Code*.

(7) Controlled Receptacles.

Automatically controlled receptacles shall be replaced with equivalently controlled receptacles. If automatic control is no longer required, the receptacle and any associated receptacles marked in accordance with 406.311(FD) shall be replaced with a receptacle and faceplate not marked in accordance with 406.311(FD).

(8) Ground-Fault Protection of Equipment (GFPE).

Receptacles shall be provided with GFPE where replacements are made at receptacle outlets that are required to be so protected elsewhere in this *Code*.

(E) Cord- and Plug-Connected Equipment.

The installation of grounding-type receptacles shall not be used as a requirement that all cord-and plug-connected equipment be of the grounded type.

Informational Note: See 250.114 for types of cord-and plug-connected equipment to be grounded.

(F) Noninterchangeable Types.

Receptacles connected to circuits that have different voltages, frequencies, or types of current (ac or dc) on the same premises shall be of such design that the attachment plugs used on these circuits are not interchangeable.

(G) Protection of Floor Receptacles.

Protection for floor receptacles shall be in accordance with the following:

- (1) Physical protection of floor receptacles shall allow floor-cleaning equipment to be operated without damage to receptacles.

- (2) All 125-volt, single-phase, 15- and 20-ampere floor receptacles installed in food courts and waiting spaces of passenger transportation facilities where food or drinks are allowed shall be GFCI protected.

406.514 Receptacle Mounting.

Receptacles shall be mounted in identified boxes or assemblies. The boxes or assemblies shall be securely fastened in place unless otherwise permitted elsewhere in this *Code*. Screws used for the purpose of attaching receptacles to a box shall be of the type provided with a listed receptacle, or shall be machine screws having 32 threads per inch or part of listed assemblies or systems, in accordance with the manufacturer's instructions.

(A) Boxes That Are Set Back.

Receptacles mounted in boxes that are set back from the finished surface as permitted in 314.20 shall be installed such that the mounting yoke or strap of the receptacle is held rigidly at the finished surface.

(B) Boxes That Are Flush.

Receptacles mounted in boxes that are flush with the finished surface or project therefrom shall be installed such that the mounting yoke or strap of the receptacle is held rigidly against the box or box cover.

(C) Receptacles Mounted on Covers.

Receptacles mounted to and supported by a cover shall be held rigidly against the cover by more than one screw or shall be a device assembly or box cover listed and identified for securing by a single screw.

(D) Position of Receptacle Faces.

After installation, receptacle faces shall be flush with or project from faceplates of insulating material and shall project a minimum of 0.4 mm (0.015 in.) from metal faceplates.

Exception: Listed kits or assemblies encompassing receptacles and nonmetallic faceplates that cover the receptacle face, where the plate cannot be installed on any other receptacle, shall be permitted.

(E) Receptacles in Countertops.

Receptacle assemblies for installation in countertop surfaces shall be listed for countertop applications. Where receptacle assemblies for countertop applications are required to provide ground-fault circuit-interrupter protection for personnel in accordance with 210.8, such assemblies shall be permitted to be listed as GFCI receptacle assemblies for countertop applications.

(F) Receptacles in Work Surfaces.

Receptacle assemblies and GFCI receptacle assemblies listed for work surface or countertop applications shall be permitted to be installed in work surfaces.

(G) Receptacle Orientation.

(1) Countertop and Work Surfaces.

Receptacles shall not be installed in a face-up position in or on countertop surfaces or work surfaces unless listed for countertop or work surface applications.

(2) Under Sinks.

Receptacles shall not be installed in a face-up position in the area below a sink.

(H) Receptacles in Seating Areas and Other Similar Surfaces.

In seating areas or similar surfaces, receptacles shall not be installed in a face-up position unless the receptacle is any of the following:

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- (1) Part of an assembly listed as a furniture power distribution unit
- (2) Part of an assembly listed either as household furnishings or as commercial furnishings
- (3) Listed either as a receptacle assembly for countertop applications or as a GFCI receptacle assembly for countertop applications
- (4) Installed in a listed floor box

(I) Exposed Terminals.

Receptacles shall be enclosed so that live wiring terminals are not exposed to contact.

(J) Voltage Between Adjacent Devices.

A receptacle shall not be grouped or ganged in enclosures with other receptacles, snap switches, or similar devices, unless they are arranged so that the voltage between adjacent devices does not exceed 300 volts, or unless they are installed in enclosures equipped with identified, securely installed barriers between adjacent devices.

406.16 Receptacle Faceplates (Cover Plates).

Receptacle faceplates shall be installed so as to completely cover the opening and seat against the mounting surface.

Receptacle faceplates mounted inside a box having a recess-mounted receptacle shall effectively close the opening and seat against the mounting surface.

(A) Thickness of Metal Faceplates.

Metal faceplates shall be of ferrous metal not less than 0.76 mm (0.030 in.) in thickness or of nonferrous metal not less than 1.02 mm (0.040 in.) in thickness.

(B) Grounding.

Metal faceplates shall be grounded.

(C) Faceplates of Insulating Material.

Faceplates of insulating material shall be noncombustible and not less than 2.54 mm (0.10 in.) in thickness but shall be permitted to be less than 2.54 mm (0.10 in.) in thickness if formed or reinforced to provide adequate mechanical strength.

(D) Receptacle Faceplate (Cover Plates) with Integral Night Light and/or USB Charger.

A flush device cover plate that additionally provides a night light and/or Class 2 output connector(s) shall be listed and constructed such that the night light and/or Class 2 circuitry is integral with the flush device cover plate.

Listed receptacle faceplates with integral night light, USB charger, or both, that rely solely on spring-tensioned contacts shall be connected to only brass or copper alloy receptacle terminal screws and shall be rated 1 watt or less.

Exception: Effective January 1, 2026, spring-tensioned contact connections to steel receptacle terminal screws shall be permitted if the receptacle faceplate is specifically listed and identified for connection to steel receptacle terminal screws.

406.718 Attachment Plugs, Cord Connectors, and Flanged Surface Devices.

All attachment plugs, cord connectors, and flanged surface devices (inlets and outlets) shall be listed and marked with the manufacturer's name or identification and voltage and ampere ratings.

(A) Construction of Attachment Plugs and Cord Connectors.

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Attachment plugs and cord connectors shall be constructed so that there are no exposed current-carrying parts except the prongs, blades, or pins. The cover for wire terminations shall be a part that is essential for the operation of an attachment plug or connector (dead-front construction).

(B) Connection of Attachment Plugs.

Attachment plugs shall be installed so that their prongs, blades, or pins are not energized unless inserted into an energized receptacle or cord connectors. No receptacle shall be installed so as to require the insertion of an energized attachment plug as its source of supply.

(C) Attachment Plug Ejector Mechanisms.

Attachment plug ejector mechanisms shall not adversely affect engagement of the blades of the attachment plug with the contacts of the receptacle.

(D) Flanged Surface Inlet.

A flanged surface inlet shall be installed such that the prongs, blades, or pins are not energized unless an energized cord connector is inserted into it.

406.820 Noninterchangeability.

Receptacles, cord connectors, and attachment plugs shall be constructed such that receptacle or cord connectors do not accept an attachment plug with a different voltage or current rating from that for which the device is intended. However, a 20-ampere T-slot receptacle or cord connector shall be permitted to accept a 15-ampere attachment plug of the same voltage rating. Non-grounding-type receptacles and connectors shall not accept grounding-type attachment plugs.

406.9 Receptacles Wiring Devices in Damp or Wet Locations.

(A) Damp Locations.

(1) Receptacles.

A receptacle installed outdoors in a location protected from the weather or in other damp locations shall have an enclosure for the receptacle that is weatherproof when the receptacle is covered (attachment plug cap not inserted and receptacle covers closed).

An installation suitable for wet locations shall also be considered suitable for damp locations.

A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like, and will not be subjected to a beating rain or water runoff. All 125- and 250-volt nonlocking receptacles shall be a listed weather-resistant type. Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the cover is not designed to open 90 degrees from the closed to open position, after installation.

Informational Note: See ANSI/NEMA WD 6–2016, *Wiring Devices — Dimensional Specifications*, for the types of receptacles covered by this requirement.

(2) Switches.

A switch installed in a damp location shall comply with the following:

(1) A surface-mounted switch shall be enclosed in a weatherproof enclosure that complies with 312.2

~~(1)~~(2) A flush-mounted switch shall be equipped with a weatherproof cover.

(B) Wet Locations.

(1) Receptacles of 15 Amperes and 20 Amperes in a Wet Location.

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Receptacles of 15 amperes and 20 amperes, 125 volts and 250 volts installed in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted. An outlet box hood installed for this purpose shall be listed and shall be identified as extra-duty. Other listed products, enclosures, or assemblies providing weatherproof protection that do not utilize an outlet box hood need not be identified extra duty. Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the cover is not designed to open 90 degrees from the closed to open position, after installation.

Informational Note No. 1: See ANSI/UL 514D–2016, *Cover Plates for Flush-Mounted Wiring Devices*, for extra-duty outlet box hoods. Extra duty identification and requirements are not applicable to listed receptacles, faceplates, outlet boxes, enclosures, or assemblies that are identified as either being suitable for wet locations or rated as one of the outdoor enclosure–type numbers of Table 110.28 that does not utilize an outlet box hood.

Exception: 15- and 20-ampere, 125- through 250-volt receptacles installed in a wet location and subject to routine high-pressure spray washing shall be permitted to have an enclosure that is weatherproof when the attachment plug is removed.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall be listed and so identified as the weather-resistant type.

Informational Note No. 2: See ANSI/NEMA WD 6–2016, *Wiring Devices — Dimensional Specifications*, for receptacle configurations. The configuration of weather-resistant receptacles covered by this requirement are identified as 5-15, 5-20, 6-15, and 6-20.

(2) Other Receptacles.

All other receptacles installed in a wet location shall be listed weather-resistant type, and installation shall comply with 406.9(B)(2)(a) or (B)(2)(b).

- (a) A receptacle installed in a wet location where the product intended to be plugged into it is not attended while in use shall have an enclosure that is weatherproof with the attachment plug cap inserted or removed.
- (b) A receptacle installed in a wet location where the product intended to be plugged into it will be attended while in use (e.g., portable tools) shall have an enclosure that is weatherproof when the attachment plug is removed.

(3) Switches.

A switch installed in a wet location shall comply with the following:

(1) A surface-mounted switch shall be enclosed in a weatherproof enclosure that complies with 312.2.

~~(1)~~(2) A flush-mounted switch shall be equipped with a weatherproof cover.

(C) Wiring Devices in Bathtub and Shower Space.

(1) Receptacles

Receptacles shall not be installed inside of the tub or shower or within a zone measured 900 mm (3 ft) horizontally from any outside edge of the bathtub or shower stall, including the space outside the bathtub or shower stall space below the zone.

The zone also includes the space measured vertically from the floor to 2.5 m (8 ft) above the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space

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directly over the bathtub or shower stall and the space below this zone, but not the space separated by a floor, wall, ceiling, room door, window, or fixed barrier.

Exception No. 1: Receptacles installed in accordance with 680.73 shall be permitted.

Exception No. 2: In bathrooms with less than the required zone, the receptacle(s) required by 210.52(D) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.

Exception No. 3: Weight supporting ceiling receptacles (WSCR) shall be permitted to be installed for listed luminaires that employ a weight supporting attachment fitting (WSAF) in damp locations complying with 410.10(D).

Exception No. 4: In a dwelling unit, a single receptacle shall be permitted for an electronic toilet or personal hygiene device such as an electronic bidet seat. The receptacle shall be readily accessible and not located in the space between the toilet and the bathtub or shower.

Informational Note No. 1: See 210.8(A)(1) for GFCI requirements in a bathroom.

Informational Note No. 2: See 210.11(C) for bathroom branch circuits.

Informational Note No. 3: See 210.21(B)(1) for single receptacle on an individual branch.

(2) Switches.

Switches shall not be installed within tub or shower spaces unless installed as part of a listed tub or shower assembly.

(D) Flush Mounting with Faceplate.

The enclosure for a receptacle installed in an outlet box flush-mounted in a finished surface shall be made weatherproof by means of a weatherproof faceplate assembly that provides a watertight connection between the plate and the finished surface.

406.180 Grounding-Type Receptacles, Adapters, Cord Connectors, and Attachment Plugs.

(A) Grounding Poles (Connections).

Grounding-type receptacles, cord connectors, and attachment plugs shall be provided with one fixed grounding pole in addition to the circuit poles. The grounding contacting pole of grounding-type plug-in ground-fault circuit interrupters shall be permitted to be of the movable, self-restoring type on circuits operating at not over 150 volts between any two conductors or any conductor and ground.

(B) Grounding-Pole (Connection) Identification.

Grounding-type receptacles, adapters, cord connections, and attachment plugs shall have a means for connection of an equipment grounding conductor to the grounding pole.

A terminal for connection to the grounding pole shall be designated by one of the following:

- (1) A green-colored hexagonal-headed or -shaped terminal screw or nut, not readily removable.
- (2) A green-colored pressure wire connector body (a wire barrel).
- (3) A similar green-colored connection device, in the case of adapters. The grounding terminal of a grounding adapter shall be a green-colored rigid ear, lug, or similar device. The equipment grounding connection shall be so designed that it cannot make contact with current-carrying parts of the receptacle, adapter, or attachment plug. The adapter shall be polarized.
- (4) If the terminal for the equipment grounding conductor is not visible, the conductor entrance hole shall be marked with the word *green* or *ground*, the letters *G* or *GR*, a grounding symbol, or otherwise identified by a distinctive green color. If the terminal for

the equipment grounding conductor is readily removable, the area adjacent to the terminal shall be similarly marked.

