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2023 NEC

Mass Amendments

CONFERENCE WORKBOOK

MA Licenses A, B, C, D, E

Providers in MA, VT, NH, ME, RI

Article 100 Part I, Definitions

- Type of change: Relocation
- The change: All definitions were relocated to Article 100, and additional definition structure requirements were added for this cycle.

Article 100 Accessible (applied to wiring methods)

- Type of change: Revision
- The change: CMP-1 modified the definition of Accessible as it applies to wiring methods. The revision to this definition clarifies that wiring and electrical equipment made inaccessible by piping, ductwork, drains, raceways, or other mechanical systems is not considered as accessible as applied to wiring methods.

Article 100 Class 4 Circuit

- Type of change: New
- The change: CMP-3 created for a new definition for a Class 4 Circuit as it applies to Article 726. There are a total of six (6) definitions associated with this Class 4 technology.

Article 100 Counter (Countertop)

- Type of change: New
- The change: A new definition was added by CMP-2 to help users of the Code understand what constitutes a "Counter (Countertop)" location

Article 100 Energy Management System

- Type of change: New
- The change: CMP-13 created a new definition for an energy management system

Article 100 Feeder Assembly

- Type of change: New
- The change: CMP-7 added a new definition for Feeder Assembly to Article 100. This defini- tion will provide consistency when referencing the factory cord or cable assembly between the electrical equipment and the mobile home, recreational vehicle, or park trailer panelboard

Article 100 Fibers/Flyings, Combustible. (Combustible Fibers/Flyings)

- Type of change: New
- The change: CMP-14 created a new definition for Fibers/Flyings, Combustible. (Combustible Fibers/Flyings), which includes three informational notes that identify particle size and types of fibers/flyings.

Article 100 Ground-Fault

- Type of change: Revision
- The change: CMP-5 has changed the words from "metallic" to "metal" in the definition of Ground Fault in Article 100.

Article 100 Impedance Grounding Conductor

- Type of change: New
- The change: A new definition for Grounded Conductor, Impedance was added to Article 100 by CMP-5.

Article 100 Impedance Grounded System

- Type of change: New
- The change: CMP-5 created a new definition in Article 100 for Grounded System, Impedance.

Article 100 In Sight From {Within Sight From), {Within Sight)

- Type of change: Revision
- The change: CMP-1 modified the definition of"In Sight From (Within Sight From), (Within Sight)" per requirements of the NEC Style Manual, stating that definitions shall not contain requirements or recommendations.

Article 100 Likely to Become Energized

- Type of change: New
- The change: A new definition for Likely to Become Energized was added to Article 100 by CMP-5

Article 100 Load Management

- Type of change: New
- The change: CMP-7 added a new definition for Load Management.

Article 100 Normal High-Water Level

- Type of change: New
- The change: CMP-7 added the definition for Normal High-Water Level to Article 100 in order to help AHJs determine the elevation for the electrical datum plane distances used in Articles 551, 555, and 682.

Article 100 PV DC Circuit, PV Source Circuit, PV String Circuit

- Type of change: New
- The change: CMP-4 added new terms and revised definitions for PV System DC ele- ments. PV DC Circuit (PV System DC Circuit) includes the subsets of PV Source Circuit and PV String Circuit.

Article 100 Restricted Industrial Establishment [as applied to hazardous (classified) locations].

- Type of change: New
- The change: Restricted Industrial Establishment is a new definition in Article 100 created by CMP-14 to align with requirements for installations specifically found within hazardous (clas- sified) locations.

Article 100 Servicing

- Type of change: New
- The change: Servicing is a new definition in Article 100 created by CMP-1 for servicing of electrical equipment to assist in maintenance and repair activities.

Article 100 Short Circuit

- Type of change: New
- The change: CMP-10 has added a new definition for short circuit to improve usability of the Code.

Article 100 Transformer

- Type of change: New
- The change: CMP-9 created a new definition for the term transformer.

Article 100 Work Surface

- Type of change: New
- The change: A new definition was added by CMP-2 to help understand what constitutes a "Work Surface" location.

110.3(A) Examination, Identification, Installation, Use, and Listing (Product Certification) of Equipment. (A) Examination

- Type of change: New
- The change: CMP-1 added a new list item number 8 that addresses cybersecurity for net- work-connected life safety equipment.

110.3(B) Examination, Identification, Installation, Use, and Listing (Product Certification) of Equipment. (B) Installation and Use.

- Type of change: New
- The change: CMP-1 created a new informational note allowing the use of a QR code to access installation instructions.

110.14(A} Terminals

- Type of change: Revision
- The change: CMP-1 added "electrical" for connection (as opposed to mechanical) for additional clarity about the connection.

110.16(B) Service Equipment and Feeder Supplied Equipment

- Type of change: Revision
- The change: Labeling requirements have been changed by CMP-1 for Service Equipment from 1200 amperes to 1000 amperes or more in Section 110.16(B). CMP-1 added "Feeder Supplied Equipment" to the title, added the phrase "arc flash" for the type of permanent label required, and reduced 1200 to 1000 amperes for equipment rating in Section l 10.16(B).

110.17 Servicing and Maintenance of Equipment

- Type of change: Revision
- The change: CMP-1 added language in Section 110.17 restricting service and maintenance of equipment to qualified persons trained to perform the work.

110.20 Reconditioned Equipment

- Type of change: New
- The change: CMP-1 established general requirements in Section 110.20 that will apply to all equipment that is reconditioned

110.21{A){1) General

- Type of change: Revision
- The change: CMP-1 made changes in Section l 10.2l(A)(l) to requirements for equipment marking to clarify how to apply or affix labels on all electrical equipment.

110.21{A){2) Reconditioned Equipment

- Type of change: Revision
- The change: CMP-1 has reorganized information in Section 110.2l(A)(2) into a list format and clarifies that the original listing mark is to be removed or made permanently illegible.

110.21{B}{1} Field-Applied Hazard Marking

- Type of change: Revision
- The change: CMP-1 added language in Section 110.2l(B)(l) towards durability for hazard marking labels and signs for electrical equipment installed in various environments

- Type of change: Revision
- The change: CMP-1 added text to clarify when the identification of a disconnecting means is required or not required.

110.26 Spaces About Electrical Equipment

- Type of change: Relocation
- The change: Substantiation was received by CMP-1 concerning equipment doors and their interference with egress and access from working space. As a result, text was relocated from (A)(2)(6) in Section 110.26, as it concerns more than just working space width. Access to egress from working space requirements have been clarified in Section 110.26 for equipment 1000 volts, nominal, or less.

110.26{A){6) Grade, Floor, or Working Platform

- Type of change: New
- The change: CMP-1 added a new list item (6) at l 10.26(A) to address the working space conditions of the floor at electrical equipment locations, emphasizing a need to be clear of objects and level and flat as practical.

110.29 In Sight From (Within Sight From, Within Sight}

- Type of change: New
- The change: New Section 110.29 has been added by CMP-1 to address electrical equipment and the term "In Sight From."

110.33{A) Entrance

- Type of change: Revision
- The change: Requirements for access and egress from working space for equipment over 1000 volts, nominal, was revised and clarified in Section l 10.33(A) by CMP-1

110.34{A) Working Space and Guarding

- Type of change: Revision
- The change: Section l 10.34(A) was revised by CMP-1 to address the condition of the work surface making up the floor, grade, or platform area within the working space of electrical equipment 1000 volts, nominal, and above.

Chapter 9 Table 13 Equipment Suitable for Hazardous (Classified) Locations

- Type of change: New
- The change: CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous (Classified) Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9 (C)(2)(4) with new text added to reference Chapter 9 Table 13.

210.2 Reconditioned Equipment

- Type of change: Relocation
- The change: The information concerning reconditioned equipment has been relocated by CMP-2 from 210.15 to 210.2 as it applies to branch circuits. (Note: the xxx.2 sections within various chapters will become placeholders for information concerning reconditioned equipment.)

210.8{A){6) Dwelling Units- Kitchens

- Type of change: Revision
- The change: Ground-fault circuit-interrupter (GFCI) protection has been expanded in Sec- tion 210.S(A) (6) to include any cord-and plug equipment in the kitchen, regardless of whether the outlet serves the countertop.

210.S(A} Dwelling Unit Bathroom- Exception No. 4 Exhaust Fan Receptacle(s}

- Type of change: New
- The change: A new exception was added by CMP-2 to Section 210.S(A) to help the installer and enforcer understand ground-fault circuit-interrupter (GFCI) protection requirements for factory-installed exhaust fan receptacles

210.S(A) Exception 3 and 210.S(B) GFCI Protection for Personnel

- Type of change: Relocation / Revision
- The change: CMP-2 utilized two new terms and acronyms for "Weight Supporting Ceiling Receptacle (WSCR)" and "Weight Supporting Attachment Fitting (WSAF)" for consistency throughout the code. Also, 210.8(A) Exception 3 and 210.8(B) Exception 6, along with the others, were relocated to the end of 210.8(A) and 210.8(B) as part of the reorganization of 210.8.

