

CEC 2022 Changes

ARTICLE 90 — INTRODUCTION

90.2 Scope.

(A) Covered. This *Code* covers the installation and removal of electrical conductors, equipment, and raceways; signaling And communications conductors, equipment, and raceways; and optical fiber cables for the following:

- (5) Installations supplying shore power to ships and watercraft in marinas and boatyards, including monitoring of leakage current
- (6) Installations used to export electric power from vehicles to premises wiring or for bidirectional current flow

CEC 100 - Definitions

Part I. General

Accessible (as applied to equipment) – ~~Admitting close approach;; not guarded by locked doors, elevation, or other effective means.~~

Accessible (as applied to equipment) – Capable of being reached for operation, renewal, and inspection.

CEC 100 - Definitions

Part I. General

***Fuel Cell System.** The complete aggregate of equipment used to convert chemical fuel into usable electricity and typically consisting of a reformer, stack, power inverter, and auxiliary equipment.

Generating Capacity, Inverter. The sum of parallel-connected inverter maximum continuous output power at 40°C in watts or kilowatts.

Island Mode. The operational mode for stand-alone power production equipment or an isolated microgrid, or for a multimode inverter or an interconnected microgrid that is disconnected from an electric power production and distribution network or other primary power source.

Photovoltaic (PV) System. The total components, circuits, and equipment up to and including the PV system disconnecting means that, in combination, convert solar energy into electric energy.

Power Production Equipment. Electrical generating equipment supplied by any source other than a utility service, up to the source system disconnecting means.

***Stand-Alone System.** A system that is capable of supplying power independent of an electric power production and distribution network.

*Revised and moved from article 692 Fuel Cell Systems to article 100

CEC 100 - Definitions

Part I. General

Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction...

Informational Note: If a listed product is of such a size, shape, material, or surface texture that it is not possible to apply legibly the complete label to the product, the complete label may appear on the smallest unit container in which the product is packaged.

ARTICLE 110 — REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

110.2 Approval. The conductors and equipment required or permitted by this *Code* shall be acceptable only if approved.

OSHPD 1, 1R, 2, 3, 4 & 5] Equipment shall be approvable if the equipment meets the following requirements:

- *Equipment is approved, listed, labeled or certified for its use by a Nationally Recognized Testing Laboratory (NRTL) as recognized by the U.S. department of Labor, Occupational Safety and Health Administration.*
- *When field evaluated, equipment is evaluated and labeled by a Field Evaluation Body (FEB) that is accredited by International Accreditation Services (IAS) in accordance with NFPA 790.*
- *Equipment has special seismic certifications when required by Sections 1705.13.3 and 1705A.13.3 of California Building Code*

ARTICLE 110 — REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

110.14 Connections

- **(D) Terminal Connection Torque.** Tightening torque values for terminal connections shall be as indicated on equipment or in installation instructions provided by the manufacturer. An approved means shall be used to achieve the indicated torque value.
- Informational Note No. 1: Examples of approved means of achieving the indicated torque values include torque tools or devices such as shear bolts or breakaway-style devices with visual indicators that demonstrate that the proper torque has been applied.
- Informational Note No. 2: The equipment manufacturer can be contacted if numeric torque values are not indicated on the equipment or if the installation instructions are not available. Informative Annex I of UL Standard 486A-486B, *Standard for Safety-Wire Connectors*, provides torque values in the absence of manufacturer's recommendations.
- Informational Note No. 3: Additional information for torquing threaded connections and terminations can be found in Section 8.11 of NFPA 70B-2019, *Recommended Practice for Electrical Equipment Maintenance*.

ARTICLE 110 — REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

110.14 Connections

(D) Terminal Connection Torque

The tightening of conductors is sometimes taken for granted. Many electricians have been taught that their elbow contains this “magical” ability to sense when the appropriate amount of force has been applied to the tool tightening the electrical termination. This was tested a few years ago at a trade show by a wiring manufacturer. The attendees were mostly all seasoned electricians. They were given an opportunity to tighten electrical terminations with a standard wrench to the level they thought it was tightened properly. A staggering 78% of these terminations were under torqued. Now think how many times you have done exactly that same thing. This is why torquing and using the proper tools is important to the electrical safety of the installation.