Informational Note: See Informational Note Figure 406.10(B).

Figure Informational Note Figure 406.10(B) One Example of a Symbol Used to Identify the Termination Point for an Equipment Grounding Conductor.



(C) Grounding Terminal Use.

A grounding terminal shall not be used for purposes other than connection to the equipment grounding conductor.

(D) Grounding-Pole (Connection) Requirements.

Grounding-type attachment plugs and mating cord connectors and receptacles shall be designed such that the equipment grounding connection is made before the current-carrying connections. Grounding-type devices shall be so designed that grounding poles of attachment plugs cannot be brought into contact with current-carrying parts of receptacles or cord connectors.

(E) Use.

Grounding-type attachment plugs shall be used only with a cord having an equipment grounding conductor.

Informational Note: See 250.126 for identification of equipment grounding conductor terminals.

406.2411 Connecting Receptacle Grounding Terminal to Box.

The connection of the receptacle grounding terminal shall comply with 250.146.

406.2612 Tamper-Resistant Receptacles.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles in the following locations shall be listed tamper-resistant receptacles:

- (1) All dwelling units, boathouses, mobile homes and manufactured homes, including their attached and detached garages, accessory buildings, and common areas
- (2) Guest rooms and guest suites of hotels, motels, and their common areas
- (3) Child care facilities
- (4) Preschools and education facilities
- (5) Within clinics, medical and dental offices, and outpatient facilities, the following spaces:
 - a. Business offices accessible to the general public
 - b. Lobbies, and waiting spaces
 - c. Spaces of nursing homes and limited care facilities covered in 517.10(B)(2)
- (6) Places of awaiting transportation, gymnasiums, skating rinks, fitness centers, and auditoriums
- (7) Dormitory units
- (8) Residential care/assisted living facilities, social and substance abuse rehabilitation facilities, and group homes

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(9) Foster care facilities, nursing homes, and psychiatric hospitals

(10) Areas of agricultural buildings accessible to the general public and any common areas

Informational Note No. 1: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*. This requirement would include receptacles identified as 5-15, 5-20, 6-15, and 6-20.

Informational Note No. 2: See NFPA 5000-2021, *Building Construction and Safety Code*, and the *International Building Code (IBC)*-2021 for more information on occupancy classifications for the types of facilities covered by this requirement.

Informational Note No. 3: Areas of agricultural building are frequently converted to hospitality areas. These areas can include petting zoos, stables, and buildings used for recreation or educational purposes where receptacles are installed.

Exception to (1) through (10): Receptacles in the following locations shall not be required to be tamper resistant:

(1) Receptacles located more than 1.7 m (5 $1\frac{1}{2}$ ft) above the floor

(2) Receptacles that are part of a luminaire or appliance

(3) Where the receptacle outlet is installed within the space occupied by or designated for each appliance that, in normal use, is not easily moved from one place to another and is cord-and-plug-connected in accordance with 400.10(A)(6), (A)(7), or (A)(8) the following are permitted:

a. A single receptacle that is not readily accessible and supplies one appliance

b. A duplex receptacle that is not readily accessible and supplies two appliances

(4) Nongrounding receptacles used for replacements as permitted in 406.4(D)(2)(a)

406.2813 Single-Pole Separable-Connector Type.

Single-pole separable connectors shall be listed and labeled and shall comply with 406.13(A) through (D).

(A) Locking or Latching Type.

Single-pole separable connectors shall be of either the locking or latching type and marked with the manufacturer's name or identification and voltage and ampere ratings.

(B) Identification.

Connectors designated for connection to the grounded circuit conductor shall be identified by a white-colored housing; connectors designated for connection to the grounding circuit conductor shall be identified by a green-colored housing.

(C) Interchangeability.

Single-pole separable connectors shall be permitted to be interchangeable for ac or dc use or for different current ratings or voltages on the same premises, provided they are listed for ac/dc use and marked in a suitable manner to identify the system to which they are intended to be connected.

(D) Connecting and Disconnecting.

The use of single-pole separable connectors shall be performed by a qualified person and shall comply with at least one of the following conditions:

(1) Connection and disconnection of connectors are only possible where the supply connectors are interlocked to the source, and it is not possible to connect or disconnect connectors when the supply is energized.

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- (2) Line connectors are of the listed sequential-interlocking type so that load connectors are connected in the following sequence and that disconnection is in the reverse sequence:
 - a. Equipment grounding conductor connection
 - b. Grounded circuit conductor connection, if provided
 - c. Ungrounded conductor connection
- (3) A caution notice that complies with 110.21(B) is provided on the equipment employing single-pole separable connectors, adjacent to the line connectors, indicating that connections are to be performed in the following sequence and that disconnection is in the reverse sequence:
 - a. Equipment grounding conductor connectors
 - b. Grounded circuit-conductor connectors, if provided
 - c. Ungrounded conductor connectors

Informational Note: See ANSI-UL 1691-2014, *Single Pole Locking-Type Separable Connectors*, for more information on single-pole locking-type separable connectors.

Part III General-Use Snap Switches, Dimmers, and Electronic Control Switches

406.30 Switch Connections [Move text from 404.2(A) through (C)]

406.32 Switch Enclosure.

Switches shall be of the externally operable type installed in device boxes or on covers listed for the intended use.

Exception: Pendant- and surface-type snap switches mounted on an open-face switchboard or panelboard shall be permitted without enclosures.

406.34 Time Switches, Flashers, and Similar Devices.

Time switches, flashers, and similar devices shall be of the enclosed type or shall be installed in device boxes.

406.36 Indicating.

General-use and motor circuit switches where mounted in an enclosure as described in 406.32, shall indicate, in a location that is visible when accessing the external operation means, whether they are in the open (off) or closed (on) position.

Exception: Vertically operated double-throw switches shall be permitted to be in the closed (on) position with the handle in either the up or down position.

406.38 Accessibility and Grouping.

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(A) Location. All switches shall be located so that they can be operated from a readily accessible place. They shall be installed such that the center of the grip of the operating handle of the switch when in its highest position, is not more than 2.0 m (6 ft 7 in.) above the floor or working platform. Switches installed adjacent to motors, appliances, or other equipment that they supply shall be permitted to be located higher than 2.0 m (6 ft 7 in.) and to be accessible by portable means.

~~(A)(B)~~ [Move from 404.8(B)]

~~(B)(C)~~ [Move from 404.8(C)]

406.40 [Move from 404.9]

406.42 [Move from 404.10]

406.44 Grounding of Enclosures.

Metal enclosures for switches shall be connected to an equipment grounding conductor as specified in Part IV of Article 250. Metal enclosures for switches used as service equipment shall comply with the provisions of Part V of Article 250. Where nonmetallic enclosures are used with metal raceways or metal-armored cables, they shall comply with 314.3, Exception No. 1 or No. 2.

Except as covered in 406.40(B), Exception No. 1, nonmetallic boxes for switches shall be installed with a wiring method that provides or includes an equipment grounding conductor.

406.46 Rating and Use of Switches.

(A) [Move from 404.14(A)]

(B) [Move from 404.14(B)]

(C) [Move from 404.14(D)]

(D) [Move from 404.14(E)]

(E) [Move from 404.14(F)]

(F) [Move from 404.14(G)]

406.48 Marking.

(A) Ratings.

Switches shall be marked with the current, voltage, and, if horsepower rated, the maximum rating for which they are designed.

(B) Off Indication.

Where in the off position, a switching device with a marked OFF position shall completely disconnect all ungrounded conductors to the load it controls.

406.50 [Move from 404.22]



First Revision No. 8238-NFPA 70-2024 [Detail]

[Ballot separately from other action on existing 600.3 (proposed new 600.2)]
Remove the phrase ", unless otherwise approved by special permission" from 600.3

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Sat Jan 20 13:16:31 EST 2024

Committee Statement

Committee Statement: The statement "provided with installation instructions and installed in conformance with the listing" needs to remain. Installation instructions are necessary to install the sign or retrofit kit in accordance with its listing. Special permission was removed because the AHJ may not have access to the facilities and may not be properly equipped and qualified for experimental listing.

Response Message: FR-8238-NFPA 70-2024

[Public Input No. 1474-NFPA 70-2023 \[Section No. 600.3 \[Excluding any Sub-Sections\]\]](#)

**First Revision No. 8131-NFPA 70-2024 [Definition: Busbar Support.]****Busbar Support (as applied to low-voltage suspended ceiling power distribution systems) .**

An insulator that runs the length of a section of suspended ceiling bus rail that serves to support and isolate the busbars from the suspended grid rail. (393) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 14:51:25 EST 2024

Committee Statement

Committee Statement: The text "as applied to Low-Voltage Suspended Ceiling Power Distribution Systems" was added to the defined term "Busbar Support" to comply with Section 2.1.2.1 of the NEC Style Manual.

Response Message: FR-8131-NFPA 70-2024

Public Input No. 4211-NFPA 70-2023 [Definition: Busbar Support.]

**First Revision No. 8123-NFPA 70-2024 [Definition: Busbar.]****Busbar (as applied to low-voltage suspended ceiling power distribution systems) .**

A noninsulated conductor electrically connected to the source of supply and physically supported on an insulator providing a power rail for connection to utilization equipment, such as sensors, actuators, A/V devices, low-voltage luminaire assemblies, and similar electrical equipment. (393) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 14:22:03 EST 2024

Committee Statement

Committee Statement: To improve usability of the Code and to differentiate from the common term "busbar", the phrase "as applied to Low-Voltage Suspended Ceiling Power Distribution Systems" was added to the defined term "Busbar".

Response Message: FR-8123-NFPA 70-2024

[Public Input No. 4210-NFPA 70-2023 \[Definition: Busbar.\]](#)

[Public Input No. 587-NFPA 70-2023 \[Definition: Busbar.\]](#)



First Revision No. 8829-NFPA 70-2024 [Definition: Electric Sign.]

Sign, Electric-Sign:

~~A fixed, stationary, or portable self-contained, electrically operated and/or electrically illuminated~~
.(Electric Sign) [Relocate Alphabetically]

Electrically operated utilization equipment with words, symbols, art, or symbols- advertising
 designed to convey information or attract attention. (CMP-18)

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8829_Electric_Sign_def.docx		

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Wed Jan 24 00:32:20 EST 2024

Committee Statement

Committee Statement: The change will further clarify the intent and be consistent with the NEC Style Manual section 2.2.2.3. The words "fixed, stationary, or portable" refer to the full universe of options so they are collectively unneeded with the definition. "Illuminated" was removed because it is redundant.

Response Message: FR-8829-NFPA 70-2024

Public Input No. 2285-NFPA 70-2023 [Definition: Electric Sign.]

Sign, Electric. (Electric Sign.)

~~A fixed, stationary, or portable self-contained, electrically~~Electrically operated ~~and/or electrically illuminated~~ utilization equipment with words ~~or~~, symbols, art, or advertising designed to convey information or attract attention. (CMP-18)

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SUBJECT TO REVISION - NOT FOR PUBLICATION

**First Revision No. 8103-NFPA 70-2024 [Definition: Host Sign.]****Sign, Host Sign. (Host Sign) [Relocate Alphabetically]**

A sign or outline lighting system already installed in the field that is designated by a retrofit kit for field conversion of the illumination system- ~~with a retrofit kit~~ . (600) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 13:21:55 EST 2024

Committee Statement

Committee Statement: The change will better clarify the use of the “Sign, Host” definition. Changed the location where “a retrofit kit” is located to clarify the meaning.

Response Message: FR-8103-NFPA 70-2024

Public Input No. 2286-NFPA 70-2023 [Definition: Host Sign.]



First Revision No. 8104-NFPA 70-2024 [Definition: LED Sign Illumination System.]

LED Sign Illumination System:

A complete lighting system for use in signs and outline lighting consisting of light-emitting diode (LED) light sources, power supplies, wire, and connectors to complete the installation. (600) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 13:29:06 EST 2024

Committee Statement

Committee Statement: This definition is removed because it is no longer used in the Code.

Response Message: FR-8104-NFPA 70-2024

Public Input No. 2292-NFPA 70-2023 [Definition: LED Sign Illumination System.]



First Revision No. 8014-NFPA 70-2024 [Definition: Luminaire.]

Luminaire.

A complete lighting unit consisting of a light source such as a lamp or lamps, together with the parts designed to position the light source and connect it to the power supply. It may also include parts to protect the light source or the ballast or to distribute the light. Utilization equipment intended to illuminate a space or object(s), to facilitate visual tasks, activities, aesthetics, or security, or for similar purposes. Light emitting devices such as lamps or LED modules may be removable or replaceable. The equipment may connect directly to the branch circuit (ac or dc) or be used with a separate power source that regulates the voltage, current, or both, from the branch circuit. A lampholder itself is not a luminaire. (CMP-18)

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8014_Luminaire_def.docx		

Submitter Information Verification

Committee: NEC-P18
Submittal Date: Thu Jan 18 16:37:18 EST 2024

Committee Statement

Committee Statement: The definition of "Luminaire" was updated to clarify that the light source within a luminaire may be replaceable and to clarify that certain luminaires do not connect directly to the branch circuit. The sentence concerning lampholders not being luminaires was retained to preserve the intent.