210.8(B}(4} Other Than Dwelling Units

- Type of change: New
- The change: CMP-2 added buffet serving areas to the list of locations requiring ground-fault circuit-interrupter (GFCI) protection in Section 210.8(B)(4).

210.8{B}{7} Other Than Dwelling Units, Sinks

- Type of change: New
- The change: CMP-2 added "cord-and-plug-connected fixed and stationary appliances" to the existing language for sink locations.

210.8(B}(13} Other Than Dwelling Locations. (13) Aquariums and Bait Wells

- Type of change: New
- The change: Section 210.S(B) added a new numbered list item (13) dealing with aquariums and bait wells in areas that are other than dwelling units. This change requires that receptacles installed within 1.8 m (6 ft.) of aquariums, bait wells, and similar open aquatic vessels or con- tainers be provided with ground-fault circuit-interrupter (GFCI) protection.

210.S{D) Dwelling Units - Specific Appliances

- Type of change: Revision
- The change: The appliance information at 210.S(D) requiring ground-fault circuit-interrupter (GFCI) protection was placed into a list format by CMP-2 for easier use. In the 2020 NEC, 210.S(D) did not include any specific appliances, rather it provided prescriptive requirements for achieving GFCI for appliances listed in a pointer to 422.5

210.S(F) Outdoor Outlets

- Type of change: Revision
- The change: A new requirement has been added to 210.S(F) by CMP-2 that will require when equipment that is supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be GFCI protected

210.11{C){4) 210.11 Branch Circuits Required. {C) Dwelling Units. (4) Garage Branch Circuits

- Type of change: Revision
- The change: The text was revised at Section 210. l l(C)(4) by CMP-2, clarifying that 15-am- pere branch circuits are permitted to serve receptacle outlets installed in a dwelling unit garage that are in addition to the receptacle outlets required by 210.52(G)(l).

210.11{C){4) 210.11 Branch Circuits Required. {C) Dwelling Units. (4) Garage Branch Circuits. Exception No. 2

- Type of change: New
- The change: A new exception (4) was added by CMP-2 to Section 210.l l(C)(4), permitting the 20-ampere circuit supplying a single-vehicle bay garage to supply other equipment in accordance with requirements in 210.23(A)(l) and (A)(2).

210.12 Arc-Fault Circuit-Interrupter Protection

- Type of change: New
- The change: CMP-2 reformatted this section making it easier to reference and utilize the requirements as well as introduce 10-ampere branch circuits as an allowable branch circuit size.

210.12(0)(3) Other Occupancies

- Type of change: New
- The change: Substantiation was received by CMP-2 to add rooms designed exclusively as sleeping rooms in places such as firehouses, rescue squads, police departments, and similar locations to be protected by one of the methods in 210.12(A)(l) through (A)(6). As a result, a new list item (3) was added to Section 210.12(D).

210.17 Guest Rooms and Guest Suites

- Type of change: Revision
- The change: Section 210.17 was modified by CMP-2 to include assisted living facilities to the list of existing locations (guest rooms and guest suites) that were provided with a permanent means for cooking requiring them to have their branch circuits installed per the requirements for dwelling units.

210.19 Conductors - Minimum Ampacity and Size

- Type of change: Revision
- The change: CMP-2 clarified that the voltage limitation should apply to the circuit, not the conductor insulation rating, and specified that Section 210.19 applies to branch circuits not exceeding 1000 volts ac or 1500 volts de.

210.23 Permissible Loads, Multiple-Outlet Branch Circuits, 10 Ampere Branch Circuits- Permitted and Not Permitted

- Type of change: Revision
- The change: Information for the permitted and non-permitted use of a 10-ampere branch circuit has been developed by CMP-2 and implemented into existing Section 210.23.

210.52(C) Dwelling Units- Island and Peninsular Countertops and Work Surfaces

- Type of change: Revision
- The change: The requirement for receptacles serving the countertop or work surface of an island or peninsula has been made optional by CMP-2 in Section 210.52(C), but guidance for their location has been maintained when they are provided.

210.52(G) Basements, Garages, and Accessory Buildings

- Type of change: Revision
- The change: CMP-2 members clarified that the receptacle provided for premises security systems did not meet the receptacle requirements of210.52(G).

210.70 Lighting Outlets Required. (1) Habitable Rooms, Kitchens, Laundry Areas, and Bathrooms.

- Type of change: Revision
- The change: CMP-2 added laundry areas to the existing list of locations in 210.70(1), re- quiring a listed wall-mounted control device to be installed for the lighting outlet. Language was also added prohibiting a switch or wall-mounted control device to rely solely on a battery unless provided with a means to energize lighting outlets upon failure.

- Type of change: New
- The change: Substantiation was provided to CMP-10 that whenever feeder taps or trans- former secondary conductors supply panelboards, switchboards, switchgear, or motor control centers, there must be added barriers at load terminations when such terminations remain energized when the disconnect for the taps (or transformer secondary conductors) is in the off (open) position. As a result, a new Section 215.15 was added.

215.18, 225.42, 230.67 Surge Protection

- Type of change: Revision / New Sections
- The change: The requirements of 230.67 of the 2020 NEC were expanded for the 2023 NEC and added two new Sections 215.18 and 225.42. The new language requires Type 1 or 2 SPOs when a service or feeder supplies a dwelling unit, dormitory unit, guest rooms of hotels and motels, and sleeping rooms/areas of nursing homes and limited care facilities. The new requirements also specify that SPDs must have a nominal discharge rating not less than lOkA.

220.1 Scope. {Branch-Circuit, Feeder, and Service Load Calculations)

- Type of change: New
- The change: CMP-2 added information about new parts VI and VII to the Scope of Article 220 concerning calculation methods for health care facilities and marinas, boatyards, floating buildings, and commercial and noncommercial docking facilities. There are also new require- ments in 220.110 that provides relief for load calculations in health care facilities.

220.5(C) Floor Areas

- Type of change: New
- The change: Substantiation was provided to CMP-2 for consideration and, as a result, areas such as garages, or unused or unfinished space(s) are no longer excluded from the calculated floor area of the building, dwelling unit, or other areas. A new subdivision (C) was added to

Section 220.5(C), Floor Areas.

220.57 Electric Vehicle Supply Equipment (EVSE) Load

- Type of change: New
- The change: CMP-2 added a new Section 220.57 to specify load calculations for Electric Vehicle Supply Equipment (EVSE).

220.70 Energy Management Systems (EMSs)

- Type of change: New
- The change: CMP-2 added a new Section 220.70 to specify load calculations for Energy Management Systems (EMSs).

220.110 Receptacle Loads

- Type of change: New
- The change: CMP-2 members recommended new tables with demand factor values for receptacles used in Category 1, 2, 3, and 4 patient care spaces within Health Care Facilities. As a result, Table 220.110(1) and Table 220.110(2) are now included in the 2023 NEC.

220.120 Marinas, Boatyards, Floating Buildings, and Commercial and Noncommercial Docking Facilities

- Type of change: Relocation
- The change: The requirements of Section 555.6 have been moved to 220.120. This will not change the requirements for load calculations or demand factors and is a simple relocation.

225.5 and 225.7 Deletion of 225.5 Size of Conductors, 1000 Volts, Nominal, or Less and 225.7 Lighting Equipment Installed Outdoors

- Type of change: Deletion
- The change: Sections 225.5, Size of Conductors 1000 Volts, Nominal or Less, and 225.7, Light- ing Equipment Installed Outdoors, were deleted.

225.41 Emergency Disconnects

- Type of change: New
- The change: The new section was added by CMP-10 to require an emergency disconnect at a readily accessible outdoor location for one-and two-family dwelling units that are served by feeders. The disconnect must be on or within sight of the dwelling unit.

230.62(C) Barriers

- Type of change: Revision
- The change: New language was added by CMP-10 to clarify that barriers are required in service equipment in such a way that no uninsulated, ungrounded busbars or terminals is/ are exposed to inadvertent contact while load terminations are being serviced when the service disconnect is in the open position.

230.67(A} Surge-Protective Devices

- Type of change: Revision
- The change: CMP-10 revised subdivision 230.67(A) by changing the term dwelling units to the following occupancies and added a list of additional locations that now require protection by a surge-protective device (SPD).

230.71{B} Two to Six Service Disconnecting Means

- Type of change: Revision
- The change: Transfer switches were added at 230.7l(B)(4) by CMP-10 to clarify that they must be listed for and used as service equipment. Each service disconnect is to be provided in a separate compartment.

230.71{B} Exception Two to Six Service Disconnecting Means

- Type of change: New
- The change: An exception was added by CMP-10 to clarify that existing service equipment is not required to comply with the provisions of230.7l(B) when such existing equipment was installed in compliance with previous editions of the NEC that allowed for up to six service disconnects in a single enclosure or compartment.