From: The 10 Most Commonly Cited Electrical Code Violations EC&M 2023

110.14(D) Electrical Terminal Connection Torque

An **approved means** shall be used to achieve the indicated torque value where tightening torque values for terminal connections are indicated on equipment or in installation instructions provided by the manufacturer



Examples of **approved means of achieving the indicated torque values** include torque tools or devices such as shear bolts or breakaway-style devices with visual indicators that demonstrate that the proper torque has been applied

Copyright © JAEI 2020

Connecting Wire Torques*				Torque Values For Copper Or Aluminum Bus Bar Connections			
Wire Size (AWG)	Temp. (°F)	Actual Size (in)	Temp. (°F)	Bus Size (in)	Temp. (°F)	Bus Size (in)	Temp. (°F)
14-12	90	1/8"	120	1/2"	90	1/2"	90
10-8	90	3/16"	120	3/4"	90	3/4"	90
6-4	90	1/4"	120	1"	90	1"	90
2-1/0	90	5/8"	120	1 1/2"	90	1 1/2"	90
*See Marking On Device For Their Torque				Any Space On This Panel Will Accept A Breaker Of The Same Frame Size As The Opposite Breaker.			

ARTICLE 110 — REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

110.22 Identification of Disconnecting Means.

A) General. Each disconnecting means shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident. In other than one- or two-family dwellings, the marking shall include the identification of the circuit source that supplies the disconnecting means. The marking shall be of sufficient durability to withstand the environment involved.

110.24 Available Fault Current.

A) Field Marking. Service equipment at other than dwelling units shall be legibly marked in the field with the available fault current. The field marking(s) shall include the date the fault-current calculation was performed and be of sufficient durability to withstand the environment involved. The calculation shall be documented and made available to those authorized to design, install, inspect, maintain, or operate the system.

B) Modifications. When modifications to the electrical installation occur that affect the available fault current at the service, the available fault current shall be verified or recalculated as necessary to ensure the service equipment ratings are sufficient for the available fault current at the line terminals of the equipment. The required field marking(s) in 110.24(A) shall be adjusted to reflect the new level of available fault current

ARTICLE 210 — BRANCH CIRCUITS

210.12 Arc-Fault Circuit-Interrupter Protection.

(C) Guest Rooms, Guest Suites, and Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in patient sleeping rooms in nursing homes and limited-care facilities shall be protected by any of the means described in 210.12(A)(1) through (6).

- (1) A listed combination-type arc-fault circuit interrupter installed to provide protection of the entire branch circuit
- (2) A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
- (3) & (4) A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit.
- (5) If metal raceway, metal wireways, metal auxiliary gutters, or Type MC, or Type AC cable with metal boxes, metal conduit bodies, and metal enclosures are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit-type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.
- (6) Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 50 mm (2 in.) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a listed outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

ARTICLE 240 — OVERCURRENT PROTECTION

240.88 Reconditioned Equipment Reconditioned equipment shall be listed as “reconditioned” and the original listing mark removed.

A) Circuit Breakers. The use of reconditioned circuit breakers shall comply with (1) through (3):

- (1) Molded-case circuit breakers shall not be permitted to be reconditioned.
- (2) Low- and medium-voltage power circuit breakers shall be permitted to be reconditioned.
- (3) High-voltage circuit breakers shall be permitted to be reconditioned

(B) Components. The use of reconditioned trip units, protective relays, and current transformers shall comply with (1) and (2):

- (1) Low-voltage power circuit breaker electronic trip units shall not be permitted to be reconditioned.
- (2) Electromechanical protective relays and current transformers shall be permitted to be reconditioned

ARTICLE 300 — GENERAL REQUIREMENTS FOR WIRING METHODS AND MATERIALS

300.25 Exit Enclosures (Stair Towers). Where an exit enclosure is required to be separated from the building, only electrical wiring methods serving equipment permitted by the authority having jurisdiction in the exit enclosure shall be installed within the exit enclosure.