Response Message: FR-8014-NFPA 70-2024

Public Input No. 2293-NFPA 70-2023 [Definition: Luminaire.]

Luminaire.

Utilization equipment intended to illuminate a space or object(s), to facilitate visual tasks, activities, aesthetics, or security, or for similar purposes. Light emitting devices such as lamps or LED modules may be removable or replaceable. The equipment may connect directly to the branch circuit (ac or dc) or be used with a separate power source that regulates the voltage, current, or both, from the branch circuit.~~A complete lighting unit consisting of a light source such as a lamp or lamps, together with the parts designed to position the light source and connect it to the power supply. It may also include parts to protect the light source or the ballast or to distribute the light.~~ A lampholder itself is not a luminaire. (CMP-18)

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SUBJECT TO REVISION - NOT FOR PUBLICATION

**First Revision No. 8134-NFPA 70-2024 [Definition: Power Supply.]****Power Supply (as applied to low-voltage suspended ceiling power distribution systems) .**

A Class 2 power supply connected between the branch-circuit power distribution system and the busbar low-voltage suspended ceiling power distribution system. (393) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 14:54:36 EST 2024

Committee Statement

Committee Statement: The text "as applied to Low-Voltage Suspended Ceiling Power Distribution Systems" was added to the defined term "Power Supply" to comply with Section 2.1.2.1 of the NEC Style Manual.

Response Message: FR-8134-NFPA 70-2024

Public Input No. 4216-NFPA 70-2023 [Definition: Power Supply.]

**First Revision No. 7963-NFPA 70-2024 [Definition: Receptacle Outlet.]****Receptacle Outlet.**

An outlet where the branch circuit conductors are connected to one or more receptacles-~~are~~
~~installed~~ . (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 13:08:10 EST 2024

Committee Statement

Committee Statement: The term "outlet" is already defined. The definition has been updated to improve clarity.

Response Message: FR-7963-NFPA 70-2024

Public Input No. 3141-NFPA 70-2023 [Definition: Receptacle Outlet.]

**First Revision No. 8105-NFPA 70-2024 [Definition: Retrofit Kit, General Use.****(General Use Retrofi...]****Retrofit Kit, General Use. (General Use Retrofit Kit)**

A kit consisting of primary parts, which does not include all the parts for a complete subassembly but includes a list of required parts and installation instructions that includes some, but not all, of the parts needed to replace the illumination system of a host sign, and installation instructions that identify the parts required to complete the subassembly in the field. (600) (CMP-18)

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 13:31:53 EST 2024**Committee Statement****Committee Statement:** The section was rearranged to conform with the product standard.**Response Message:** FR-8105-NFPA 70-2024Public Input No. 2288-NFPA 70-2023 [Definition: Retrofit Kit, General Use. (General Use Retrofi...]



First Revision No. 8108-NFPA 70-2024 [Definition: Retrofit Kit, Sign Specific. (Sign Specific Ret...]

Retrofit Kit, Sign Specific. (Sign Specific Retrofit Kit)

A kit consisting of ~~the~~ all necessary parts and hardware to allow for field installation in a host sign, based on the included installation instructions. (600) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 13:41:48 EST 2024

Committee Statement

Committee Statement: The change to refer to “all necessary parts,” which will better clarify the use and be consistent with the product standard.

Response Message: FR-8108-NFPA 70-2024

Public Input No. 2290-NFPA 70-2023 [Definition: Retrofit Kit, Sign Specific. (Sign Specific Ret...]

**First Revision No. 8109-NFPA 70-2024 [Definition: Sign Body.]****Sign Body.**

A portion of a sign that may provide protection from the weather ~~but is not an~~ and may additionally serve as an electrical enclosure. (600) (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 13:45:17 EST 2024

Committee Statement

Committee Statement: The text is revised because the outer portion of the sign intended to protect the interior of the sign may not necessarily serve as an electrical enclosure.

Response Message: FR-8109-NFPA 70-2024

Public Input No. 2284-NFPA 70-2023 [Definition: Sign Body.]

**First Revision No. 8016-NFPA 70-2024 [New Definition after Definition:****Portable (as applied to eq...]****Portable Handlamp.**

A cord-and-plug connected luminaire with a handle, and a hook for temporary mounting and hand free operation. (CMP-18).

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 16:41:25 EST 2024

Committee Statement

Committee Statement: A definition for "Portable Handlamp" has been added to correlate with the use of the term in 250.114(3)(e) and 250.114(4)(e).

Response Message: FR-8016-NFPA 70-2024

Public Input No. 2294-NFPA 70-2023 [New Definition after Definition: Portable (as applied to eq...]



First Revision No. 7968-NFPA 70-2024 [New Definition after Definition: Receptacle.]

Receptacle, Weather-Resistant (WR). (Weather-Resistant Receptacle)

A receptacle by which its construction is intended to be resistant to the adverse effects of damp, wet, or outdoor locations. (CMP-18)

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 13:24:50 EST 2024

Committee Statement

Committee Statement: Clarifies a term that is used in CMP 18 scope. The submitters language was modified to reflect that the device (receptacles) is resistant to environmental conditions.

Response Message: FR-7968-NFPA 70-2024

Public Input No. 1378-NFPA 70-2023 [New Section after 90.9(D)]

**First Revision No. 7965-NFPA 70-2024 [New Definition after Definition:****Wireways, Nonmetallic. (No...]****Wiring Device.**

An electrical device that serves as either a connection point to facilitate the flow of current or as a control device in general distribution and branch circuits. (CMP-18)

Informational Note: Examples of wiring devices include attachment plugs, receptacles, general-use snap switches, pendant switches, surface switches, dimmers, and electronic control switches and lighting control switches.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 13:16:19 EST 2024

Committee Statement

Committee Statement: The addition of this definition will clarify how the term is used throughout CMP 18 scope, and provide examples. This also correlates with the proposed revisions to the scope of Article 404.

Response Message: FR-7965-NFPA 70-2024

Public Input No. 1529-NFPA 70-2023 [New Definition after Definition: Wireways, Nonmetallic. (No...]



First Revision No. 9127-NFPA 70-2024 [New Definition after Definition: Work Surface.]

Yoke (Strap).

The structural frame of a wiring device, such as a receptacle or switch, that serves as the mounting means. (406) (CMP-18).

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 25 13:02:13 EST 2024

Committee Statement

Committee Statement: The term "yoke" is used in Article 406 in multiple paragraphs. Adding the definition of a "yoke" is intended to improve the understanding of requirements when the term is used.

Response Message: FR-9127-NFPA 70-2024

Public Input No. 856-NFPA 70-2023 [New Article after 100]

**First Revision No. 8110-NFPA 70-2024 [Section No. 393.6]****393.6– 2** Listing Requirements.

Suspended ceiling power distribution systems and associated fittings shall be listed as in 393.6(A) or (B).

(A) Listed System.

Low-voltage suspended ceiling distribution systems operating at 30 volts ac or less or 60 volts dc or less shall be listed as a complete system, with the utilization equipment, power supply, and fittings as part of the same identified system.

(B) Assembly of Listed Parts.

A low-voltage suspended ceiling power distribution system assembled from the following parts, listed according to the appropriate function, shall be permitted:

- (1) Listed low-voltage utilization equipment
- (2) Listed Class 2 power supply
- (3) Listed or identified fittings, including connectors and grid rails with bare conductors
- (4) Listed low-voltage cables in accordance with 722.179, conductors in raceways, or other fixed wiring methods for the secondary circuit

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 13:48:47 EST 2024

Committee Statement

Committee Statement: Article 393 does not modify the requirements of Article 110 as outlined in 90.3 Code Arrangement, and does not need to be repeated. See section 4.1.1 of the NEC Style Manual.

Response Message: FR-8110-NFPA 70-2024

[Public Input No. 3537-NFPA 70-2023 \[Section No. 393.6\]](#)



First Revision No. 8236-NFPA 70-2024 [Section No. 393.14(A)]

(A) General Requirements.

~~Support wiring-~~ All components of a low-voltage suspended ceiling power distribution system shall be installed in a neat and workmanlike manner by qualified persons and in accordance with the manufacturer's installation instructions. Cables and conductors installed exposed on the surface of ceilings and sidewalls shall be supported by the building structure in such a manner that the cable is not damaged by normal building use. Such cables shall be supported by straps, staples, hangers, cable ties listed and identified for securement and support, or similar fittings designed and installed so as not to damage the cable.

~~Informational Note:-~~ Suspended ceiling low-voltage power grid distribution systems should be installed by qualified persons in accordance with the manufacturer's installation instructions.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Sat Jan 20 12:28:08 EST 2024

Committee Statement

Committee Statement: The text "Support wiring shall be installed in a neat and workmanlike manner." was deleted, as those terms are possibly unenforceable and vague per the NEC Style Manual section 3.2.1. Article 393 does not modify the requirements of Article 110 as outlined in Section 90.3.

The informational note was changed to mandatory text to comply with the NEC Style Manual Section 2.1.10.1, and moved to the beginning to emphasize its importance.

Response Message: FR-8236-NFPA 70-2024

[Public Input No. 49-NFPA 70-2023 \[Section No. 393.14\(A\)\]](#)

[Public Input No. 1381-NFPA 70-2023 \[Section No. 393.14\(A\)\]](#)

[Public Input No. 1630-NFPA 70-2023 \[Section No. 393.14\]](#)

**First Revision No. 8237-NFPA 70-2024 [Section No. 393.14(B)]****(B) Insulated Conductors.**

Exposed insulated secondary circuit conductors shall be listed, of the type, and installed as described as follows:

- (1) Class 2 cable supplied by a listed Class 2 power source and installed in accordance with ~~Part I of Article 722, Part I, and Article 725, Parts I and II of Article 725~~
- (2) Wiring methods described in Chapter 3

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Sat Jan 20 12:31:49 EST 2024

Committee Statement

Committee Statement: The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.

Response Message: FR-8237-NFPA 70-2024

Public Input No. 2670-NFPA 70-2023 [Section No. 393.14(B)]

**First Revision No. 8118-NFPA 70-2024 [Section No. 393.40(B)]****(B) Enclosures.**

Where made in a wall, connections shall be installed in an enclosure in accordance with Article 314, Parts I, II, and III of Article 314.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 14:14:14 EST 2024

Committee Statement

Committee Statement: The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.

Response Message: FR-8118-NFPA 70-2024

Public Input No. 2671-NFPA 70-2023 [Section No. 393.40(B)]

**First Revision No. 8119-NFPA 70-2024 [Section No. 393.57]****393.57** Connections.

Connections in busbar grid rails, cables, and conductors shall be made with listed insulating devices and be accessible after installation. Where made in a wall, connections shall be installed in an enclosure in accordance with Article 314, Parts I, II, and III- of ~~Article 314~~, as applicable.

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 14:15:36 EST 2024**Committee Statement****Committee Statement:** The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.**Response Message:** FR-8119-NFPA 70-2024[Public Input No. 2672-NFPA 70-2023 \[Section No. 393.57\]](#)

**First Revision No. 8120-NFPA 70-2024 [Section No. 393.60]****393.60** Equipment Grounding Conductor.

The supply side of the Class 2 power source shall be connected to an equipment grounding conductor in accordance with the applicable requirements in ~~Part IV of Article 250~~ , Part IV .

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 14:16:31 EST 2024**Committee Statement**

Committee Statement: The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.

Response Message: FR-8120-NFPA 70-2024

Public Input No. 2673-NFPA 70-2023 [Section No. 393.60]

**First Revision No. 7915-NFPA 70-2024 [New Section after 406.1]****406.2 Listing Requirements. [Renumber subsequent sections]**

Receptacles shall be listed. All attachment plugs, cord connectors, and flanged surface devices (inlets and outlets) shall be listed. Single-pole separable connectors shall be listed and labeled.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 08:57:09 EST 2024

Committee Statement

Committee Statement: The requirements for listing are relocated from Sections 406.3, 406.7, and 406.13 for compliance with the NEC Style Manual Section 2.2.1.

Response Message: Article reference numbers change throughout the entire article.

FR-7915-NFPA 70-2024

Public Input No. 3709-NFPA 70-2023 [Section No. 406.13 [Excluding any Sub-Sections]]

Public Input No. 3713-NFPA 70-2023 [New Section after 406.2]

**First Revision No. 8815-NFPA 70-2024 [Section No. 406.2]****406.2** Reconditioned Equipment.

Reconditioned receptacles, attachment plugs, cord connectors, and flanged surface devices shall not be ~~permitted~~ installed .

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 21:28:44 EST 2024

Committee Statement

Committee Statement: The term "permitted" was replaced with "installed" for consistency with NEC Style Manual section 2.2.1.1.

Response Message: FR-8815-NFPA 70-2024

[Public Input No. 2607-NFPA 70-2023 \[Section No. 406.2\]](#)

**First Revision No. 7918-NFPA 70-2024 [Section No. 406.3(A)]****(A) Receptacles.**

Receptacles shall be ~~listed and~~ marked with the manufacturer's name or identification and voltage and ampere ratings.

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Thu Jan 18 09:09:02 EST 2024**Committee Statement**

Committee Statement: The phrase "listed and" was removed to comply with NEC Style Manual section 2.2.1, which coincides with the proposed new 406.2 for listing requirements.