230.85 Emergency Disconnects

- Type of change: Revision
- The change: Section 230.85 was reorganized by CMP-10 into subdivisions with titles to better align with the formatting requirements of the NEC Style Manual

Article 235 Branch Circuits, Feeders and Services Over 1000 Volts ac, 1500 Volts de, Nominal

- Type of change: New I Relocation
- The change: CMP-2 added a new Article 235 to govern medium voltage branch circuits

240.2 Reconditioned Equipment

- Type of change: Relocation
- The change: The reconditioning requirements located at 240.62 and 240.88 were relocated by CMP-10 to Section 240.2 in the 2023 NEC. Ground-fault protection of equipment (GFPE) and ground-fault circuit interrupters (GFCI) were added to the list of equipment that shall not be reconditioned.

240.4(B) Overcurrent Devices Rated 800 Amperes or Less

- Type of change: Revision
- The change: CMP-10 has added adjustable trip overcurrent protective devices as being permitted to have an ampacity value set that does not exceed the next higher standard overcurrent protection device ampacity value [per Table 240.6(A)] above the ampacity of the conductors being protected.

240.4(0)(3) 14 AWG Copper-Clad Aluminum

- Type of change: Revision
- The change: 14 AWG copper-dad aluminum was added by CMP-10 to the list of small conductors permitted per NEC 240.4(0).

Table 240.6(A) Standard Ampere Ratings for Fuses and Inverse Time Cir- cuit Breakers

- Type of change: Revision
- The change: 10 ampere was added by CMP-10 to the list of standard ratings of overcurrent protection devices.

240.6(0) Remotely Accessible Adjustable-Trip Circuit Breakers

- Type of change: Revision
- The change: Provisions were added by CMP-10 to allow remote access to adjustable-trip circuit breakers through a direct local nonnetworked interface or a networked interface connection.

240.7 Listing Requirements

- Type of change: New
- The change: In the new Section 240.7, CMP-10 has clarified that branch-circuit overcurrent protective devices, relays, and circuit breakers that provide ground-fault protection of equipment (GFPE) and ground-fault circuit interrupter (GFCI) devices must be listed.

240.11 Selective Coordination

- Type of change: New
- The change: A requirement was added by CMP-10 to clarify that whenever the NEC requires a feeder overcurrent protective device to be selectively coordinated with a service overcurrent protective device, then ALL feeder overcurrent devices connected to such service must be selectively coordinated with the service overcurrent device

240.16 Interrupting Ratings

- Type of change: New
- The change: A new requirement was added at Section 240.16 by CMP-10 to specify that the minimum interrupting rating of a branch-circuit overcurrent protective device is 5,000 amperes.

240.24(A) Accessibility - Exception.

- Type of change: Revision
- The change: Substantiation was presented to CMP-10 concerning access to overcurrent protective devices and replacing the words "similar enclosures" in the existing exception due to the words being vague and problematic for the enforcement community. As a result, the exception to Section 240.24(A) was updated.

240.24(E} Not Located in Bathrooms

- Type of change: Revision
- The change: Substantiation was received by CMP-10 and the panel determined that overcurrent protective devices (other than supplementary overcurrent devices) are no longer allowed in ANY bathroom or in showering facilities or locker rooms having showering facilities

242.2 Reconditioned Equipment

- Type of change: New
- The change: CMP-10 has specified that surge protective devices (SPDs) and surge arresters shall not be reconditioned in the new Section 242.2.

242.9 Indicating

- Type of change: New
- The change: New Section 242.9 requires surge protective devices (SPDs) to have an indication that the device is functioning properly.

Article 245 Article 245 Overcurrent Protection for Systems Rated Over 1000 Volts ac, 1500 Volts de

■ Type of change: New
■ The change: Various portions of Articles 215, 225, 230, and 240 dealing with conductors or systems operating at over 1,000 volts were relocated to the new Article 245, Overcurrent Protection for Systems Rated Over I 000 Volts ac, 1500 Volts de.

250.24 Grounding of Service-Supplied Alternating-Current Systems

■ Type of change: Revision
■ The change: CMP-5 made several changes within Section 250.24 to meet the requirements of the NEC Style Manual. The panel also added the word "shall" where necessary to clarify electrical professionals' understanding of installing conductors connected in parallel

250.24(0)(2) Grounding of Service-Supplied Alternating-Current Systems.
(D) Grounded Conductor Brought to Service Equipment.
(2) Conductors in Two or More Raceways or Cables Connected in Parallel.

■ Type of change: Revision
■ The change: CMP-5 received substantiation to clarify the requirements concerning grounded parallel conductors for service equipment. As a result, Section 250.4(D)(2) was revised.

250.30(C} Outdoor Source, Exception

■ Type of change: Revision
■ The change: CMP-5 removed the word "neutral'' from 250.30(C) to be consistent with other locations within the NEC and with language found at 250.36 and 250.187.

250.36 Impedance Grounded Systems - 480 Volts to 1000 Volts

■ Type of change: Revision
■ The change: CMP-5 removed the words "High" and "Neutral" from the title of Section 250.36, renaming the section to be Impedance Grounded Systems - 480 Volts to 1000 Volts. A new definition for "impedance grounding conductor" was also created.

250.50 Grounding Electrode System, 250.52(A)(3)(1) Concrete- Encased Electrode, 250.52(B)(2) Not Permitted for Use as Grounding Electrodes.

■ Type of change: Revision
■ The change: The term "reinforcing steel or rods" was replaced by CMP-5 with "rebar." This revision was done in all three sections of the Code for consistency.

250.64(G) Enclosures with Ventilation Openings

- Type of change: New
- The change: CMP-5 added a new requirement to prohibit openings in enclosures intended for ventilation to be used to install the grounding electrode conductor.

250.70 Methods of Grounding and Bonding Conductor Connection to Electrodes

- Type of change: Relocation / Revision
- The change: The section has been divided by CMP-5 into new subsections (A) and (B), and the list of methods for connection to grounding electrodes has been eliminated. The list item for the communications system has been moved to the new list item (B) as a permitted meth- od. A new informational note was added to clarify to users that a connector or fitting that is listed as suitable for direct burial is also listed and suitable for concrete encasement.

250.94(A) The lntersystem Bonding Termination Device

- Type of change: Revision
- The change: CMP-5 made minor wording changes in 250.94(A)(4) a and band removed Informational Note 1, which did not have much value within the code and did not comply with the NEC Style Manual.

250.106 Lightning Protection Systems

- Type of change: Revision
- The change: References to the NFPA 780 standard were removed for Informational Note No. 1 and updated for Informational Note No. 2 by CMP-5.

250.118(A} Types of Equipment Grounding Conductors, (A} Permitted.

- Type of change: New
- The change: Substantiation was received by CMP-5 for the recognition of stainless-steel flex- ible and liquid tight metal conduit and a requirement for a wire-type equipment grounding conductor (EGC), resulting in the addition of a new list item (f) in Section 250.11S(A).

250.130 Equipment Grounding Conductor Connections

- Type of change: Revision
- The change: CMP-5 added snap switches to the items that must conform with requirements found at 250.130(C) for their equipment grounding conductor connection.

250.140 Frames of Ranges and Clothes Dryers

- Type of change: Revision
- The change: CMP-5 recognized that clarification was needed to make Section 250.140 more understandable. It has been revised by changing the main requirement and the former exception into two titled subdivisions.

250.148 Continuity of Equipment Grounding Conductors and Attachment in Boxes

- Type of change: Revision
- The change: CMP-5 modified subdivision (A) to specify that all equipment grounding conductors that are spliced or terminated within a box are required to be connected together without regard to if they are for different circuits. Also, the reference for the connection means complying with 250.8 was relocated to this section.

Chapter 9 Table 13 Equipment Suitable for Hazardous (Classified) Locations

- **Type of change:** New
- **The change:** CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous *(Classified)* Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9 (C)(2)(4) with new text added to reference Chapter 9 Table 13.

Articles 342, 344, 348, 350, 352, 353, 354, 355, 356, 358, 360, and 362 Title Revision

- Type of change: Revision
- The change: CMP-8 revised Articles 342, 344, 348, 350, 352, 353, 354, 355, 356, 358, 360, and 362 by removing the word "Types" from their titles.

3OO.2{A) Limitations, Voltage

- Type of change: Revision
- The change: Section 300.2(A) was modified by CMP-3 to add 1500 volts de in two locations. This change specifies that wiring methods found within Chapter 3 are to be used for systems rated 1000 volts ac, 1500 volts de, nominal, or less, where not limited in other locations of the NEC.

300.4(E) Ex. No. 1 and 2 Cables, Raceways, or Boxes Installed in or Under Metal-Corrugated Roof Decking

- Type of change: Revision
- The change: A new Exception No. 1 and modifications to Exception No. 2 have been added to 300.4(E) by CMP-3. These changes recognize poured concrete on top of the metal roof decking as a means of physical protection and addition of "listed steel or malleable iron fittings

and boxes" used with rigid metal conduit (RMC) and intermediate metal conduit (IMC).

300.4(G) Fittings

- Type of change: Revision
- The change: CMP-3 added new language in 300.4(G), noting chat protective fittings need to be installed "prior to the installation of conductors."