Informational Note: For more information, refer to NFPA101-2018, *Life Safety Code*, 7.1.3.2.1(10)(b).

ARTICLE 310 — CONDUCTORS FOR GENERAL WIRING

Broken into (2) sections:

ARTICLE 310 — CONDUCTORS FOR GENERAL WIRING

- Revised to only cover conductors up to 2000 volts

-and-

New

ARTICLE 311 — MEDIUM VOLTAGE CONDUCTORS AND CABLE

- Covers conductors 2000 volts

Table 310.16 is back (was 310.15(B)(16) in last version of code)

ARTICLE 404 — SWITCHES

404.4 Damp or Wet Locations.

(C) Switches in Tub or Shower Spaces. Switches shall not be installed within tub or shower spaces unless installed as part of a listed tub or shower assembly.

[OSHPD 1, 2, 4 & 5] Switches that are not part of a listed tub or shower assembly shall not be installed within shower rooms or stalls, or be accessible from within those areas. Switches shall not be installed within ~~(5 ft)~~(3 ft) of the perimeter of bathtubs or shower stalls.

Exception 1: Bath station devices for Call Systems meeting the requirements of 517.123(C)(4) shall be permitted to be installed outside the perimeter of bathtubs or shower stalls.

Exception 2: Bath station devices for Call Systems meeting the requirements of 517.123(C)(3) shall be permitted to be installed within the tub or shower spaces.

ARTICLE 406 — RECEPTACLES, CORD CONNECTORS, AND ATTACHMENT PLUGS (CAPS)

406.9 Receptacles in Damp or Wet Locations.

(C) Bathtub and Shower Space. Receptacles shall not be installed within a zone measured 900 mm (3 ft) horizontally and 2.5 m (8 ft) vertically from the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the tub or shower stall.

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

[OSHPD 1, 2, 4 & 5] Exception not adopted.

~~*(1) [OSHPD 1, 1R, 2, 4 & 5] Receptacles shall not be installed within shower rooms or stalls or be accessible from within these areas. Receptacles shall not be installed within 5 feet (1.52 m) of the perimeter of bathtubs or shower stalls*~~

ARTICLE 406 — RECEPTACLES, CORD CONNECTORS, AND ATTACHMENT PLUGS (CAPS)

406.12 Tamper-Resistant Receptacles. All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles in the areas specified in 406.12(1) through (8) shall be listed tamper-resistant receptacles.

(1) Dwelling units..

...

(3) Child care facilities

...

(8) Assisted living facilities

Informational Note No. 2: Assisted living facilities are Institutional Use Group I-1 per IBC 2015.

ARTICLE 406 — RECEPTACLES

Article 408 - Panelboards

406.5 Receptacle Mounting.

(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 faceup position in the area below a sink.

408.43 Panelboard Orientation. Panelboards shall not be installed in the face-up position.

ARTICLE 408 — SWITCHBOARDS, SWITCHGEAR, AND PANELBOARDS

408.6 Short-Circuit Current Rating. Switchboards, switchgear, and panelboards shall have a short-circuit current rating not less than the available fault current. In other than one- and two-family dwelling units, the available fault current and the date the calculation was performed shall be field marked on the enclosure at the point of supply. The marking shall comply with 110.21(B)(3).

ARTICLE 408 — SWITCHBOARDS, SWITCHGEAR, AND PANELBOARDS

408.8 Reconditioning of Equipment. Reconditioning of equipment within the scope of this article shall be limited as described in 408.8(A) and (B). The reconditioning process shall use design qualified parts verified under applicable standards and be performed in accordance with any instructions provided by the manufacturer. If equipment has been damaged by fire, products of combustion, or water, it shall be specifically evaluated by its manufacturer or a qualified testing laboratory prior to being returned to service.