Response Message: FR-7918-NFPA 70-2024

[Public Input No. 3712-NFPA 70-2023 \[Section No. 406.3\(A\)\]](#)



First Revision No. 8816-NFPA 70-2024 [Section No. 406.3(D)]

[See attached word document "70_NEC_CMP18_A2025NEC_406.3 (D)_FR_8816" for proposed revisions]

(D) Receptacle Terminations.

Receptacle terminations shall be in accordance with the following:

- (1) Terminals of 15-ampere and 20-ampere receptacles not marked CO/ALR shall be used with copper and copper-clad aluminum conductors only.
- (2) Terminals marked CO/ALR shall be permitted to be used with aluminum, copper, and copper-clad aluminum conductors.
- (3) Receptacles installed using screwless terminals of the conductor push-in type construction (also known as *push-in-terminals*) shall be installed on not greater than 15-ampere branch circuits and shall be connected with 14 AWG solid copper wire only unless listed and marked for other types of conductors.

Informational Note: See UL 498, *Attachment Plugs and Receptacles*, for information regarding screwless terminals of various type constructions employed on receptacles. Screwless terminals of the separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 498 as screwless terminals of the conductor push-in type construction (also known as push-in terminals).

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
70_NEC_CMP18_A2025NEC_406.3_D_FR_8816.docx	For staff use only	

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 21:34:34 EST 2024

Committee Statement

Committee Statement: These changes are intended to clarify that aluminum conductors may not be used unless the device is marked "CO/ALR". The current paragraph uses confusing reverse language stating that if not marked CO/ALR they may only be used with copper and copper-clad wiring. Unfortunately, this is being misinterpreted in the field that copper and copper-clad wire may be used interchangeably.

The intent of the code was to address the use of aluminum wire. These revisions use clear and positive language.

Many manufacturers mark their devices copper wire only and many also mark copper and copper-clad. There are many factors manufacturers consider in making this determination including type of termination, solid or stranded wire, etc. Any device must be used in accordance with the manufacturer's markings and instructions to assure safe use and compliance with this code.

To improve the language, (1) and (2) were reversed to provide clarity to the reader.

For (1): directly terminated was added to clarify that a receptacle terminal can be in direct contact with any of the identified conductor types.

(2) was revised to clarify that receptacles not marked "CO/ALR" are prohibited from direct connection to aluminum conductor.

(1) and (2) were further revised for clarity and consistency with Article 110.3(B) that requires equipment installation to be in accordance with manufacturers' instructions.

(3) was revised for consistency with the product listing standard.

Date was added to the informational note reference to comply with NFPA Regulations.

Response FR-8816-NFPA 70-2024
Message:

Public Input No. 2161-NFPA 70-2023 [Section No. 406.3(D)]

Public Input No. 2189-NFPA 70-2023 [Section No. 406.3(D)]

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SUBJECT TO REVISION - NOT FOR PUBLICATION

(D) Receptacle Terminations.

Receptacle terminations shall be in accordance with the following:

- (2) **[Relocate to 406.3(D)(2)]** A receptacle not marked CO/ALR shall not be permitted to directly terminate aluminum conductors.
- (1) **[Relocate to 406.3(D)(1)]** A receptacle marked CO/ALR shall be permitted to directly terminate aluminum, copper, or copper-clad aluminum conductors in accordance with the branch circuit conductor size (AWG) identified by the manufacturer's instructions.
- (3) Receptacles installed using screwless terminals of the conductor push-in type construction (also known as *push-in-terminals*) shall be installed on not greater than 15-ampere branch circuits and shall be connected with 14 AWG solid copper wire only.

Informational Note: See UL 498-2017, *Attachment Plugs and Receptacles*, for information regarding screwless terminals of various type constructions employed on receptacles. Screwless terminals of the separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 498 as screwless terminals of the conductor push-in type construction (also known as push-in terminals).



First Revision No. 8817-NFPA 70-2024 [Section No. 406.4(D)(3)]

(3) Ground-Fault Circuit-Interrupter Protection.

Ground-fault circuit-interrupter protection for receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this Code. ~~Ground-fault circuit interrupters shall be listed.~~

Exception: Where the outlet box size will not permit the installation of the GFCI receptacle, and if no electrically upstream outlet box will permit the installation of a GFCI receptacle, and if a GFCI circuit breaker cannot provide the required GFCI protection, the receptacle shall be permitted to be replaced with a new receptacle of the existing type, where GFCI protection is provided and the receptacle is marked "GFCI Protected" and "No Equipment Ground," in accordance with 406.4(D)(2)(a), (D)(2)(b), or (D)(2)(c), as applicable.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 21:55:31 EST 2024

Committee Statement

Committee Statement: Application of the exception should not be limited to the size of a single box size only. It should also consider upstream outlet boxes to accommodate the installation of a GFCI receptacle to provide downstream protection. Alternatively, another option for providing GFCI protection is the use of a GFCI circuit breaker. Both of these additional options should be required before allowing the use of the exception.

Additionally, the entire sentence "Ground -fault circuit interrupters shall be listed" was removed to comply with the NEC Style Manual, and coincides with the proposed addition of a new 406.2.

Response Message: FR-8817-NFPA 70-2024

Public Input No. 2180-NFPA 70-2023 [Section No. 406.4(D)(3)]



First Revision No. 7927-NFPA 70-2024 [Section No. 406.4(D)(4)]

(4) Arc-Fault Circuit-Interrupter Protection.

If a receptacle ~~located~~ supplied by a 120-volt, single-phase, 15- or 20-ampere branch circuit, located in any areas specified in 210.12(A B), (B C), or (C D) is replaced, a replacement receptacle at this outlet shall be one of the following:

- (1) A listed outlet branch-circuit type AFCI receptacle
- (2) A receptacle protected by a listed outlet branch-circuit type AFCI type receptacle
- (3) A receptacle protected by a listed combination type AFCI circuit breaker

Exception: Section 210.12(E), Exception, shall not apply to replacement of receptacles.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 09:52:47 EST 2024

Committee Statement

Committee Statement: Section 406.4(D)(4) is now Section 406.5(D)(4).

This revision clarifies which areas and which replacement receptacles will require AFCI protection requirements.

Section 210.12(A) should not be referenced since it specifies the "means" of AFCI protection but does not specify any "areas". The correct references are 210.12(B),(C), (D).

Branch circuit voltage and amperages should also be specified in this section as well as 210.12, to minimize the possibility of misinterpreting which replacement receptacles will need AFCI protection.

This change addresses the concern that installers might mistakenly assume AFCI protection requirements also apply when replacing a 250-volt receptacle on a 240-volt circuit, if located in any of the "areas" in 210.12(B)-(D).

Finally, "10- ampere receptacle branch circuit" was not included since it is not permitted based upon Article 210.

Response Message: FR-7927-NFPA 70-2024

Public Input No. 2003-NFPA 70-2023 [Section No. 406.4(D)(4)]

**First Revision No. 7933-NFPA 70-2024 [Section No. 406.4(G)]****(G) Protection of Floor Receptacles.**

Protection for floor receptacles shall be in accordance with the following:

- (1) Physical protection of floor receptacles shall allow floor-cleaning equipment to be operated without damage to receptacles.
- (2) All 125-volt, single-phase, 15- and 20-ampere floor receptacles installed in food courts and waiting spaces of passenger transportation facilities ~~where food or drinks are allowed~~ shall be GFCI protected.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 10:21:22 EST 2024

Committee Statement

Committee Statement: The text "where food or drinks are allowed" was removed to comply with the NEC Style Manual section 3.2 regarding vague and unenforceable language.

Response Message: FR-7933-NFPA 70-2024

[Public Input No. 2366-NFPA 70-2023 \[Section No. 406.4\(G\)\]](#)



First Revision No. 7935-NFPA 70-2024 [Section No. 406.4 [Excluding any Sub-Sections]]

Receptacle outlets shall be located in branch circuits in accordance with ~~Part III of Article 210~~ ,
Part III . General installation requirements shall be in accordance with 406.4(A) through (G).

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 10:27:34 EST 2024

Committee Statement

Committee Statement: The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.

Response Message: FR-7935-NFPA 70-2024

Public Input No. 2679-NFPA 70-2023 [Section No. 406.4 [Excluding any Sub-Sections]]



First Revision No. 8818-NFPA 70-2024 [Section No. 406.5(G)]

(G) Receptacle Orientation.

~~(1) Countertop and Work Surfaces:~~

Receptacles shall not be installed in a face-up position in any of the following locations:

(1)

In or on countertop surfaces or work surfaces unless listed for countertop or work surface applications.

~~(2) Under Sinks:~~

~~Receptacles shall not be installed in a face-up position in~~

In the area below a sink.

(3)

In a laundry area, unless permitted by 406.5(G)(1).

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8818_406.5_G_.docx		

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 22:29:15 EST 2024

Committee Statement

Committee Statement: Section 406.5(G) was revised to remove the repeated text "Receptacles shall not be installed in a face-up position" in list items 1 and 2, which was placed in the first level subdivision of the section, for clarity.

List item 3 was added to include receptacles installed in a laundry area. Receptacles placed face up in a an energized laundry room, with receptacles facing up, and not having an attachment plug inserted, are susceptible to exposure to liquid.

Response Message: FR-8818-NFPA 70-2024

Public Input No. 219-NFPA 70-2023 [New Section after 406.5(G)(2)]

(G) Receptacle Orientation.

Receptacles shall not be installed in a face-up position in any of the following locations:

(1) In or on countertop surfaces or work surfaces unless listed for countertop or work surface applications.

(2) In the area below a sink.

(3) In a laundry area, unless permitted by 406.5(G)(1).

~~(1) Countertop and Work Surfaces.~~ [Move text to main section and (1)]

~~Receptacles shall not be installed in a face-up position in or on countertop surfaces or work surfaces unless listed for countertop or work surface applications.~~

~~(2) Under Sinks.~~ [Move last phrase to (2)]

~~Receptacles shall not be installed in a face-up position in the area below a sink.~~

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First Revision No. 8819-NFPA 70-2024 [Section No. 406.6(D)]

~~Exception: Effective January 1, 2026, spring-tensioned contact connections to steel receptacle terminal screws shall be permitted if the receptacle faceplate is specifically listed and identified for connection to steel receptacle terminal screws~~

(D) Receptacle Faceplate- Faceplates (Cover Plates) with Integral Night Light and/or USB Charger.

~~A flush device cover plate that additionally provides a night light and/or Class 2 output connector(s) shall be listed and constructed such that the night light and/or Class 2 circuitry is integral with the flush device cover plate.~~

~~Listed receptacle faceplates with integral night light, USB charger, or both, that rely solely on spring-tensioned contacts shall be connected to only brass or copper alloy receptacle terminal screws and shall be rated 1 watt or less.~~

Lights, USB Chargers, or Both.

Flush device faceplates (cover plates) that integrally incorporate night lights, Class 2 output connectors (USB chargers), or both, shall comply with all of the following:

- (1) Faceplate (cover plate) assemblies shall be listed.
- (2) During normal operation, night light and Class 2 supply connections shall not introduce current to the grounding means or to the equipment grounding conductor.
- (3) Night lights and Class 2 connections (USB chargers), if relying on spring-tensioned contacts for electrical power, shall not be rated more than 1 watt and shall be connected to only unpainted or unenameled heads of receptacle terminal screws made of only copper alloy unless the faceplate (cover plate) is additionally listed and identified that the spring-tensioned contacts are suitable for connection to unpainted or unenameled heads of terminal screws made of plated steel .

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8819_406.6_D_.docx		

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 22:33:09 EST 2024

Committee Statement

Committee Statement: The title and requirements were reorganized to comply with section 3.5.3 of the NEC Style Manual.

Number 2 was clarified for consistency with Article 250.6. Supply circuits shall not utilize the equipment grounding conductor directly, or indirectly via the receptacle's grounding (bonding) means, as the return path for objectionable current of the night lights or USB chargers, as all such leakage current to ground is cumulative.

Number 3 was clarified that some receptacle terminal screwheads employ nonconductive paint or enamel for polarity and conductor identification.

This change also serves to address the exception effective date of January 1, 2026, in accordance with sections 2.1.9.1 and 2.1.9.1.1 of the NEC Style Manual. The existing permissive exception can be expressed in positive language without the use of an exception.

Response FR-8819-NFPA 70-2024
Message:

[Public Input No. 3230-NFPA 70-2023 \[Section No. 406.6\(D\)\]](#)

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SUBJECT TO REVISION - NOT FOR PUBLICATION

(D) Receptacle ~~Faceplate~~Faceplates (Cover Plates) with Integral Night ~~Light and/or~~Lights, USB ~~Charger~~Chargers, or Both.

~~Flush device faceplates (cover plates) that integrally incorporate night lights, Class 2 output connectors (USB chargers), or both, shall comply with all of the following: A flush device cover plate that additionally provides a night light and/or Class 2 output connector(s) shall be listed and constructed such that the night light and/or Class 2 circuitry is integral with the flush device cover plate.~~

(1) Faceplate (cover plate) assemblies shall be listed.

(2) During normal operation, night light and Class 2 supply connections shall not introduce current to the grounding means or to the equipment grounding conductor.

(3) Night lights and Class 2 connections (USB chargers), if relying on spring-tensioned contacts for electrical power, shall not be rated more than 1 watt and shall be connected to only unpainted or unenameled heads of receptacle terminal screws made of only copper alloy unless the faceplate (cover plate) is additionally listed and identified that the spring-tensioned contacts are suitable for connection to unpainted or unenameled heads of terminal screws made of plated steel.