Table 300.5 Minimum Cover Requirements, 0 to 1000 Volts, ac, 1500 Volts de, Nominal, Burial in Millimeters (Inches)

- Type of change: Revision
- The change: CMP-3 has added Electrical Metallic Tubing (EMT) to Column 3 ofTable 300.5 to clearly indicate that EMT can be installed in an underground location.

300.S{D) Protection from Damage

- Type of change: Deletion
- The change: The words "direct buried" were removed from the text at 300.5(D) by CMP-3 leaving behind "conductors and cables."

300.6(A} Ferrous Metal Equipment

- Type of change: Revision
- The change: The informational note referencing field-cut threads was removed, and the reference was turned into positive language.

300.ll(C) Raceways Used as Means of Support

- Type of change: Revision
- The change: CMP-3 added Class 3 circuit conductors as a conductor permitted to be support- ed by the raceway containing power supply conductors that supplies the equipment.

300.14 Length of Free Conductors at Outlets, Junctions, and Switch Points

- Type of change: Revision
- The change: CMP-3 added text at 300.14 permitting free conductors to be spliced at outlet, junction, and switch points.

300.17 Number and Size of Conductors and Cables in Raceway

- Type of change: Revision
- The change: CMP-3 received substantiation for Section 300.17 to recognize that cables are installed in raceways and that requirements are needed so that they are not damaged during

and after the installation. The revised Informational Note offers direction to the location of the various wiring methods.

300.25 Exit Enclosures (Stair Towers)

- Type of change: New
- The change: CMP-3 eliminated the term "be separated from the building" and added the words "have a fire resistance rating" to Section 300.25. An exception was also added addressing egress lighting on outside exterior doorways.

300.26 Remote-Control and Signaling Circuits Classification

- Type of change: New
- The change: A new Section 300.26 was created by CMP-3 for remote-control and signaling circuits.

Article 305 General Requirements for Wiring Methods and Materials for Systems Rated Over 1000 Volts ac, 1500 Volts de, Nominal

- Type of change: New
- The change: A new Article 305 was created by CMP-3 for general wiring methods and installations applying to Wiring Methods and Materials for Systems Rated Over 1000 Volts ac, 1500 Volts de.

Tables 310.16, 310.17 and 310.20 Ampacities of Conductor Tables

- Type of change: Deletion
- The change: CMP-6 deleted "XHWN" from the 90-degree Celsius columns of Tables 310.16, 310.17, and 310.20.

312.10 Screws and Other Fasteners

- Type of change: New
- The change: A new Section 312.10 was added by CMP-9 to address field-installed screws or other fasteners entering a cabinet, cutout box, or meter socket. This additional language protects against damage to conductors resulting from sharp projections from exposed threads of screws that are run through covers.

314.5 Screws and Other Fasteners

- Type of change: New
- The change: A new Section 314.5 was added to address screws and fasteners entering the wiring space of boxes and conduit bodies. CMP- 9 is inserting this language to protect against

damage to conductors resulting from sharp projections from exposed threads of screws run through covers or sides of boxes.

314.16(B)(6) Terminal Block Fill

- Type of change: New
- The change: New subdivision 314.16(B)(6) was added to address terminal blocks installed in boxes. CMP-9 added the word assembly so as not to count all the poles of the terminal block for volume allowance towards box fill concerns.

315.1 Dimensions of Boxes

- Type of change: Revision
- The change: CMP-9 adjusted the existing language at Section 314.24 by broadening the reach of this section to address side entries for outlet and device boxes.

315.1 Scope

- Type of change: New
- The change: CMP-6 made clarifications as to the voltages covered by Article 315, which is entitled Medium Voltage Conductors, Cable, Cable Joints, and Cable Terminations. Article 311 has been deleted with those requirements relocated to Article 315. New requirements for cable joints and terminations were also added to this article.

32O.23(A} Cables Run Across the Top of Framing Members. (In Accessible Attics}

- Type of change: Revision
- The change: CMP-6 received substantiation to use the term "Framing Members" instead of the word "Joists" in Section 320.23(A) when considering the installations of armored cable: Type AC.

322.56(8) Taps

- Type of change: Revision
- The change: CMP-6 made changes to flat cable assembly requirements by removing the term "color-coded" and replacing it with "marked" in Section 322.56(B).

330.112{A) 1000 Volts or Less. {MC Cable)

- Type of change: Revision
- The change: CMP-6 made a few editorial changes in Section 330.l 12(A) to correlate with the addition of 16 AWG copper conductors for general use wiring methods used with metal-dad cable (Type MC).

Article 337 Industrial Mobile Cable: Type IM

- Type of change: Revision
- The change: CMP-6 changed all references to the former Type P cable to Type IM in Article 337.

342.20(B) Maximum

- Type of change: Revision
- The change: In Section 342.20(B), CMP-8 made a change for intermediate metal conduit (IMC) by specifying that a 6-inch trade size is the largest that can be installed.

344.28 Reaming and Threading (Rigid Metal Conduit)

- Type of change: Revision
- The change: CMP-8 clarified adherence to the manufacturer's requirements for reaming and threading of PVC-coated rigid metal conduit (RMC) in Section 344.28.

352.44(B) Expansion Fittings (Earth Movement)

- Type of change: New
- The change: CMP-8 added requirements for an expansion fitting to be installed for underground runs of direct buried PVC conduit that emerge from the ground.

353.48 Joints

- Type of change: Revision
- The change: Section 353.48 was revised by CMP 8 to specify that the joining methods of High Density Polyethylene Conduit (HDPE) are to be made by a method identified by the manufacturer. Heat fusion or butt fusion joints are not to be permitted.

358.20(B) Maximum

- Type of change: Revision
- The change: CMP-8 increased the maximum size of electrical metallic conduit (EMT) to metric designator 155 (trade size 6) in Section 358.20(B).

Article 369 Insulated Bus Pipe (IBP)/Tubular Covered Conductors (TCC), Systems

- Type of change: New
- The change: CMP-8 has created a new Article 369 to cover the use, installation, and construction specifications for insulated bus pipe (IBP) systems.

Article 371 Flexible Bus Systems

- Type of change: New
- The change: CMP-8 received substantiation for the creation of a new article covering the use and installation requirements of flexible bus systems and their associated fittings. This resulted in the creation of new Article 371, Flexible Bus Systems.

398.15(C) Exposed to Physical Damage

- Type of change: Deletion
- The change: CMP-6 has removed high-density polyethylene conduit (HDPE) as a permitted means to provide physical protection for open wiring on insulators in Section 398.15(C).

Chapter 9 Table 13 Equipment Suitable for Hazardous (Classified) Locations

- **Type of change:** New
- **The change:** CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous *(Classified)* Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9 (C)(2)(4) with new text added to reference Chapter 9 Table 13.

404.1 Scope

- Type of change: New
- The change: CMP-9 added a new informational note to Section 404.1 addressing wall-mount- ed control devices.

404.14(0) Snap Switch Terminations

- Type of change: New
- The change: CMP-9 received substantiation regarding 14 AWG solid coppers conductors used with snap switches. As a result, a new 404.14(D), Snap Switches with Push-In Terminals, was inserted in between the pre-existing subdivisions.

404.16 Reconditioned Equipment

- Type of change: New
- The change: New Section 404.16 was added by CMP-9 to address reconditioned equipment. This change addresses control devices that can and can not be reconditioned after being damaged.

404.30 Switch Enclosures with Doors

- Type of change: New
- The change: CMP-9 changed the text to clarify the requirement for doors with switch mechanisms.

406.2 Reconditioned Equipment

- Type of change: Relocation
- The change: CMP-18 relocated limitations for reconditioned equipment from 406.3(A) and 406.7 into new Section 406.2.

406.3(0} Receptacle Terminations

- Type of change: New
- The change: The new text added by CMP-18 in 406.3(D) is intended to emphasize the limitations for receptacles installed on 15-ampere branch circuits. Only 14 AWG copper conductors used with "push-in" type terminals for receptacles are permitted. The old text at 406.3(D) has been moved to subdivision (E).

406.4(0)(3) Ground-Fault Circuit-Interrupter Protection

- Type of change: Revision
- The change: Substantiation was provided to CMP-18 that will require ground-fault circuit interrupter (GFCI) receptacles to be listed per 406.4(0)(3).

406.4(0)(8) Ground-Fault Protection of Equipment (GFPE)

- Type of change: New
- The change: Substantiation has been provided to CMP-18 to require ground-fault protection of equipment (GFPE) to be provided for replacement receptacles that require GFPE protec- tion by current Code requirements elsewhere in the NEC

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

- Type of change: Revision
- The change: The change by CMP-18 adds language to 406.6(D), limiting the faceplate's load to one watt or less and specifically requires the screws on the receptacles to be made only of brass or copper alloy.

406.9(C) Bathtub and Shower Space

- Type of change: Revision
- The change: CMP-18 clarified receptacle restrictions in and around bathtubs and showers in Section 406.9(C). A new Exception #4 was added to allow single receptacles within 36" of the

tub or shower with limitations.

406.12 Tamper-Resistant Receptacles

- Type of change: Revision
- The change: CMP-18 made some editorial changes to allow for an easier understanding of where tamper-resistant receptacles are required. Additional areas and occupancies were also added where tamper-resistant receptacles will now be required.