(A) Panelboards. Panelboards shall not be permitted to be reconditioned. This shall not prevent the replacement of a panelboard within an enclosure.

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

ARTICLE 422 — APPLIANCES

422.5 Ground-Fault Circuit-Interrupter (GFCI) Protection for Personnel.

(A) General. Appliances identified in 422.5(A)(1) through (A)(7) rated 150 volts or less to ground and 60 amperes or less, single- or 3-phase, shall be provided with Class A GFCI protection for personnel.

- (2) Drinking water coolers and bottle fill stations
- (3) Cord-and-plug-connected high-pressure spray washing machines
- (5) Vending machines
- (6) Sump pumps (NEW)
- (7) Dishwashers (NEW)

(B) Type and Location. The GFCI shall be readily accessible, listed, and located in one or more of the following locations:

- (1) Within the branch-circuit overcurrent device
- (2) A device or outlet within the supply circuit
- (3) An integral part of the attachment plug
- (4) Within the supply cord not more than 300 mm (12 in.) from the attachment plug
- (5) Factory installed within the appliance

ARTICLE 210 — BRANCH CIRCUITS

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (F)... The ground-fault circuit interrupter shall be installed in a readily accessible location.

Readily accessible location (definition)-

Capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is requisite to take actions such as to use tools (other than keys), to climb over or under, to remove obstacles, or to resort to portable ladders, and so forth.



ARTICLE 210 — BRANCH CIRCUITS

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

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

For the purposes of this section, when determining the distance from receptacles the distance shall be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a window. (Note: Door was removed.)



ARTICLE 450 — TRANSFORMERS AND TRANSFORMER VAULTS

450.9 Ventilation. The ventilation shall dispose of the transformer full-load heat losses without creating a temperature rise that is in excess of the transformer rating.

Transformers with ventilating openings shall be installed so that the ventilating openings are not blocked by walls or other obstructions. The required clearances shall be clearly marked on the transformer. Transformer top surfaces that are horizontal and readily accessible shall be marked to prohibit storage.



ARTICLE 480 — STORAGE BATTERIES

480.7 DC Disconnect Methods.

(A) Disconnecting Means. A disconnecting means shall be provided for all ungrounded conductors derived from a stationary battery system with a voltage over 60 volts dc. A disconnecting means shall be readily accessible and located within sight of the battery system.

(C) Disconnection of Series Battery Circuits. Battery circuits exceeding 240 volts dc nominal between conductors or to ground and subject to field servicing shall have provisions to disconnect the series-connected strings into segments not exceeding 240 volts dc nominal for maintenance by qualified persons.

(F) Notification. The disconnecting means shall be legibly marked in the field. A label with the marking shall be placed in a conspicuous location near the battery if a disconnecting means is not provided. The marking shall be of sufficient durability to withstand the environment involved and shall include the following:

- (1) Nominal battery voltage
- (2) Available fault current derived from the stationary battery system
- (3) An arc flash label in accordance with acceptable industry practice
- (4) Date the calculation was performed



ARTICLE 517 - HEALTH CARE FACILITIES

Global changes

Category 1 >>> Category 1 (critical care)

Category 2 >>> Category 2 (general care)

~~Selected~~ receptacles >>> Select receptacles

~~Area~~ >>> Spaces

Grounding conductor >>> Equipment grounding conductor

~~In another than hazardous (classified) location~~ >>> in an unclassified location

ARTICLE 517 - HEALTH CARE FACILITIES

517.17 Ground-Fault Protection of Equipment.

(D) Testing. When ground-fault protection of equipment is first installed, each level shall be performance tested to ensure compliance with 517.17(C). This testing shall be conducted by a qualified person(s) using a test process in accordance with the instruction provided with the equipment. A written record of this testing shall be made and shall be available to the authority having jurisdiction.