~~Listed receptacle faceplates with integral night light, USB charger, or both, that rely solely on spring-tensioned contacts shall be connected to only brass or copper alloy receptacle terminal screws and shall be rated 1 watt or less.~~

~~Exception: Effective January 1, 2026, spring-tensioned contact connections to steel receptacle terminal screws shall be permitted if the receptacle faceplate is specifically listed and identified for connection to steel receptacle terminal screws.~~



First Revision No. 7940-NFPA 70-2024 [Section No. 406.7]

406.7 Attachment Plugs, Cord Connectors, and Flanged Surface Devices.

All attachment plugs, cord connectors, and flanged surface devices (inlets and outlets) shall be ~~listed and~~ marked with the manufacturer's name or identification and voltage and ampere ratings.

(A) Construction of Attachment Plugs and Cord Connectors.

Attachment plugs and cord connectors shall be constructed so that there are no exposed current-carrying parts except the prongs, blades, or pins. The cover for wire terminations shall be a part that is essential for the operation of an attachment plug or connector (dead-front construction).

(B) Connection of Attachment Plugs.

Attachment plugs shall be installed so that their prongs, blades, or pins are not energized unless inserted into an energized receptacle or cord connectors. No receptacle shall be installed so as to require the insertion of an energized attachment plug as its source of supply.

(C) Attachment Plug Ejector Mechanisms.

Attachment plug ejector mechanisms shall not adversely affect engagement of the blades of the attachment plug with the contacts of the receptacle.

(D) Flanged Surface Inlet.

A flanged surface inlet shall be installed such that the prongs, blades, or pins are not energized unless an energized cord connector is inserted into it.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 11:00:33 EST 2024

Committee Statement

Committee Statement: Removed the phrase "listed and" as a result of the new proposal to relocate listing requirements to new section 406.2 in accordance with section 2.2.1 of the NEC Style Manual.

Response Message: FR-7940-NFPA 70-2024

Public Input No. 3711-NFPA 70-2023 [Section No. 406.7 [Excluding any Sub-Sections]]



First Revision No. 8820-NFPA 70-2024 [Section No. 406.9(A)]

[See attached word file "70_NEC_CMP18_A2025NEC_406.9 (A)_FR_8820" for proposed revisions]

(A) Damp Locations.

A receptacle installed outdoors in a location protected from the weather or in other damp locations shall have an enclosure for the receptacle that is weatherproof when the receptacle is covered (attachment plug cap not inserted and receptacle covers closed).

An installation suitable for wet locations shall also be considered suitable for damp locations.

A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like, and will not be subjected to a beating rain or water runoff. All 125- and 250-volt nonlocking receptacles shall be a listed weather-resistant type. Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the cover is not designed to open 90 degrees from the closed to open position, after installation.

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, for the types of receptacles covered by this requirement.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
70_NEC_CMP18_A2025NEC_406.9_A_FR_8820.docx		
NEC_CMP18_FR-8820_406.9_A_.docx	For prod use	

Submitter Information Verification

Committee: NEC-P18
Submittal Date: Tue Jan 23 22:48:50 EST 2024

Committee Statement

Committee Statement: Section 406.9(A) has been modified to comply with Style Manual section 3.5.1.2, additional subdivisions shall be used where multiple requirements can be broken into independent requirements.

"A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like, and will not be subjected to a beating rain or water runoff" was retained for clarity.

(2) Weatherproof Enclosure was modified to include the cover.

Response Message: FR-8820-NFPA 70-2024

Public Input No. 769-NFPA 70-2023 [Section No. 406.9(A)]

Public Input No. 4121-NFPA 70-2023 [Section No. 406.9(A)]

(A) Damp Locations.

~~A receptacle installed outdoors in a location protected from the weather or in other damp locations shall have an enclosure for the receptacle that is weatherproof when the receptacle is covered (attachment plug cap not inserted and receptacle covers closed).~~

(1) General.

An installation suitable for wet locations shall also be considered suitable for damp locations. A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like, and will not be subjected to a beating rain or water runoff.

~~A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like, and will not be subjected to a beating rain or water runoff.~~

(2) Weatherproof Enclosure.

A receptacle installed outdoors in a location protected from the weather or in other damp locations shall have an enclosure and cover for the receptacle that is weatherproof when the receptacle is covered (attachment plug cap not inserted and receptacle covers closed).

(3) Weather-Resistant Receptacle Type.

All 125- and 250-volt nonlocking receptacles shall be a listed weather-resistant type.

(4) Covers.

Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the cover is not designed to open 90 degrees from the closed to open position, after installation.

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, for the types of receptacles covered by this requirement.



First Revision No. 8821-NFPA 70-2024 [Section No. 406.9(B)(1)]

[See attached word document "70_NEC_CMP18_A2025NEC_406.9 (B)(1) _FR_8821" for proposed revisions]

(1). Receptacles of 15 Amperes and 20 Amperes in a Wet Location.

Receptacles of 15 amperes and 20 amperes, 125 volts and 250 volts installed in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted. An outlet box hood installed for this purpose shall be listed and shall be identified as extra-duty. Other listed products, enclosures, or assemblies providing weatherproof protection that do not utilize an outlet box hood need not be identified extra duty. Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the cover is not designed to open 90 degrees from the closed to open position, after installation.

Informational Note No. 1: See ANSI/UL 514D–2016, *Cover Plates for Flush-Mounted Wiring Devices*, for extra-duty outlet box hoods. Extra duty identification and requirements are not applicable to listed receptacles, faceplates, outlet boxes, enclosures, or assemblies that are identified as either being suitable for wet locations or rated as one of the outdoor enclosure–type numbers of Table 110.28 that does not utilize an outlet box hood.

Exception: 15- and 20-ampere, 125- through 250-volt receptacles installed in a wet location and subject to routine high-pressure spray washing shall be permitted to have an enclosure that is weatherproof when the attachment plug is removed.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall be listed and so identified as the weather-resistant type.

Informational Note No. 2: See ANSI/NEMA WD 6–2016, *Wiring Devices — Dimensional Specifications*, for receptacle configurations. The configuration of weather-resistant receptacles covered by this requirement are identified as 5-15, 5-20, 6-15, and 6-20.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
70_NEC_CMP18_A2025NEC_406.9_B_1_FR_8821.docx		
70_NEC_CMP18_A2025NEC_406.9_B_1_FR_8821.docx	For prod use	

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 23:06:22 EST 2024

Committee Statement

Committee Statement: Section 406.10(B)(1) has been modified to comply with Style Manual section 3.5.1.2, additional subdivisions shall be used where multiple requirements can be broken into independent requirements.

Response Message: FR-8821-NFPA 70-2024

Public Input No. 864-NFPA 70-2023 [Section No. 406.9(B)(1)]

[Public Input No. 4128-NFPA 70-2023 \[Section No. 406.9\(B\)\(1\)\]](#)

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(1) Receptacles of 15 Amperes and 20 Amperes in a Wet Location.

(a) Weatherproof Enclosure.

Receptacles of 15 amperes and 20 amperes, 125 volts and 250 volts installed in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted.

(b) Outlet Box Hood.

An outlet box hood ~~installed for this purpose shall be listed and~~ shall be identified as extra-duty. Other listed products, enclosures, or assemblies providing weatherproof protection that do not utilize an outlet box hood need not be identified as extra duty.

(c) Covers.

Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the cover is not designed to open 90 degrees from the closed to open position, after installation.

Informational Note ~~No. 1~~: See ANSI/UL 514D-2016, *Cover Plates for Flush-Mounted Wiring Devices*, for extra-duty outlet box hoods. Extra duty identification and requirements are not applicable to listed receptacles, faceplates, outlet boxes, enclosures, or assemblies that are identified as either being suitable for wet locations or rated as one of the outdoor enclosure-type numbers of Table 110.28 that does not utilize an outlet box hood.

Exception: 15- and 20-ampere, 125- through 250-volt receptacles installed in a wet location and subject to routine high-pressure spray washing shall be permitted to have an enclosure that is weatherproof when the attachment plug is removed.

(d) Weather-Resistant Receptacle Type.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall be listed and so identified as the weather-resistant type.

Informational Note ~~No. 2~~: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, for receptacle configurations. The configuration of weather-resistant receptacles covered by this requirement are identified as 5-15, 5-20, 6-15, and 6-20.



First Revision No. 8822-NFPA 70-2024 [Section No. 406.9(B)(2)]

(2) Other Receptacles.

All other receptacles installed in a wet location shall be listed weather-resistant type, and installation shall comply with 406.9(B)(2)(a) or (B)(2)(b).

(a) ~~- A receptacle installed in a wet location where the product intended to be plugged into it is not attended. For supplying a product that is unattended while in use, the receptacle shall have an enclosure that is weatherproof with the attachment plug cap inserted or removed.~~

(b) ~~- A receptacle installed in a wet location where the product intended to be plugged into it will be. For supplying a product that is attended while in use (e.g., portable tools), the receptacle shall have an enclosure that is weatherproof when the attachment plug is removed.~~

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 23:08:29 EST 2024

Committee Statement

Committee Statement: Section 406.10(B)(2) has been modified to remove of "a receptacle installed in a location where" in (a) and (b) since the text of Section 406.10(B)(2) already identifies" a receptacle installed in a wet location where".

Additionally, (a) and (b) were modified to improve the language.

Response Message: FR-8822-NFPA 70-2024

Public Input No. 1507-NFPA 70-2023 [Section No. 406.9(B)(2)]



First Revision No. 8823-NFPA 70-2024 [Section No. 406.9(C)]

[See attached word document "70_NEC_CMP18_A2025NEC_406.9(C)_FR_8823" for proposed revisions]

(C) Bathtub and Shower Space.

Receptacles shall not be installed inside of the tub or shower or within a zone measured 900 mm (3 ft) horizontally from any outside edge of the bathtub or shower stall, including the space outside the bathtub or shower stall space below the zone.

The zone also includes the space measured vertically from the floor to 2.5 m (8 ft) above the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the bathtub or shower stall and the space below this zone, but not the space separated by a floor, wall, ceiling, room door, window, or fixed barrier.

Exception No. 1: Receptacles installed in accordance with 680.73 shall be permitted.

Exception No. 2: In bathrooms with less than the required zone, the receptacle(s) required by 210.52(D) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.

Exception No. 3: Weight supporting ceiling receptacles (WSCR) shall be permitted to be installed for listed luminaires that employ a weight supporting attachment fitting (WSAF) in damp locations complying with 410.10(D).

Exception No. 4: In a dwelling unit, a single receptacle shall be permitted for an electronic toilet or personal hygiene device such as an electronic bidet seat. The receptacle shall be readily accessible and not located in the space between the toilet and the bathtub or shower.

Informational Note No. 1: See 210.8(A)(1) for GFCI requirements in a bathroom.

Informational Note No. 2: See 210.11(C) for bathroom branch circuits.

Informational Note No. 3: See 210.21(B)(1) for single receptacle on an individual branch.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
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Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 23:20:14 EST 2024

Committee Statement

Committee Statement: The section has been modified into a list format to comply with NEC Style Manual section 3.5.1.2; additional subdivisions shall be used where multiple requirements can be broken into independent requirements.

Response Message: FR-8823-NFPA 70-2024

Public Input No. 4129-NFPA 70-2023 [Section No. 406.9(C)]

(C) Bathtub and Shower Space.

~~A Receptacle~~receptacle shall not be installed inside of the tub or shower or within a zone as identified in (C)(1) and (C)(2).~~measured 900 mm (3 ft) horizontally from any outside edge of the bathtub or shower stall, including the space outside the bathtub or shower stall space below the zone.~~The identified zone is all-encompassing and shall include the space directly over the bathtub or shower stall and the space below this zone, but not the space separated by a floor, wall, ceiling, room door, window, or fixed barrier.

(1) Horizontal Zone.

Measured 900 mm (3 ft) horizontally from any outside edge of the bathtub or shower stall, including the space outside the bathtub or shower stall space below the zone.

(2) Vertical Zone.

Measured vertically from the floor to 2.5 m (8 ft) above the top of the bathtub rim or shower stall threshold.

~~The zone also includes the space measured vertically from the floor to 2.5 m (8 ft) above the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the bathtub or shower stall and the space below this zone, but not the space separated by a floor, wall, ceiling, room door, window, or fixed barrier.~~

Exception No. 1: Receptacles installed in accordance with 680.73 shall be permitted.

Exception No. 2: In bathrooms with less than the required zone, the receptacle(s) required by 210.52(D) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.

Exception No. 3: Weight supporting ceiling receptacles (WSCR) shall be permitted to be installed for listed luminaires that employ a weight supporting attachment fitting (WSAF) in damp locations complying with 410.10(D).

Exception No. 4: In a dwelling unit, a single receptacle shall be permitted for an electronic toilet or personal hygiene device such as an electronic bidet seat. The receptacle shall be readily accessible and not located in the space between the toilet and the bathtub or shower.

Informational Note No. 1: See 210.8(A)(1) for GFCI requirements in a bathroom.

Informational Note No. 2: See 210.11(C) for bathroom branch circuits.

Informational Note No. 3: See 210.21(B)(1) for single receptacle on an individual branch.