408.4 Descriptions Required

- Type of change: Revision
- The change: CMP-9 has placed requirements for circuit directories and descriptions in Section 408.4 into a list format for clarity

408.9 Replacement Panelboards

- Type of change: Revision
- The change: CMP-9 clarified the replacement requirements for panelboards in Section 408.9. There are now two list items for the replacement of existing panelboards in an enclosure or cabinet.

408.38 Enclosure

- Type of change: Revision
- The change: CMP-9 clarified by revised text where a panelboard installed in a cabinet, cutout box, or identified enclosure has an available fault current greater than 10,000 amperes, the panelboard and enclosure combination shall be evaluated for the application.

408.43 Panelboard Orientation

- Type of change: Revision
- The change: CMP-9 received substantiation to add that panelboards cannot be installed in the face-down position, therefore resulting in changes in Section 408.43.

409.60 Bonding

- Type of change: Reorganization
- The change: Section 409.60 for industrial control panels was restructured by CMP-11, creat- ing (A) Grounding and (B) Bonding.

409.70 Surge Protection

- Type of change: New
- The change: New Section 409.70 has been added by CMP-11 requiring surge protection for industrial control panels.

410.2 Reconditioned Equipment

- Type of change: Revision
- The change: CMP-18 has determined that ballasts, LED drivers, and lamps should be added into updated Section 410.2 for items not allowed to be reconditioned.

410.lO(F) Luminaires Installed in or Under Roof Decking

- Type of change: Revision
- The change: CMP-18 received substantiation to require a minimum of 38 mm (1 ½ in.) to luminaires under any roof system where physical damage can occur to the luminaire, not only metal corrugated style roof systems in Section 410. lO(F). An exception was also added for concrete of 50 mm (2 in.) covering metal-corrugated sheet roof decking that the 38 mm (1 ½ in.) spacing is not required.

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

- Type of change: Relocation
- The change: CMP-18 has relocated the requirement for disconnects for luminaires to 410.71 because LED drivers were added to this section.

Article 410, Part XVII Special Provisions for Germicidal Irradiation Luminaires

- Type of change: New
- The change: A new Part XVII was added to Article 410 by CMP-18 to address the increasing use of germicidal luminaires for disinfecting purposes. These products are increasingly being used due to the COVID 19 pandemic and other concerns.

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

- Type of change: Revision
- The change: CMP-18 revised Section 410.184 to clarify when GFCI protection is required for horticultural lighting, with an exception added to require the use of a special purpose ground- fault circuit interrupter (SPGFCI) on circuits exceeding 150 voles to ground.

Article 422 Appliances

- Type of change: Deletion
- The change: Sections 422.3, 422.4, 422.15, 422.23, 422.46. 422.50 for appliances were de- leted by CMP-17 from the 2023 edition of the NEC.

422.16(B)(2) Built-in Dishwashers and Trash Compactors

- Type of change: Revision
- The change: CMP-17 added provisions at Section 422.16(B)(2) for supply cords to trash compactors and dishwashers to pass through an item such as a wood cabinet to be provided with protections that incorporate smoothed edges.

422.18 Ceiling-Suspended (Paddle} Fans

- Type of change: Revision
- The change: Text covering ceiling-suspended (paddle) fans have been subdivided by CMP-17 and includes a new first-level subdivision (B) that prohibits metal parts of ceiling fans from areas over tub and shower spaces. That prohibited "zone" correlates with the prohibited zone described in 410.10(0) for luminaires.

424.10 General

- Type of change: Deletion
- The change: Section 424.10, Special Permission, was deleted by CMP-17, and 424.9, General, was relocated to 424.10 at the beginning of Article 424 Part II.

424.48 Installation of Cables in Walls

- Type of change: New
- The change: The new section at 424.28 was created by CMP-17 and will allow heating cables to be installed in walls with specific protection and limitations. The provision includes a Jan- uary 1, 2026, effective date.

424.93{C} Installation of Heating Panels in Walls

- Type of change: New
- The change: This new first-level subdivision created by CMP-17 will allow heating panels and heating panel sets to be installed in walls with specific protection and limitations. The provision includes a January 1, 2026, effective date.

425.10 General

- Type of change: Deletion
- The change: Section 425.10 was deleted by CMP-17 for special permission requirements and 425.8 General was relocated to 425.10 as the beginning of Article 425 Part II.

426.14 Special Permission

- Type of change: Deletion
- The change: Section 426.14 pertaining to special permission for fixed outdoor electric deicing and snow-melting equipment was deleted by CMP-17

426.28 Ground-Fault Protection

- Type of change: Revision
- The change: CMP-17 recognizes that manufacturers of fixed outdoor electric deicing and snow-melting equipment have an option to require ground-fault protection with reduced current and time threshold values providing a higher degree of protection than previously required. Therefore, Section 426.28 was revised, allowing the manufacturer to specify the ground fault trip level.

427.35 Scope

- Type of change: Deletion
- The change: Section 427.35, which covered the installation ofline frequency induction heat- ing equipment and accessories for pipelines and vessels, was deleted by CMP-17.

430.1 Scope

- Type of change: Revision
- The change: The previous figure at Section 430.1 has been deleted, and an expanded figure has been added by CMP-11 to include all relevant parts of the motor circuit and what parts of Article 430 apply.

430.2 Reconditioned Motors

- Type of change: New
- The change: CMP-11 added new guidance for reconditioning of motors in Section 430.2, including a new informational note that references ANSI/EASA ARl00-2020, Recommended Practice for the Repair of Rotating Electrical Apparatus

440.8 Single Machine and Location

- Type of change: Revision
- The change: New language has been added by CMP-11 to Section 440.8, indicating that mini-split units are not to be installed in a tub or shower zone.

440.11 General

- Type of change: Revision
- The change: CMP-11 added additional language at Section 440.11 that requires disconnects with covers that expose live parts to be locked for protection.

440.14 Location

- Type of change: Revision
- The change: CMP-11 added a reference to 110.26(A) in Section 440.14, which now makes it clear that working space clearances are required for air-conditioning and refrigerating equipment.

445.lS(A} & 445.19 Disconnecting Means & Emergency Shutdown of Prime Mover

- Type of change: Revision
- The change: CMP-13 has added new language to (A), permitting the disconnecting means to be located within the generator behind a hinged cover, door, or enclosure panel. When the generator disconnecting means is located in the generator, a field-applied label has to be provided indicat- ing the location of the disconnecting means.

450.2 Interconnection of Transformers

- Type of change: New
- The change: CMP-9 added new guidance for transformer interconnection and operation re-quirements within Article 450.

470.2 Reconditioned Equipment

- Type of change: New
- The change: CMP-11 made new Section 470.2 the placeholder for reconditioned equipment, indicating that reconditioning of a resistor is not permitted and that reactors shall follow manufacturers' guidelines.

Article 495 Equipment Over 1000 Volts AC, 1500 Volts DC, Nominal

- Type of change: New I Relocation
- The change: All the requirements previously found in Article 490, Equipment Over 1000 Volts, Nominal, have been moved to Article 495 by CMP-9.

Chapter 9 Table 13 Equipment Suitable for Hazardous (Classified) Locations

- Type of change: New
- The change: CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous (Classified) Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9 (C)(2)(4) with new text added to reference Chapter 9 Table 13.500.4 Documentation

- Type of change: Revision
- The change: CMP-14 added additional language in Section 500.4 to assist the authority having jurisdiction (AHJ) for requirements on documentation for hazardous (classified) locations.

500.S{D){l){a) Combustible Fibers/Flyings

- Type of change: Revision
- The change: The previous Code language at 500.5(D)(l)(a) has been completely reworded by CMP-14 to align with the new definition for combustible fibers/flyings and the edits for combustible dust.

500.8(0}(2} and (3) Equipment, Temperature, Class II and Class Ill

- Type of change: Revision
- The change: The previous language for 500.8(D)(2) and (3) that involve Class II and Class III temperature has been edited and revised by CMP-14 to align with the new definition for combustible fibers/flyings.

505.9(C} Chapter 9 Table 13 Equipment Suitable for Hazardous (Classi- fied} Locations

- Type of change: New
- The change: CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous (Classified) Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9(C)(2)(4) with new text added to reference Chapter 9 Table 13.

Article 512 Cannabis Oil Equipment and Cannabis Oil Systems Using Flam- mable Materials

- Type of change: New
- The change: CMP-14 created new Article 512, which covers cannabis oil extraction equip- ment, booths, postprocessing equipment, and systems using flammable materials in commer- cial and industrial facilities.

515.10 Special Equipment - Motor Fuel Dispensers

- Type of change: Revision
- The change: CMP-14 changed the title of Section 515.10 from "Gasoline Dispensers" to "Motor Fuel Dispensers."

Article 517 Health Care Facilities

- Type of change: Revision
- The change: With the edition of the 2023 NEC, CMP-15 has completed the phased approach of changing the references found in Article 517 for health care facilities from critical, general, basic, and support spaces to Category 1, 2, 3, and 4 Spaces

517.6 Patient Care-Related Electrical Equipment

- Type of change: New
- The change: CMP-15 determined that the reconditioning requirements found elsewhere in the Code do not apply to patient care-related electrical equipment.