ARTICLE 517 - HEALTH CARE FACILITIES

517.21 Ground-Fault Circuit-Interrupter Protection for Personnel in Category 2 (General Care) and Category 1 (Critical Care) Spaces. Receptacles shall not be required in bathrooms or toilet rooms. [99:6.3.2.2.2(D)] Receptacles located in patient bathrooms and toilet rooms in Category 2 (general care) spaces shall have ground-fault circuit-interrupter protection in accordance with 210.8(B)(1).

Ground-fault circuit-interrupter protection for personnel shall not be required for receptacles installed in those Category 2 (general care) and Category 1 (critical care) spaces where a basin, sink, or other similar plumbing fixture is installed in the patient bed location.

ARTICLE 517 - HEALTH CARE FACILITIES

517.26 Application of Other Articles. The life safety branch [*OSHPD 1, 2, 3, 4 & 5*] *critical branch, and equipment branch* of the essential electrical system shall meet the requirements of Article 700, except as amended by Article 517.

(1) Section 700.4 shall not apply. **(Capacity, Rating and Peak Load Shaving)**

(2) Section 700.10(D) shall not apply. **(Fire Protection)**

(3) Section 700.17 shall be replaced with the following: Branch circuits that supply emergency lighting shall be installed to provide service from a source complying with 700.12 when normal supply for lighting is interrupted or where single circuits supply luminaires containing secondary batteries.

(4) Section 700.32 shall not apply. **(Selective Coordination)**

ARTICLE 517 - HEALTH CARE FACILITIES

517.30 Sources of Power.

(B) Types of Power Sources.

(2) Fuel Cell Systems. Fuel cell systems shall be permitted to serve as the alternate source for all or part of an essential electrical system, provided the following conditions apply:

(1) Installation of fuel cells shall comply with the requirements in Parts I through VII of Article 692 for 1000 volts or less and Part VIII for over 1000 volts.

Informational Note: For information on installation of stationary fuel cells, see NFPA 853-2015, *Standard for the Installation of Stationary Fuel Cell Power Systems*.

(2) N + 1 units shall be provided where N units have sufficient capacity to supply the demand load of the portion of the system served.

(3) Systems shall be able to assume loads within 10 seconds of loss of normal power source.

(4) Systems shall have a continuing source of fuel supply, together with sufficient on-site fuel storage for the essential system type.

(5) Where life safety and critical portions of the distribution system are present, a connection shall be provided for a portable diesel generator.

~~(6) Fuel cell systems shall be listed for emergency system use~~

ARTICLE 517 - HEALTH CARE FACILITIES

517.30 Sources of Power.

(B) Types of Power Sources.

(3) Battery Systems. Battery systems shall be permitted to serve as the alternate source for all or part of an essential electrical system. *[OSHPD 1, 3, 4 and 5] Where life safety and critical portions of the distribution system are present, a connection shall be provided for a portable diesel generator.*

Informational Note: For information on installation of battery systems, see NFPA 111-2019, *Standard on Stored Electrical Energy Emergency and Standby Power Systems.*

ARTICLE 517 - HEALTH CARE FACILITIES

517.31 Requirements for the Essential Electrical System.

(C) Wiring Requirements.

(1) Separation from Other Circuits. The life safety branch and critical branch [of the essential electrical system] shall be kept independent of all other wiring and equipment. [99:6.7.5.2.1]

(a) Raceways, cables, or enclosures of the life safety and critical branch shall be readily identified as a component of the essential electrical system (EES). Boxes and enclosures (including transfer switches, generators, and power panels) shall be field- or factory-marked and identified as a component of the EES. Raceways and cables shall be field- or factory-marked as a component of the EES at intervals not to exceed 7.6 m (25 ft).

ARTICLE 517 - HEALTH CARE FACILITIES

517.31 Requirements for the Essential Electrical System.

(C) Wiring Requirements.