First Revision No. 8824-NFPA 70-2024 [Section No. 406.12]

FOR COMMITTEE USE ONLY
SUBJECT TO REVISION - NOT FOR PUBLICATION

406.12 Tamper-Resistant Receptacles.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles in the following locations shall be listed tamper-resistant receptacles:

- (1) All dwelling units, boathouses, mobile homes and manufactured homes, including their attached and detached garages, accessory buildings, and common areas
- (2) Guest rooms and guest suites of hotels, motels, and their common areas
- (3) Child care facilities
- (4) Preschools and education facilities
- (5) Within clinics, medical and dental offices, and outpatient facilities, the following spaces:
 - (6) Business offices accessible to the general public
 - (7) Lobbies, and waiting spaces
 - (8) Spaces of nursing homes and limited care facilities covered in 517.10(B)(2)
- (9) Places of awaiting transportation, gymnasiums, skating rinks, fitness centers, and auditoriums
- (10) ~~Dormitory units~~ Dormitories
- (11) Residential care/assisted living facilities, social and substance abuse rehabilitation facilities, and group homes
- (12) Foster care facilities, nursing homes, and psychiatric hospitals
- (13) Areas of agricultural buildings accessible to the general public and any common areas
- (14) Park and recreation areas

Informational Note No. 1: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*. This requirement would include receptacles identified as 5-15, 5-20, 6-15, and 6-20.

Informational Note No. 2: See NFPA 5000-2021, *Building Construction and Safety Code*, and the *International Building Code (IBC)-2021* for more information on occupancy classifications for the types of facilities covered by this requirement.

Informational Note No. 3: Areas of agricultural building are frequently converted to hospitality areas. These areas can include petting zoos, stables, and buildings used for recreation or educational purposes where receptacles are installed.

Informational Note No. 4: Park and recreation areas can include garden areas, play areas, and similar areas.

Exception to (1) through (10): Receptacles in the following locations shall not be required to be tamper resistant:

- (1) *Receptacles located more than 1.7 m (5 ½ ft) above the floor*
- (2) *Receptacles that are part of a luminaire or appliance*
- (3) *Where the receptacle outlet is installed within the space occupied by or designated for each appliance that, in normal use, is not easily moved from one place to another and is cord-and-plug-connected in accordance with 400.10(A)(6), (A)(7), or (A)(8) the following are permitted:*
 - (4) A single receptacle that is not readily accessible and supplies one appliance
 - (5) A duplex receptacle that is not readily accessible and supplies two appliances
- (6) *Nongrounding receptacles used for replacements as permitted in 406.4(D)(2)(a)*

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Tue Jan 23 23:24:10 EST 2024

Committee Statement

Committee Statement: Added park and recreation areas in a new item (11), along with a new informational note no. 4 to clarify that park and recreation areas include garden areas, play areas, and similar indoor and outdoor areas.

The addition of tamper-resistant receptacles applies to all areas where children of all ages have access to these areas where receptacles may be installed.

“Dormitory units” was replaced with “Dormitories” for clarity.

Response Message: FR-8824-NFPA 70-2024

[Public Input No. 806-NFPA 70-2023 \[Section No. 406.12\]](#)

[Public Input No. 2181-NFPA 70-2023 \[Section No. 406.12\]](#)

[Public Input No. 2226-NFPA 70-2023 \[Section No. 406.12\]](#)

**First Revision No. 7970-NFPA 70-2024 [Section No. 410.2]****410.2– 3 _ Reconditioned Equipment.**

Reconditioned luminaires, lampholders, ballasts, LED drivers, lamps, and retrofit kits shall not be ~~permitted installed~~ . If a retrofit kit is installed in a luminaire in accordance with the installation instructions, the retrofitted luminaire shall not be considered reconditioned.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 13:32:20 EST 2024

Committee Statement

Committee Statement: The text is revised to comply with the NEC Style Manual Section 2.2.1.

Response Message: FR-7970-NFPA 70-2024

[Public Input No. 3723-NFPA 70-2023 \[Section No. 410.2\]](#)

[Public Input No. 2609-NFPA 70-2023 \[Section No. 410.2\]](#)

**First Revision No. 7972-NFPA 70-2024 [Section No. 410.6]****410.6– 2 _ Listing ~~Required~~ Requirements .**

All luminaires, lampholders, and retrofit kits shall be listed.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 13:35:11 EST 2024

Committee Statement

Committee Statement: The section has been renumbered and the title revised to comply with the NEC Style Manual Section 2.2.1.

Response Message: FR-7972-NFPA 70-2024

Public Input No. 3724-NFPA 70-2023 [Section No. 410.6]

**First Revision No. 7973-NFPA 70-2024 [Section No. 410.16(C)]****(C) Luminaire Types Not Permitted.**

~~Incandescent luminaires~~ Luminaires with open or partially enclosed lamps and pendant luminaires or lampholders shall not be installed, unless permitted in 410.16(B).

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Thu Jan 18 13:37:16 EST 2024**Committee Statement****Committee Statement:** Incandescent was removed and reference to 410.16(B) was added to clarify that this requirement applies to the luminaire and is independent of the light source.**Response Message:** FR-7973-NFPA 70-2024Public Input No. 2228-NFPA 70-2023 [Section No. 410.16(C)]



First Revision No. 8828-NFPA 70-2024 [Section No. 410.56]

[See attached word document "70_NEC_CMP18_A2025NEC_410.56_FR_8828" for clarification of proposed revisions]

410.56 Protection of Conductors and Insulation.

(A) Properly Secured.

Conductors shall be secured in a manner that does not tend to cut or abrade the insulation.

(B) Protection Through Metal.

Conductor insulation shall be protected from abrasion where it passes through metal.

(C)

~~Luminaire Stems:~~

~~**Splices and**~~

~~taps shall not be located within luminaire arms or stems.~~

~~**(D)** Splices and Taps:~~

~~No unnecessary splices or taps shall be made within or on a luminaire.~~

~~Informational Note: See 410.14 for approved means of making connections.~~

~~**(E)**~~

~~Splices and taps shall not be located within luminaire arms or stems.~~

(D) Stranding.

Stranded conductors shall be used for wiring on luminaire chains and on other movable or flexible parts.

(F E) Tension.

Conductors shall be arranged so that the weight of the luminaire or movable parts does not put tension on the conductors.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
70_NEC_CMP18_A2025NEC_410.56_FR_8828.docx		
70_NEC_CMP18_A2025NEC_410.56_FR_8828.docx	For prod use	

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Wed Jan 24 00:09:06 EST 2024

Committee Statement

Committee Statement: This section was reorganized to combine the requirements for splices and taps into one item for clarity. The informational note was reiterating Chapter 1 requirements, so it was deleted to eliminate redundancy.

Response FR-8828-NFPA 70-2024
Message:

[Public Input No. 2232-NFPA 70-2023 \[Sections 410.56\(C\), 410.56\(D\)\]](#)

FOR COMMITTEE USE ONLY
SUBJECT TO REVISION - NOT FOR PUBLICATION

410.56 Protection of Conductors and Insulation.

(A) Properly Secured.

Conductors shall be secured in a manner that does not tend to cut or abrade the insulation.

(B) Protection Through Metal.

Conductor insulation shall be protected from abrasion where it passes through metal.

~~**(C) Luminaire Stems.**~~

~~Splices and taps shall not be located within luminaire arms or stems.~~

(CD) Splices and Taps.

No unnecessary splices or taps shall be made within or on a luminaire. Splices and taps shall not be located within luminaire arms or stems.

~~Informational Note: See 110.14 for approved means of making connections.~~

(ED) Stranding.

Stranded conductors shall be used for wiring on luminaire chains and on other movable or flexible parts.

(FE) Tension.

Conductors shall be arranged so that the weight of the luminaire or movable parts does not put tension on the conductors.



First Revision No. 7983-NFPA 70-2024 [Section No. 410.71]

410.71 Disconnecting Means for Fluorescent or LED Luminaires that Utilize Double-Ended Lamps.

(1 A) General.

In indoor locations other than dwellings and associated accessory structures, fluorescent or LED luminaires that utilize double-ended lamps and contain ballast(s) or LED driver(s) that can be serviced in place shall have a disconnecting means either internal or external to each luminaire. For existing installed luminaires without disconnecting means, at the time a ballast or LED driver is added or replaced a disconnecting means shall be installed. The line side terminals of the disconnecting means shall be guarded.

Exception No. 1: A disconnecting means shall not be required for luminaires installed in hazardous (classified) location(s).

Exception No. 2: A disconnecting means shall not be required for luminaires that provide emergency illumination required in 700.16.

Exception No. 3: For cord-and-plug-connected luminaires, an accessible separable connector or an accessible plug and receptacle shall be permitted to serve as the disconnecting means.

Exception No. 4: Disconnecting means shall not be required for every luminaire in a building area if all of the following conditions apply:

- (1) More than one luminaire is installed in the building area
- (2) The luminaires are not connected to a multiwire branch circuit
- (3) The design of the installation includes disconnecting means
- (4) The building area will not be left in total darkness should only one disconnect be opened

(2 B) Multiwire Branch Circuits.

When connected to multiwire branch circuits, the disconnecting means shall simultaneously break all the supply conductors to the ballast, including the grounded conductor.

(3 C) Location.

The disconnecting means shall be located so as to be accessible to qualified persons before servicing or maintaining the ballast. Where the disconnecting means is external to the luminaire, it shall be a single device, and it shall be attached to the luminaire or the luminaire shall be located within sight of the disconnecting means.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 14:49:58 EST 2024

Committee Statement

Committee Statement: 410.71 was revised to comply with 2.1.6 of the NEC Style Manual.

Response Message: FR-7983-NFPA 70-2024

Public Input No. 551-NFPA 70-2023 [Section No. 410.71]



First Revision No. 7984-NFPA 70-2024 [Section No. 410.136(B)]

(B) Combustible Low-Density Cellulose Fiberboard.

Where a surface-mounted luminaire containing a ballast, transformer, LED driver, or power supply is to be installed on combustible low-density cellulose fiberboard, it shall be marked for this condition or shall be spaced not less than 38 mm (1½ in.) from the surface of the fiberboard. Where such luminaires are partially or wholly recessed, 410.110 through 410.126 shall apply.

Informational Note: See ASTM E84-20 2023c , *Standard Test Method for Surface Burning Characteristics of Building Materials*, or ANSI/UL 723-2018, *Standard for Test for Surface Burning Characteristics of Building Materials*. Combustible low-density cellulose fiberboard includes sheets, panels, and tiles that have a density of 320 kg/m³ (20 lb/ft³) or less and that are formed of bonded plant fiber material but does not include solid or laminated wood or fiberboard that has a density in excess of 320 kg/m³ (20 lb/ft³) or is a material that has been integrally treated with fire-retarding chemicals to the degree that the flame spread index in any plane of the material will not exceed 25, determined in accordance with tests for surface burning characteristics of building materials.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 14:56:19 EST 2024

Committee Statement

Committee Statement: Updated the date for ASTM E84 reference within the Informational Note. The most current version is 2023c, published in September 2023.

Response Message: FR-7984-NFPA 70-2024

Public Input No. 1353-NFPA 70-2023 [Section No. 410.136(B)]

**First Revision No. 7985-NFPA 70-2024 [Section No. 410.137(C)]****(C) Wired Luminaire Sections.**

Wired luminaire sections are paired, with a ballast(s) or LED driver(s) supplying a light source or light sources in both. For interconnection between paired units, it shall be permissible to use metric designator 12 (trade size $\frac{3}{8}$) flexible metal conduit in lengths not exceeding 7.5 m (25 ft), installed in accordance with ~~Part II of Article 348~~, Part II. Luminaire wire operating at line voltage, supplying only the ballast(s) or LED driver(s) of one of the paired luminaires, shall be permitted in the same raceway as the light source supply wires of the paired luminaires where the voltage rating of the light source supply wires is greater than the line voltage.

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Thu Jan 18 14:57:36 EST 2024**Committee Statement****Committee Statement:** The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.**Response Message:** FR-7985-NFPA 70-2024Public Input No. 2684-NFPA 70-2023 [Section No. 410.137(C)]

**First Revision No. 7986-NFPA 70-2024 [Section No. 410.172]**

~~410.172— Listing:~~

~~Lighting equipment identified for horticultural use shall be listed.~~

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 14:58:59 EST 2024

Committee Statement

Committee Statement: Removed 410.172 since 410.6 (Proposed new 410.2) already addresses listing requirements.

Response Message: FR-7986-NFPA 70-2024

[Public Input No. 678-NFPA 70-2023 \[Section No. 410.172\]](#)

**First Revision No. 7987-NFPA 70-2024 [Section No. 410.174]****~~410.174~~ Installation and Use:**

~~Lighting equipment identified for horticultural use shall be installed and used in accordance with the manufacturer's installation instructions and installation markings on the equipment as required by that listing.~~

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Thu Jan 18 15:00:22 EST 2024**Committee Statement****Committee Statement:** Removed 410.174 since it is already addressed by 110.3(B).**Response Message:** FR-7987-NFPA 70-2024[Public Input No. 679-NFPA 70-2023 \[Section No. 410.174\]](#)



First Revision No. 8189-NFPA 70-2024 [Section No. 410.184]

410.184 Ground-Fault Circuit-Interrupter (GFCI) Protection and Special Purpose Ground-Fault Circuit-Interrupter (SPGFCI) Protection.

Lighting equipment identified for horticultural use and employing flexible cord(s) with one or more separable connector(s) or attachment plug(s) shall be supplied by lighting outlets protected by one of the following:

(A) 150 Volts or Less to Ground.