517.13 Equipment Grounding Conductor for Receptacles and Fixed Electri- cal Equipment in Patient Care Spaces

- Type of change: Relocation / Revision
- The change: Section 517.13 was revised by CMP-15 for clarity by relocating former Exception No. 2 to follow the opening paragraph and by stating wiring "serving" patient care spaces.

517.22 Demand Factors

- Type of change: New
- The change: The members of CMP-15 have determined that the use of demand factors is acceptable and permitted for general-purpose receptacle loads in Category 1, 2, 3, and 4 patient care spaces.

517.30 Sources of Power

- Type of change: Revision
- The change: Revisions were made by CMP-15 for consistent use of terminology, to clarify the types of sources of power, and to recognize energy storage systems and health care microgrids in Section 517.30.

517 Part V Diagnostic Imaging and Treatment Equipment

- Type of change: Revision
- The change: The title and applicable text in Article 517 have been changed by CMP-15 from "X-Ray Installations" to "Diagnostic Imagining and Treatment Equipment."

518.2 General Classification. {A) Examples.

- Type of change: Revision
- The change: Casinos and gaming facilities are now included in the list of assembly occupancy examples.

518.4 Wiring Methods

- Type of change: Revision
- The change: Section 5 l 8.4(A) and the Exception were revised into a list format, and two titled subdivisions and content were added to clarify that Power over Ethernet (PoE) is included.

518.5 Supply

- Type of change: Revision
- The change: The section concerning assembly occupancies was reorganized for clarity and revised by CMP-15, including requirements for commercial appliance outlet centers and pan-elboard orientation.

Article 530 Motion Picture and Television Studios and Remote Locations

- Type of change: Revision / Reorganization
- The change: Article 530 was completely reorganized by CMP-15 for clarity and rewritten to remove old technologies and to include dominant and emerging new technologies.

547.26 Physical Protection (Agricultural Buildings)

- Type of change: New
- The change: The members of CMP-7 determined that nonmetallic cables will be prohibited from being concealed within walls and above ceilings of buildings that are contiguous with or physically adjoin livestock confinement areas. As a result, a new Section 547.26, Physical Protection, was added to the 2023 NEC.

547.44 Equipotential Planes and Bonding of Equipotential Planes

- Type of change: New
- The change: CMP-7 clarified the indoor and outdoor locations requiring equipotential planes and specified the bonding locations of equipotential planes in new Section 547.44(A) and (B).

550.32 Service Equipment

- Type of change: Revision
- The change: The electrical service disconnect can now be located within sight from the mobile home as opposed to 30 feet.

551.3 Electrical Datum Plane Distances

- Type of change: New
- The change: Substantiation was submitted to CMP-7 for the need to address recreational vehicle sites located next to natural bodies of water. As a result, a new Section 551.3, Electrical Datum Plane Distances, was added.

551.40(0} Loss of Ground Device

- Type of change: Revision
- The change: Section 551.40(D) was changed to eliminate the need for a Reverse Polarity Device in a recreational vehicle. Substantiation was submitted to CMP-7 for the addition of language for a loss of a ground device.

555.4 Location of Service Equipment

- Type of change: Revision
- The change: CMP-7 modified Section 555.4 to state that service for a marina or docking facility must be no closer than 1.5 m (5 ft) horizontally from the structure served and elevated to a distance of 12" above the electrical datum plane.

555.6 Load Calculations for Service and Feeder Conductors

- Type of change: Relocation
- The change: CMP-7 relocated text from Section 555.6 to 220.120 to better align with the "calculations" for services and feeders being located in Chapter 2.

555.14 Equipotential Planes and Bonding of Equipotential Planes

- Type of change: New
- The change: Substantiations were submitted to CMP-7 that enhanced safety could result from requiring an equipotential plane to equalize or eliminate step and touch voltages for electrical equipment located at or on docks. As a result, a new 555.14, Equipotential Planes and Bonding of Equipotential Planes, was added to Article 555.

555.15 Replacement of Equipment at Marinas, Boatyards, Floating Build- ings, and Commercial and Noncommercial Docking Facilities

- Type of change: New
- The change: Language has been added to a new Section 555.15 that mandates that "replacement" electrical equipment at docking facilities be installed to the current edition of the NEC. In addition, the new language will also allow the AHJ to inspect the existing electrical equipment for any damage. The damage found for existing equipment needs only to be repaired to the NEC edition for which it was originally installed.

555.35{E) Leakage Current Measurement Device

- Type of change: New
- The change: Language was added by CMP-7 to 555.35(E) to recognize that the leakage cur- rent device is required to be listed by January 1, 2026

555.36(C} Emergency Electrical Disconnect

- Type of change: New
- The change: Language has been added at a new subdivision 555.36(C) to mandate that an emergency disconnect be located within sight of a marina power outlet or enclosure that pro- vides shore power to boats.

555.38 Luminaires

- Type of change: New
- The change: In the 2020 NEC, Article 555 does not address luminaires. Section 555.38, Luminaires, was added to the 2023 NEC as a result. This section should help both installers and AHJs address electrically safe installations of luminaires at docking facilities to help reduce the incidents of electric shock drowning.

590.4(F) Lamp Protection

- Type of change: Revision
- The change: CMP-3 has eliminated some existing text concerning various socket styles at Section 590.4(F), and the words "metal guarded sockets" and "metal guard" were added

CHAPTER 6 EOUIPMENT FDR GENERAL USE

Articles 600-690

- Type of change: New
- The change: CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous (Classified) Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9 (C)(2)(4) with new text added to reference Chapter 9 Table 13.

600.S{A} Exception

- Type of change: New
- The change: CMP-18 added two exceptions for Section 600.5(A). Exception No. 1 was add- ed, moving text that was originally in the last sentence of the main body of requirement. Exception No. 2 allows time clocks and similar devices to be on the sign circuit.

600.35 Retrofit Kits

- Type of change: Deletion
- The change: Section 600.35 had redundant requirements removed by CMP-18, which are already covered in Chapters 1-4 of NEC.

62O.12(A) Traveling Cables

- Type of change: New
- The change: CMP-12 added Class 2 communication conductor(s) for use with elevator trav- eling cables.

62O.22(A} Car Light Receptacles, Auxiliary Lighting, and Ventilation

- Type of change: Revision
- The change: CMP-12 revised requirements in Section 620.22(A) to specify permissible loads on the car light circuit.

620.36 Different Systems in One Raceway or Traveling Cable

- Type of change: Revision
- The change: CMP-12 received substantiation specifies which cable types may be installed in elevator raceway or traveling cable. Shielded pair cables, coaxial cables, and communication cables complying with 800.179 are now specifically permitted in Section 620.36.

620.Sl(A) Type. Ex. No. 2 Stairway Chair Lift

- Type of change: Revision
- The change: CMP-12 revised existing exception 2 clarifying situations where the cord-and- plug connection of a stairway chair lift is allowed. This includes new language concerning installations where a stairway chairlift is supplied by batteries as the primary source.

625.6 Listed

- Type of change: Revision
- The change: CMP-12 clarified which electric vehicle equipment involved in electric vehicle power transfer systems should be listed in Section 625.6.

625.44(A) Portable Equipment

- Type of change: Revision
- The change: CMP-12 received substantiation that led to the addition of 60-ampere receptacles to the list of permitted receptacle amperages for portable electric vehicle supply equipment (EVSE) in Section 625.44(A).

625.49 Island Mode

- Type of change: New
- The change: CMP-12 created a new Section 625.49 stating that electric vehicle power export equipment (EVPE) and bidirectional electric vehicle supply equipment (EVSE) are permitted to be a part of interconnected power systems operating in an island mode condition.

630.8 Ground-Fault Circuit-Interrupter Protection for Personnel (Electric Welders)

- Type of change: New
- The change: CMP-12 created a new Section 630.8 requiring ground-fault circuit-interrupter (GFCI) protection for personnel involved with electric welder applications.

646.19 Entrance to and Egress from Working Space

- Type of change: Revision
- The change: The revision of Section 646.19 by CMP-12 specifies the requirements for egress doors located in modular data centers.

670.1 Scope. (Industrial Machinery)

- Type of change: Revision
- The change: CMP-12 revised Section 670.1 to now include overvoltage protection for supply conductors for industrial machinery.

Article 680 Swimming Pools, Fountains, and Similar Installations

- Type of change: Reorganization
- The change: Article 680 underwent a major reorganization by CMP-17 to improve usability and compliance with the NEC Style Manual.

680.5 Ground-Fault Circuit-Interrupter Protection (GFCI) and Special Pur- pose Ground-Fault Circuit-Interrupter (SPGFCI) Protection

- Type of change: Revision
- The change: Text at Section 680.5 has been revised by CMP-17 and subdivided to address ground-fault circuit-interrupter (GFCI) protection. It introduces special purpose ground-fault circuit-interrupter (SPGFCI) protection, a new GFCI protection requirement for circuits above 150 volts to ground, but not more than 480 volts phase-to-phase, single- or three-phase. The protection for higher voltage circuits shall not exceed 20-mA ground-fault trip current.