(3) Mechanical Protection of the Essential Electrical System. The wiring of the life safety and critical branches shall be mechanically protected by raceways. Listed flexible metal raceways and listed metal sheathed cable assemblies in any of the following:

~~f. Luminaires installed in rigid ceiling structures where there is no access above the ceiling space after the luminaire is installed~~

f. Luminaires installed in ceiling structures

g. *[OSHPD 1, 2, 3 (surgery clinics), 4 & 5] Where necessary to allow relative movement between immediately adjacent buildings*

ARTICLE 517 - HEALTH CARE FACILITIES

517.31 Requirements for the Essential Electrical System.

(E) Receptacle [*OSHPD 1, 2, 3, 4 & 5*] and Switch Identification.

The cover plates for the electrical receptacles [*For OSHPD 1, 2, 3, 4 & 5*] and light switches or the electrical receptacles and light switches supplied from the life safety and critical branches shall have a distinctive color or marking so as to be readily identifiable.

ARTICLE 517 - HEALTH CARE FACILITIES

517.34 Critical Branch.

(A) Task Illumination, Fixed Equipment, and Selected Receptacles.

(6) Telecommunications entrance facility, telecommunications equipment rooms, and telecommunications rooms and equipment in these rooms

(7) Task illumination, select receptacles, and select power circuits for the following areas:

1. [OSHPD 1] Imaging room containing imaging equipment approved by Licensing Agency for diagnostic services of emergency/trauma patients found in California Building Code Section 1705A.13.3.1 7. Imaging equipment shall be connected to critical branch or equipment branch.

(8) Clinical IT-network equipment

(9) Wireless phone and paging equipment for clinical staff communications

ARTICLE 517 - HEALTH CARE FACILITIES

517.35 Equipment Branch Connection to Alternate Power Source.

(A) Equipment for Delayed Automatic Connection. The following equipment shall be permitted to be arranged for delayed automatic connection to the alternate power source:

~~(10) [OSHPD 1, 2, 3, 4 & 5] Where provided, UPS systems serving telephone, data, technology and telecommunications equipment rooms and closets.~~

ARTICLE 517 - HEALTH CARE FACILITIES

517.43 Automatic Connection to Life Safety and Equipment Branch. The life safety and equipment branches shall be installed and connected to the alternate source of power specified in 517.41 so that all functions specified herein for the life safety and equipment branches are automatically restored to operation within 10 seconds after interruption of the normal source.

No functions other than those listed in 517.43(A) through (G) shall be connected to the life safety branch.

The life safety branch shall supply power as follows:

(A) Illumination of Means of Egress.

(B) Exit Signs.

(C) Alarm and Alerting Systems.

(D) Communications Systems.

~~**(E) Dining and Recreation Areas**~~

(E) Generator Set Location

(F) Elevators.

~~**(G) AC Equipment for Nondelayed Automatic Connection.**~~ Generator accessories, including, but not limited to, the transfer fuel pump, electrically operated louvers, and other generator accessories essential for generator operation shall be arranged for automatic connection to the alternate power source.

*NFPA 70 has clean up work to do. I will suggest the text highlighted in blue be removed. We should enforce as if text highlighted in blue does not exist.

ARTICLE 517 - HEALTH CARE FACILITIES

517.80 Patient Care Spaces. Equivalent insulation and isolation to that required for the electrical distribution systems in patient care areas shall be provided for communications, signaling systems, data system circuits, fire alarm systems, and systems less than 120 volts, nominal.

Class 2 and Class 3 signaling and communications systems *[OSHPD 1, 2, 3, 4 & 5]* Class 2 circuits that transmit power and data to a power device, and power-limited fire alarm systems shall not be required to comply with the grounding requirements of 517.13, to comply with the mechanical protection requirements of 517.31(C)(3)(5), or to be enclosed in raceways, unless otherwise specified by Chapter 7 or 8.

Secondary circuits of transformer-powered communications or signaling systems shall not be required to be enclosed in raceways unless otherwise specified by Chapters 7 or 8.

[OSHPD 1, 2, 3, 4 & 5] See ANSI/NEMA C137.3-2017, American National Standard for Lighting Systems — Minimum Requirements for Installation of Energy Efficient Power over Ethernet (PoE) Lighting Systems, for information on installation of cables for PoE lighting systems.