Branch circuits rated 150 volts or less to ground, single- or 3-phase, shall be provided with a listed Class A GFCI.

~~Exception: Circuits exceeding 150 volts to ground shall be protected by a listed SPGFCI.~~

(B) Above 150 Volts to Ground.

Branch circuits rated above 150 volts to ground, single- or 3-phase, shall be provided with a listed SPGFCI with a ground-fault trip current not exceeding 20-mA. SPGFCI protective equipment that is listed only for use with protected equipment that employs a double insulation system shall not be used for this purpose.

Informational Note: See UL 943C-2012 , *Outline of Investigation for Special Purpose Ground-Fault Circuit-Interrupters*, for information on special installation considerations necessary for special purpose ground-fault circuit interrupters.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8189_410.184.docx		

Submitter Information Verification

Committee: NEC-P18
Submittal Date: Fri Jan 19 17:35:25 EST 2024

Committee Statement

Committee Statement: This sections was reorganized to clarify the requirements, and to assist installers and AHJ's. Additional details were also included. Added date to UL 943C reference within the Informational Note.

Response Message: FR-8189-NFPA 70-2024

Public Input No. 4304-NFPA 70-2023 [Section No. 410.184]

410.184 Ground-Fault Circuit-Interrupter (GFCI) Protection and Special Purpose Ground-Fault Circuit-Interrupter (SPGFCI) Protection.

Lighting equipment identified for horticultural use and employing flexible cord(s) with one or more separable connector(s) or attachment plug(s) shall be supplied by lighting outlets protected by ~~a listed GFCI~~ one of the following:

~~Exception: Circuits exceeding 150 volts to ground shall be protected by a listed SPGFCI.~~

~~Informational Note: See UL 943C, *Outline of Investigation for Special Purpose Ground Fault Circuit Interrupters*, for information on special purpose ground-fault circuit interrupters.~~

Commented [SB1]: Move IN

(A) 150 Volts or Less to Ground.

Branch circuits rated 150 volts or less to ground, single- or 3-phase, shall be provided with a listed Class A GFCI.

(B) Above 150 Volts to Ground.

Branch circuits rated above 150 volts to ground, single- or 3-phase, shall be provided with a listed SPGFCI with a ground-fault trip current not exceeding 20-mA. SPGFCI protective equipment that is listed only for use with protected equipment that employs a double insulation system shall not be used for this purpose.

Informational Note: See UL 943C-2012, *Outline of Investigation for Special Purpose Ground-Fault Circuit-Interrupters*, for information on special installation considerations necessary for special purpose ground-fault circuit interrupters.

**First Revision No. 7990-NFPA 70-2024 [Section No. 410.190]**

~~410.190~~ General.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 15:22:55 EST 2024

Committee Statement

Committee Statement: "410.190 General" was removed because it had no content.

Response Message: FR-7990-NFPA 70-2024

[Public Input No. 680-NFPA 70-2023 \[Section No. 410.190\]](#)



First Revision No. 8831-NFPA 70-2024 [Section No. 411.2]

[See attached word document "70_NEC_CMP18_A2025NEC_411.2_FR_8831" for proposed revisions]

411.2 Reconditioned Equipment.

Listed low-voltage lighting systems or a lighting system assembled from listed parts shall not be reconditioned.

(A) Listed System.

The luminaires, power supply, and luminaire fittings (including the exposed bare conductors) of a low-voltage lighting system shall be listed for use as part of the same identified lighting system.

(B) Assembly of Listed Parts.

A lighting system assembled from the following listed parts shall be permitted:

- (1) Low-voltage luminaires identified for the use
- (2) Power supply identified for the use
- (3) Low-voltage luminaire fittings identified for the use
- (4) Suitably rated cord or cable, or any Chapter 3 wiring method for the secondary circuit

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
70_NEC_CMP18_A2025NEC_411.2_FR_8831.docx		
70_NEC_CMP18_A2025NEC_411.2_FR_8831.docx	For prod use	

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Wed Jan 24 01:20:58 EST 2024

Committee Statement

Committee Statement: The listing requirements were separated from the reconditioned equipment requirement and put into a new 411.2 to have the correct title and description for compliance with Sections 2.1.6.2 and 2.2.1.1 of the NEC Style Manual.

Revised existing 411.2 (new 411.3) to make it clear that reconditioned equipment described in new 411.2 is not allowed to be installed. The NEC is an installation standard, and the installation of these reconditioned items is what should be prohibited. Removed the term "listed" as it is now covered in new 411.2.

Response Message: FR-8831-NFPA 70-2024

[Public Input No. 657-NFPA 70-2023 \[New Section after 411.4\]](#)

[Public Input No. 2263-NFPA 70-2023 \[Article 411\]](#)

[Public Input No. 2262-NFPA 70-2023 \[Article 411\]](#)

[Public Input No. 3087-NFPA 70-2023 \[Section No. 411.2\]](#)

[Public Input No. 656-NFPA 70-2023 \[Sections 411.2\(A\), 411.2\(B\)\]](#)

[Public Input No. 3729-NFPA 70-2023 \[New Section after 411.2\]](#)

[Public Input No. 3727-NFPA 70-2023 \[Section No. 411.2\]](#)

FOR COMMITTEE USE ONLY
SUBJECT TO REVISION - NOT FOR PUBLICATION

411.23 Reconditioned Equipment. [Relocate to 411.3]

~~Listed~~Reconditioned low-voltage lighting systems or a lighting system assembled from ~~listed~~ reconditioned parts shall not be ~~reconditioned~~ installed.

411.2 Listing Requirements. [Relocate existing 411.3(A) and (B) under new 411.2]

(A) Listed System.

The luminaires, power supply, and luminaire fittings (including the exposed bare conductors) of a low-voltage lighting system shall be listed for use as part of the same identified lighting system.

(B) Assembly of Listed Parts.

A lighting system assembled from the following listed parts shall be permitted:

- (1) Low-voltage luminaires identified for the use
- (2) Power supply identified for the use
- (3) Low-voltage luminaire fittings identified for the use
- (4) Suitably rated cord or cable, or any Chapter 3 wiring method for the secondary circuit



First Revision No. 8159-NFPA 70-2024 [Sections 411.3, 411.4]

Sections

411.

~~3, 411.4 411.3~~

4 Low-Voltage Lighting Systems.

Low voltage lighting systems shall consist of an isolating power supply, low-voltage luminaires, and associated equipment that are all identified for the use. The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.

(A) Power Supply Limitation.

The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.

(B) Voltage Limitations.

The operating voltage of low-voltage lighting systems and their associated components shall not exceed 30 volts ac or 60 volts dc. If wet contact is likely to occur, the operating voltage of low-voltage lighting systems and their associated components shall not exceed 15 volts ac or 30 volts dc.

Informational Note: See 680.1 for swimming pools, fountains, and similar installations.

~~411.4 Low-Voltage Lighting Systems.~~

~~Low voltage lighting systems shall consist of an isolating power supply, low-voltage luminaires, and associated equipment that are all identified for the use. The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.~~

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8159_411.3.docx		

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 15:49:16 EST 2024

Committee Statement

Committee Statement: Sections 411.3 and 411.4 were combined into one Section with two first level subdivisions. Section 411.4 was retitled "Low-Voltage Lighting Systems" and included a description for compliance with Section 2.1.6.2 of the NEC Style Manual.

First level subdivision "(A) Power Supply Limitation" was added for the output circuit requirement.

The voltage limitations in 411.3 were added as a first level subdivision "(B) Voltage Limitations" for clarity and usability.

Response FR-8159-NFPA 70-2024

Message:

[Public Input No. 3728-NFPA 70-2023 \[Section No. 411.3\]](#)

FOR COMMITTEE USE ONLY
SUBJECT TO REVISION - NOT FOR PUBLICATION

411.3 Voltage Limitations. [Move to 411.4(B)]

~~The operating voltage of low-voltage lighting systems and their associated components shall not exceed 30 volts ac or 60 volts dc. If wet contact is likely to occur, the operating voltage of low-voltage lighting systems and their associated components shall not exceed 15 volts ac or 30 volts dc.~~

~~Informational Note: See 680.1 for swimming pools, fountains, and similar installations.~~

411.4 Low-Voltage Lighting Systems.

Low voltage lighting systems shall consist of an isolating power supply, low-voltage luminaires, and associated equipment that are all identified for the use. The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.

(A) Power Supply Limitation.

The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.

(B) Voltage Limitations.

The operating voltage of low-voltage lighting systems and their associated components shall not exceed 30 volts ac or 60 volts dc. If wet contact is likely to occur, the operating voltage of low-voltage lighting systems and their associated components shall not exceed 15 volts ac or 30 volts dc.

Informational Note: See 680.1 for swimming pools, fountains, and similar installations.



First Revision No. 8239-NFPA 70-2024 [Section No. 600.3]

600.3– 2 _ Listing Requirements .

Fixed, mobile, or portable electric signs, section signs, outline lighting, photovoltaic (PV) powered signs, and retrofit kits, regardless of voltage, shall be listed and labeled, provided with installation instructions, and installed in conformance with that listing, unless otherwise approved by special permission.

(A) Field-Installed Skeleton Tubing.

Field-installed skeleton tubing shall not be required to be listed where installed in conformance with this *Code*.

(B) Outline Lighting.

Outline lighting shall not be required to be listed as a system when it consists of listed luminaires wired in accordance with Chapter 3.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Sat Jan 20 13:32:41 EST 2024

Committee Statement

Committee Statement: This change relocates existing 600.3 and provides a list to conform with the NEC Style Manual section 2.2.1.

Response Message: FR-8239-NFPA 70-2024

Public Input No. 2801-NFPA 70-2023 [New Section after 600.1]

Public Input No. 2800-NFPA 70-2023 [Section No. 600.3]

**First Revision No. 8068-NFPA 70-2024 [Section No. 600.4(A)]****~~(A) Signs and Outline Lighting Systems:~~**

~~Signs and outline lighting systems shall be listed and labeled, marked with the manufacturer's name, trademark, or other means of identification; and input voltage and current rating.~~

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 10:45:42 EST 2024**Committee Statement**

Committee Statement: These changes remove duplicative content already covered by the product Standard.

Response Message: FR-8068-NFPA 70-2024[Public Input No. 2303-NFPA 70-2023 \[Section No. 600.4\(A\)\]](#)

**First Revision No. 8069-NFPA 70-2024 [Section No. 600.4(C)]****~~(C) Signs with Lampholders for Incandescent Lamps:~~**

~~Signs and outline lighting systems with lampholders for incandescent lamps shall be marked to indicate the maximum allowable lamp wattage per lampholder. The markings shall be permanently installed, in letters at least 6 mm ($\frac{1}{4}$ in.) high, and shall be located where visible during relamping.~~

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 10:48:07 EST 2024**Committee Statement****Committee Statement:** These changes remove duplicative content already covered by the product Standard.**Response Message:** FR-8069-NFPA 70-2024[Public Input No. 2305-NFPA 70-2023 \[Section No. 600.4\(C\)\]](#)

**First Revision No. 8072-NFPA 70-2024 [Section No. 600.4(D)]****(D) Visibility.**

~~The markings required in 600.4(A) and listing labels.~~ Listing labels and markings that identify the input voltage and current rating, shall be visible after installation and shall be permanently applied in a location visible prior to servicing. The marking shall be permitted to be installed in a location not viewed by the public.

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 10:49:50 EST 2024**Committee Statement****Committee Statement:** This section is reworded for clarity. 600.4(D) has valuable installation-specific marking location requirements that cannot be addressed by the product standard.**Response Message:** FR-8072-NFPA 70-2024[Public Input No. 2306-NFPA 70-2023 \[Section No. 600.4\(D\)\]](#)

**First Revision No. 8075-NFPA 70-2024 [Section No. 600.4(E)]****(E) Installation Instructions:**

All signs, outline lighting, skeleton tubing systems, and retrofit kits shall be marked to indicate that field wiring and installation instructions are required.

Exception: Portable, cord-connected signs are not required to be marked.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 10:52:33 EST 2024

Committee Statement

Committee Statement: These changes remove duplicative content already covered by the product standard.

Response Message: FR-8075-NFPA 70-2024

Public Input No. 2307-NFPA 70-2023 [Section No. 600.4(E)]



First Revision No. 8076-NFPA 70-2024 [Section No. 600.5(A)]

(A)– Required _ Branch Circuit.

(1) Sign Outlet.

Each commercial building and each commercial occupancy accessible to pedestrians shall be provided with at least one outlet in an accessible location at each entrance to each tenant space for sign or outline lighting system use.

(2) Branch-Circuit Rating.

The outlet(s) shall be supplied by a branch circuit rated at least 20 amperes that supplies no other load.

Exception No. 1: A sign or outline lighting outlet shall not be required at entrances for deliveries, service corridors, or service hallways that are intended to be used only by service personnel or employees.

Exception No. 2: The required branch circuit shall be permitted to supply loads directly related to the control of the sign such as electronic or electromechanical controllers.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_CMP18_FR-8076_600.5_A_.docx		

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 10:53:48 EST 2024

Committee Statement

Committee Statement: The section was revised to comply with the NEC Style Manual section 3.5.1.2.
 “Required” was removed from the title of (A) for clarity. Compliance with 600.5 is already required, where applicable, so it did not need to be added in items (1) or (2).