680.9{A) Power

■ Type of change: Revision
■ The change: In Section 680.9(A), CMP-17 clarifies that open overhead wiring in raceways is not subject to the clearance requirements in Table 680.9(A) and Figure 680.9(A).

680.10 Electric Pool Water Heaters Incorporating Resistive Heating Ele- ments and Electrically Powered Swimming Pool Heat Pumps and Chillers
■ Type of change: Revision
■ The change: The text has been revised by CMP-17 in Section 680 .10 and subdivided to include provisions for pool water temperature conditioning equipment that incorporates tech- nology other than resistance heating.

680.21{D) Pool Pump Motor Replacement

■ Type of change: Revision
■ The change: The revisions at 680.2l(D) by CMP-17 expand the requirement to provide ground-fault circuit-interrupter (GFCI) protection for replaced pool pump motors and also include those that are repaired, but not replaced.

680.12 Equipment Rooms, Vaults, and Pits

■ Type of change: Revision
■ The change: Text at Section 680.12 has been revised by CMP-17 and subdivided to require equipment rooms, vaults, or pits with equipment to have drainage or be suitable for sub- mersion in first-level subdivision A. New first-level subdivision B requires a 125-volt, 15-or 20-ampere receptacle and requires any receptacle in the space rated 150 volts or less to be ground-fault circuit-interrupter (GFCI) protected.

680.23(B}(2}(a} Forming Shell. (Metal Conduit}

■ Type of change: Revision
■ The change: Substantiation was received by CMP-17 that rigid metal conduit extending di- rectly to wet niche luminaires in forming shells of pools must be as listed red brass or listed stainless steel.

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

■ Type of change: Revision
■ The change: CMP-17 received substantiation to revise the tide and text of Section 680.32 to indicate that both ground-fault circuit interrupter (GFCI) and special-purpose ground-fault circuit interrupter (SPGFCI) requirements are covered in this section and add a reference back

to 680.S(B) and (C).

680.41(A} Emergency Switch for Spas and Hot Tubs

- Type of change: Revision
- The change: CMP-17 clarified the emergency switch requirement at one-family dwellings for hot tub and spa installations in Section 680.4l(A).

680.44 Ground-Fault Circuit-Interrupter (GFCI} and Special Purpose Ground-Fault Circuit-Interrupter (SPGFCI} Protection

- Type of change: Revision
- The change: CMP-17 revised Section 680.44 to indicate that both GFCI and SPGFCI requirements are addressed for spa and hot tub installations.

680.54{C} Equipotential Bonding of Splash Pads

- Type of change: New
- The change: CMP-17 drafted a new 680.54(C) to address bonding requirements for splash pads.

Article 690 Solar Photovoltaic (PV) Systems

- Type of change: Deletion
- The change: The use of the term "PY output circuit" has been removed by CMP-4 throughout Article 690. All circuits and conductors will be considered a PY source, whether individual or combined. The definition of PY circuits also changed to properly align with these changes.

690.1 Figure Informational Note Figure 690.l(a), (b), (c)

- Type of change: New
- The change: CMP-4 added new simplified illustrations to Section 690.1 identifying typical PY system de components and conductors using new or revised definitions.

690.4(G} PV Equipment Floating on Bodies of Water

- Type of change: New
- The change: A new subdivision (G) was added to 690.4. This change by CMP-4 recognizes the installation of floating PV arrays over a body of water and the additional product identification requirements.

690.9(0) Transformers

- Type of change: Revision
- The change: CMP-4 revised language in Section 690.9(D), providing a pointer to 705.30(F), where specific requirements applicable to interconnected systems are addressed.

690.12 Exception No. 2 & Informational Note

- Type of change: Revision
- The change: CMP-4 revised the language to eliminate rapid shutdown requirements for structures where firefighters will not need to access the roof.

69O.12(B)(2) Inside the Array Boundary

- Type of change: Revision
- The change: Two options were revised by CMP-4 in Section 690.12(B)(2) for rapid shutdown compliance within the array boundary. The previous option (3) was eliminated.

690.15 Disconnecting Means for Isolating Photovoltaic Equipment

- Type of change: Revision
- The change: CMP-4 rearranged 690.15 with some grammatical changes. A requirement for an equipment disconnecting means to be within 10 feet of the equipment to now be within sight was also modified.

690.31{B} Identification and Grouping. (1) Conductors of Different Sys- tems. Exception List Item (2)

- Type of change: Revision
- The change: Section 690.31(B) was revised and a new list item (1), Conductors of Different Systems, was added while the previous text in that location was moved to list item (2), Identification. The text revisions by CMP-4 provide conditions where PV de circuits and inverter output circuits can now be installed in the same junction box, pull box or wireway provided they are identified, grouped, and separated in accordance with 690.31 (B)(2) and (B)(3).

690.31{B}{1} Conductors of Different Systems. - Exception

- Type of change: Revision
- The change: Exception revised by CMP-4 to permit the de and ac conductors of a PY system to be located within the same enclosure where all the conductors are insulated for the highest voltage present and grouped appropriately.

CHAPTER 7 SPECIAL CONDITIONS

Articles 700-760700.2, 701.2, 702.2, and 708.2 Reconditioned Equipment

- Type of change: Relocation
- The change: CMP-13 clarified that the reconditioning of transfer switches is not permitted for emergency systems, legally required standby systems, optional standby systems, and critical operations power systems (COPS).

700.3(F) List items (4), (6), and (7).

- Type of change: New / Revision
- The change: CMP-13 revised subdivision (F) to include revised list item (4) requiring listing, added a new (6) for the permanent connection point and routing requirements for cables, and a new (7) requiring a label to be field applied at the permanent connection point.

700.S(D} Redundant Transfer Equipment

- Type of change: Revision
- The change: Substantiation was provided to CMP-13 pertaining to emergency loads supplied by a single feeder. This must include redundant transfer equipment or a bypass isolation trans- fer switch allowing for repair and maintenance as required in 700.3(C). The structure of 700.5 concerning transfer equipment now mirrors the subdivisions for transfer equipment found in Article 708.24. New subdivision (D) describes the functionality needed when a single feeder supplies emergency loads.

700.ll{C} Wiring, Class 2 Powered Emergency Lighting Systems

- Type of change: New
- The change: CMP-13 added new requirements for the separation of Class 2 circuits designat- ed as emergency or nonemergency circuits in Section 700.1l(C).

7OO.12(C) Supply Duration

- Type of change: New
- The change: CMP-13 added an informational note to reference classification information for emergency power supply systems (EPSS) used with emergency systems.

700.12(E} & 701.12(E} Stored-Energy Power Supply Systems (SEPSS}

- Type of change: Revision
- The change: The title of Sections 700.12(E) and 701.12(E) have been changed by CMP-13 from "Uninterruptible Power Supplies" to "Stored-Energy Power Supply Systems (SEPSS)."

7OO.12(G} Microgrid Systems

- Type of change: Revision
- The change: The existing 700.12(G) was moved into 700.12(£) and replaced with a new 700.12(G) titled Microgrid Systems. CMP-13 replaced existing Section 700.12(G), recognizing there are different types of microgrids, in addition to any that might be categorized as de only.

701.4{C) Load Management

- Type of change: Revision
- The change: CMP-13 made modifications to the tide of Section 701.4(C), which now simply addresses load management requirements

701.4{0) Parallel Operation

- Type of change: New
- The change: CMP-13 added language that now identifies the two different types of parallel operation, normal and alternate sources, of legally required systems in new Section 701.4(D).

701.10 Wiring Legally Required Standby Systems

- Type of change: New
- The change: CMP-13 added a new first-level subdivision (B) and new figure informational notes concerning wiring requirements for legally required standby systems to Section 701.10

701.12{C) Supply Duration

- Type of change: New
- The change: CMP-13 added an informational note at Section 701.12(C) to reference classi-fication information for emergency power supply systems (EPSS) used with legally required standby systems.

705.11 Source Connections to a Service

- Type of change: Revision
- The change: Section 705.11 has been completely revised by CMP-4 and applies to systems interconnected with a new or existing utility service

705.13 Energy Management Systems (EMS}

- Type of change: Relocation
- The change: Most of the requirements that were located in Section 705.13 have been deleted byCMP-4.

705.20 Source Disconnecting Means

- Type of change: Deletion
- The change: The requirement for enclosure covers in Section 705.20 requiring a tool to open or be locked has been deleted by CMP-4.

705.30(F) Transformers

- Type of change: New
- The change: New language has been added by CMP-4 at Section 705.30(F) to address trans- former requirements for interconnected systems. The revised language now correlates with the transformer installation rules of Articles 240, 450, and the transformer product safery standard.

705.50 System Operation

- Type of change: Revision
- The change: The language describing the operational modes of a Microgrid in Section 705.50 was rewritten by CMP-4 to clearly state that a microgrid can operate in parallel with other systems or in island mode.