Response Message: FR-8076-NFPA 70-2024

Public Input No. 4196-NFPA 70-2023 [Section No. 600.5(A)]

(A) ~~Required~~ Branch Circuit. [Move text to (1) and (2)]

~~Each commercial building and each commercial occupancy accessible to pedestrians shall be provided with at least one outlet in an accessible location at each entrance to each tenant space for sign or outline lighting system use. The outlet(s) shall be supplied by a branch circuit rated at least 20 amperes that supplies no other load.~~

~~Exception No. 1: A sign or outline lighting outlet shall not be required at entrances for deliveries, service corridors, or service hallways that are intended to be used only by service personnel or employees.~~

~~Exception No. 2: The required branch circuit shall be permitted to supply loads directly related to the control of the sign such as electronic or electromechanical controllers.~~

(1) Sign Outlet.

Each commercial building and each commercial occupancy accessible to pedestrians shall be provided with at least one outlet in an accessible location at each entrance to each tenant space for sign or outline lighting system use.

(2) Branch-Circuit Rating.

The outlet(s) shall be supplied by a branch circuit rated at least 20 amperes that supplies no other load.

Exception No. 1: A sign or outline lighting outlet shall not be required at entrances for deliveries, service corridors, or service hallways that are intended to be used only by service personnel or employees.

Exception No. 2: The required branch circuit shall be permitted to supply loads directly related to the control of the sign such as electronic or electromechanical controllers.

**First Revision No. 8077-NFPA 70-2024 [Section No. 600.5(D)(1)]****(1) Supply.**

The wiring method used to supply signs and outline lighting systems shall terminate within a sign, an outline lighting system enclosure, a suitable box, a conduit body, or enclosed panelboard.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 10:55:36 EST 2024

Committee Statement

Committee Statement: The terms “panelboard” and “enclosed panelboard” are different defined terms. “Enclosed panelboard” is the technically correct term. The term “enclosed panelboard” was added to NEC Article 100 during the 2023 code cycle.

Response Message: FR-8077-NFPA 70-2024

Public Input No. 2081-NFPA 70-2023 [Section No. 600.5(D)(1)]



First Revision No. 8083-NFPA 70-2024 [Section No. 600.6(A)]

(A) Location.

The disconnecting means shall be accessible and located in accordance with 600.6(A)(1), 600.6(A)(2), or 600.6(A)(3). If the disconnecting means is remote from the sign it controls, it shall comply with 600.6(A)(4).

(1) At Point of Entry to a Sign.

The disconnect shall be located at the point the feeder circuit or branch circuits supplying a sign or outline lighting system enters a sign enclosure, a sign body, or a pole in accordance with 600.5(D)(3). The disconnect shall open all ungrounded conductors where it enters the enclosure of the sign or pole.

Exception No. 1: A disconnect shall not be required for branch circuits or feeder conductors passing through the sign where not accessible and enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location.

Exception No. 2: A disconnect shall not be required at the point of entry to a sign enclosure or sign body for branch circuits or feeder conductors that supply an internal panelboards in a sign enclosure or sign body. The conductors shall be enclosed where not accessible in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. A field-applied permanent hazard label that is visible during servicing shall be applied to the raceway at or near the point of entry into the sign enclosure or sign body. The danger label shall state the following: "Danger. This raceway contains energized conductors." The marking shall include the location of the disconnecting means for the energized conductors. The disconnecting means shall be capable of being locked in the open position.

(2) Within Sight of the Sign.

The disconnecting means shall be within sight of the sign or outline lighting system that it controls. Where the disconnecting means is out of the line of sight from any section that is able to be energized, the disconnecting means shall be lockable open in accordance with 110.25. A permanent field-applied marking identifying the location of the disconnecting means shall be applied to the sign in a location visible during servicing.

(3) Within Sight of the Controller.

The following shall apply for signs or outline lighting systems operated by electronic or electromechanical controllers located external to the sign or outline lighting system:

- (1) The disconnecting means shall be located within sight of the controller or in the same enclosure with the controller.
- (2) The disconnecting means shall disconnect the sign or outline lighting system and the controller from all ungrounded supply conductors.
- (3) The disconnecting means shall be designed such that no pole can be operated independently and shall be lockable ~~in~~ open in accordance with 110.25.

Exception: Where the disconnecting means is not located within sight of the controller, a permanent field-applied marking identifying the location of the disconnecting means shall be applied to the controller in a location visible during servicing.

(4) Remote Location.

The disconnecting means, if located remote from the sign, sign body, or pole, shall be mounted at an accessible location available to first responders and service personnel. The location of the disconnect shall be marked with a label at the sign location and marked as the disconnect for the sign or outline lighting system.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 11:07:31 EST 2024

Committee Statement

Committee Statement: The text "lockable in" is revised to "lockable open" to comply with the NEC Style Manual 3.2.5.3

Where a requirement specifies that the disconnecting means be capable of being locked in the open position, the phrase "lockable open" needs to be used, and is in accordance with 110.25.

Response Message: FR-8083-NFPA 70-2024

[Public Input No. 2542-NFPA 70-2023 \[Section No. 600.6\(A\)\]](#)

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SUBJECT TO REVISION - NOT FOR PUBLICATION

**First Revision No. 8084-NFPA 70-2024 [Section No. 600.7(A)(1)]****(1) Equipment Grounding Conductor.**

Metal equipment of signs, outline lighting, and skeleton tubing systems shall be ~~grounded by connection~~ connected to the equipment grounding conductor of the supply branch circuit(s) or feeder using the types of equipment grounding conductors specified in 250.118.

Exception: Portable cord-connected signs shall not be required to be connected to the equipment grounding conductor where protected by a system of double insulation or its equivalent. Double insulated equipment shall be distinctively marked.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 11:13:04 EST 2024

Committee Statement

Committee Statement: Language is revised to use the term “connected” instead of “grounded by connection” to be consistent with other sections of the Code.

Response Message: FR-8084-NFPA 70-2024

[Public Input No. 2335-NFPA 70-2023 \[Section No. 600.7\(A\)\(1\)\]](#)



First Revision No. 8087-NFPA 70-2024 [Section No. 600.7(B)(8)]

(8) Signs in Fountains.

Signs or outline lighting installed inside a fountain shall have all metal parts bonded to the equipment grounding conductor of the branch circuit for the fountain recirculating system. The bonding connection shall be as near as practicable to the fountain and shall be permitted to be made to metal piping systems that are bonded in accordance with 680.54(B).

Informational Note No. 1 : See 600.32(J) for restrictions on length of high-voltage secondary conductors.

Informational Note No. 2: See 680.57 for requirements on electric signs installed in fountains or within 10 feet of the fountains edge.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 11:30:05 EST 2024

Committee Statement

Committee Statement: The section should be moved into an informational note, as it provides additional information and is not a requirement.

Response Message: FR-8087-NFPA 70-2024

Public Input No. 4399-NFPA 70-2023 [Section No. 600.7(B)(8)]



First Revision No. 8089-NFPA 70-2024 [Section No. 600.24]

600.24 - [See attached word document "70_NEC_CMP18_A2025NEC_600.24_FR_8089" for clarification of proposed revisions]

600.25 - Class 2 Power Sources.

Class 2 transformers, power supplies, and power sources shall comply with the requirements of Class 2 circuits and 600.24(A), (B), and (C), ~~and (D)~~.

(A) Listing.

Class 2 power supplies and power sources shall be listed for use with electric signs and outline lighting systems or shall be a component in a listed electric sign.

(B) Equipment Grounding Conductor.

Metal parts of Class 2 power supplies and power sources shall be connected to the equipment grounding conductor.

(C)

~~Wiring Methods on the Supply Side of the Class 2 Power Supply.~~

~~Conductors and equipment on the supply side of the power source shall be installed in accordance with the appropriate requirements of Chapter 3.~~

~~**(D)** Secondary Wiring.~~

~~Secondary wiring on the load side of a Class 2 power source shall comply with 600.12(C) and 600.33.~~

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
70_NEC_CMP18_A2025NEC_600.24_FR_8089.docx	For staff use only	

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 11:39:37 EST 2024

Committee Statement

Committee Statement: Deleting existing 600.24(C) conforms with NEC Style Manual section 4.1.4. Existing 600.24(D) will be renumbered as 600.24(C). Moving existing 600.24 to 600.25 will comply with NEC Style Manual 2.2.1.1 on parallel numbering.

Response Message: FR-8089-NFPA 70-2024

[Public Input No. 636-NFPA 70-2023 \[Section No. 600.24\]](#)

[Public Input No. 1669-NFPA 70-2023 \[New Section after 600.24\]](#)

600.2425 Class 2 Power Sources.

Class 2 transformers, power supplies, and power sources shall comply with the requirements of Class 2 circuits and 600.2425(A), (B), and (C), ~~and (D)~~.

(A) Listing.

Class 2 power supplies and power sources shall be listed for use with electric signs and outline lighting systems or shall be a component in a listed electric sign.

(B) Equipment Grounding Conductor.

Metal parts of Class 2 power supplies and power sources shall be connected to the equipment grounding conductor.

~~**(C) Wiring Methods on the Supply Side of the Class 2 Power Supply.**~~

~~Conductors and equipment on the supply side of the power source shall be installed in accordance with the appropriate requirements of Chapter 3.~~

~~**(D) Secondary Wiring.**~~

Secondary wiring on the load side of a Class 2 power source shall comply with 600.12(C) and 600.33.

**First Revision No. 8096-NFPA 70-2024 [Section No. 600.33(B)]****(B) Installation.**

Secondary wiring shall be installed in accordance with 600.33(B)(1) and (B)(2).

- (1) ~~Wiring shall be installed and supported in a neat and workmanlike manner.~~ Cables and conductors installed exposed on the surface of ceilings and sidewalls shall be supported by the building structure in such a manner that the cable is not damaged by normal building use. The cable shall be supported and secured at intervals not exceeding 1.8 m (6 ft). Such cables shall be supported by straps, staples, hangers, cable ties, or similar fittings designed and installed so as not to damage the cable. The installation shall also comply with 300.4(D).
- (2) Connections in cable and conductors shall be made with listed insulating devices and be accessible after installation. Where made in a wall, connections shall be enclosed in a listed box.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 11:56:14 EST 2024

Committee Statement

Committee Statement: This language was removed because it is redundant to 110.12.

Response Message: FR-8096-NFPA 70-2024

[Public Input No. 50-NFPA 70-2023 \[Section No. 600.33\(B\)\]](#)

[Public Input No. 1670-NFPA 70-2023 \[Section No. 600.33\(B\)\]](#)

**First Revision No. 8099-NFPA 70-2024 [Section No. 600.34(C)]****(C) Flexible Cords and Cables.**

Flexible cords and cables shall comply with ~~Article 400.4~~ and be identified as extra hard usage, rated for outdoor use, and water and sunlight resistant.

Submitter Information Verification**Committee:** NEC-P18**Submittal Date:** Fri Jan 19 12:03:17 EST 2024**Committee Statement****Committee Statement:** Amend reference from 400 to 400.4 to comply with the NEC Style Manual section 4.1.4.**Response Message:** FR-8099-NFPA 70-2024Public Input No. 2984-NFPA 70-2023 [Section No. 600.34(C)]



First Revision No. 8097-NFPA 70-2024 [Section No. 600.34 [Excluding any Sub-Sections]]

All field wiring of components and subassemblies for an off-grid stand-alone, on-grid interactive, or non-grid interactive PV installation shall be installed in accordance with Article 690, Part IV, as applicable, 600.34, and the PV powered sign installation instructions.

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Fri Jan 19 11:57:40 EST 2024

Committee Statement

Committee Statement: Adding "Part IV" should clarify the section required. The references have been revised to reference specific parts of articles to comply with the NEC Style Manual section 4.1.4.

Response Message: FR-8097-NFPA 70-2024

Public Input No. 2982-NFPA 70-2023 [Section No. 600.34 [Excluding any Sub-Sections]]



First Revision No. 8007-NFPA 70-2024 [Sections Part XI., 410.120, 410.122, 410.124, 410.126]

~~Sections Part XI., 410.120, 410.122, 410.124, 410.126~~

~~Part XI. Construction of Flush and Recessed Luminaires~~

~~410.120 Temperature:~~

~~Luminaires shall be constructed such that adjacent combustible material is not subject to temperatures in excess of 90°C (194°F).~~

~~410.122 Lamp Wattage Marking:~~

~~Incandescent lamp luminaires shall be marked to indicate the maximum allowable wattage of lamps. The markings shall be permanently installed, in letters at least 6 mm (¹/₄ in.) high, and shall be located where visible during relamping.~~

~~410.124 Solder Prohibited:~~

~~No solder shall be used in the construction of a luminaire recessed housing.~~

~~410.126 Lampholders:~~

~~Lampholders of the screw shell type shall be of porcelain or other suitable insulating materials.~~

[Renumber subsequent Parts of Article 410]

Submitter Information Verification

Committee: NEC-P18

Submittal Date: Thu Jan 18 16:22:11 EST 2024

Committee Statement

Committee Statement: This part can be deleted in its entirety since luminaires are required to be listed and must comply with product standards in order to achieve that listing. There are few reports of unlisted flush and recessed luminaires being installed. They are easier to identify as listed by AHJs.

Response Message: FR-8007-NFPA 70-2024

Public Input No. 133-NFPA 70-2023 [Sections Part XI., 410.120, 410.122, 410.124, 410.126]