706.7 Commissioning and Maintenance (Energy Storage Systems}

- Type of change: New
- The change: CMP-13 revised the existing text, adding commissioning requirements for energy storage systems in a new subdivision (A). The existing requirements for maintenance of these systems were moved into the new (B).

Article 722 Cables for Power-Limited Circuits, Fault-Managed Power (Class 4) Circuits

- Typeofchange:New
- The change: A new Article 722 was created by CMP-3 for the general requirements for cables used with power-limited circuits and fault-managed power (Class 4) circuits installations.

725.144 Bundling of Cables Transmitting Power and Data

- Type of change: Revision
- The change: CMP-3 removed the words "4-Pair" from the title of Section 725.144 and added it to the title subdivision (A), where it was applicable to the types of cables discussed

Article 726 Class 4 (CL4} Power Systems

- Type of change: New
- The change: A new Article 726 was created by CMP-3 for fault-managed power (FMP) sys- tems in occupancies other than dwelling units.

Article 760 Fire Alarm Systems

- Type of change: Revision / Relocation
- The change: Several sections throughout Article 760 were reworded, revised, relocated, or deleted by CMP-3. Hazardous (Classified) Location requirements were reworded and relocated to 760.12 to be consistent with Article 722. Some requirements applying to cables have been relocated to Article 722.

CHAPTER 8 COMMUNICATION SYSTEMS

Articles 800-840

800.179 Wires and Cables

- Type of change: Relocation
- The change: CMP-16 moved hybrid power and communications cable general requirements to Article 800 with the other communication cable types.

805.170 Protectors

- Type of change: Relocation
- The change: CMP-16 moved communication equipment listing requirements to Article 800 leaving two subdivisions (A) and (B) for primary and secondary protectors.

840.160 Powering Circuits

- Type of change: Revision
- The change: CMP-16 changed the reference from Section 725.154(A) to Section 722.135(£) as cable substitution, and installation requirements are now in Article 722.

CHAPTER 9 TABLES

Chapter 9 Table 13 Equipment Suitable for Hazardous (Classified) Locations

- Type of change: New
- The change: CMP-14 has created a new Table 13 in Chapter 9 entitled Equipment Suitable for Hazardous (Classified) Locations. The text was deleted at 505.9(C)(2)(4) referencing Table 505.9 (C)(2)(4) with new text added to reference Chapter 9 Table 13.

527 CMR 12.00: MASSACHUSETTS ELECTRICAL CODE (AMENDMENTS)

The Massachusetts Electrical Code (527 CMR 12.00) of the Board of Fire Prevention Regulations (BFPR) shall be the 2023 National Electrical Code (NEC), as published by the National Fire Protection Association (NFPA) as NFPA 70 in the form released by vote of the NFPA Standards Council on August 12, 2022, including all modifications made by the BFPR and duly promulgated from time to time in the Code of Massachusetts Regulations. Amendments made by NFPA subsequent to this date have no force or effect until and unless reviewed and promulgated by the BFPR.

Informational Note: The NFPA releases Tentative Interim Amendments (TIAs) from time to time to its standards, including the NEC. True to their title, these changes are tentative, they are of an interim nature, and they amend (in this case) the electrical code. They have not been processed through the NFPA normal standards making process. As of this NEC cycle, these amendments, subsequent to their release, will appear in all renditions of the NEC, both print and electronic, in a form that makes them visually indistinguishable from unamended text.

The NEC version adopted in Massachusetts will be that found in the first printing in book form, and that rendition will include TIAs adopted by the Standards Council at its August 10th-12th meeting, but no others. Users of this code are advised to consult the front matter on the first page of the NEC for a list of TIAs issued by NFPA, organized by location and specified dates of issuance. In addition, the inside front cover now includes a clear designation of the printing and the TIAs (by number only) that are included. Specific information for each will be found on the NFPA website. The NEC version in effect in Massachusetts will usually vary, increasingly over time, from the version amended by NFPA depending on the timing of BFPR actions subsequent to initial promulgation.

NFPA also issues advisories of errata. These reflect errors in printing, and bring the published version of their standards, including the NEC, into agreement with the actual results of the standards development process. Because the legally enforceable standard is the form as developed through that process, errata are considered to be effective as of the original issuance of the standard, and therefore are considered effective in Massachusetts as of the date of the original promulgation of this code.

Insert the following provisions ahead of the body of the Code:

Rule 1. All installations, repairs, maintenance, and removal of electrical wiring and electrical fixtures used for light, heat, power, signaling and communications purposes in buildings and structures subject to the provisions of M.G.L. c. 143 shall be reasonably safe to persons and property.

Rule 2. Conformity of installations, repairs, maintenance, and removal of electrical wiring and electrical fixtures used for light, heat, power, signaling and communications with applicable regulations set forth

in the Code, which is hereby filed with the Secretary of the Commonwealth shall be considered as complying with these requirements.

Rule 3. Additions or modifications to an existing installation shall be made in accordance with this Code without bringing the remaining part of the installation into compliance with the requirements of this Code. The installation shall not create a violation of this Code, nor shall it increase the magnitude of an existing violation.

Rule 4. Where an actual hazard exists, the owner of the property shall be notified in writing by the authority enforcing this Code. The notification shall contain specifications of the actual hazard that exists, together with a reference to the rule of this Code that is now in violation. (See M.G.L. c. 166, §§ 32 and 33, for enforcement authority.)

Rule 5. References are made in this code to other standards. Those standards, where duly adopted by law or regulation, may be enforced by the appropriate official. They are not considered part of this Code and they are not enforceable under M.G.L. c. 143 § 3L. For Massachusetts Building Code references, see Appendix A.

Rule 6. The approving authority may be guided in his approval of specific items of equipment and materials contemplated by the Code, by proof that such equipment and materials have been tested and conform to suitable recognized industry standards.

Rule 7. 527 CMR 12.00 shall be effective on all installations for which a permit has been granted subsequent to December 31, 2022.

Rule 8. In accordance with the provisions of M.G.L. c. 143 § 3L, the permit application form to provide written notice of installation of wiring shall be uniform throughout the Commonwealth, and applications shall be filed on the prescribed form. Electronic transmittals of this form shall be permitted when done in accordance with the Uniform Electronic Transactions Act (M.G.L. c. 110G). After a permit application has been accepted by an Inspector of Wires appointed pursuant to M.G.L c. 166 §32, an electrical permit shall be issued to the person, firm or corporation stated on the permit application. Such entity shall be responsible for the notification of completion of the work as required in MGL 143 §3L.

Permits shall be limited as to the time of ongoing construction activity, and may be deemed by the Inspector of Wires abandoned and invalid if he or she has determined that the authorized work has not commenced or has not progressed during the preceding 12-month period. Upon written application, an extension of time for completion of work shall be permitted for reasonable cause. A permit shall be terminated upon the written request of either the owner or the installing entity stated on the permit application.

Rule 9. Installations, repairs, maintenance, or removals covered by 527 CMR 12.00 shall also comply with M.G.L. c. 141.

Rule 10. Electrical installations, repairs, maintenance, or removals shall not be concealed or covered from view until inspected by the inspector of wires within and not more than 24 hours for exterior or interior excavations nor more than 72 hours for exterior or interior installations after proper notice to the inspector, Saturdays, Sundays, and holidays excluded.

90.2(D)(5). Delete (d) and revise (c) to read as follows:

(c) Are located in legally established easements, rights-of-way, or by other agreements either designated by or recognized by the public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations.

Informational Note: Wiring systems that are maintained by utilities and that operate under this exclusion from coverage by the Massachusetts Electrical Code include, regardless of ownership, luminaires for street and area lighting directly connected to such systems.

90.4. Revise the heading text and code content to read as follows; Sections 90.4(C) and 90.4(D) remain unchanged from the NEC:
90.4 Enforcement.
(A) Application. This Code shall be used by the authority enforcing the Code and exercising legal jurisdiction over electrical installations.
(B) Interpretations and Appeals. The authority having jurisdiction of enforcement of the Code shall accept listed and labeled equipment or materials where used or installed in accordance with instructions included with the listing and labeling. The authority shall have the responsibility for deciding upon the approval of unlisted or unlabeled equipment and materials, and for granting the special permission contemplated in a number of the rules.

90.6. Revise to read as follows:

90.6 Interpretations and Appeals. To promote uniformity of interpretation and application of the provisions of this Code, interpretations may be requested from the Board of Fire Prevention Regulations. Requests for interpretation shall be in the form of a question that can receive a “Yes” or “No” answer. This in no way supersedes the right of any individual who is aggrieved by the decision of an Inspector of Wires to appeal from that decision to the Board of Electricians’ Appeals in accordance with M.G.L. c. 143 §3P. The Board of Fire Prevention Regulations shall, upon the request of the Board of Electricians’ Appeals, render interpretations to the Board of Electricians’ Appeals.
It is customary to revise this Code periodically to conform with developments in the art and the result of experience, and the current edition of the Code shall always be used.

90.10. Add new section numbered 90.10 to read:

90.10. References to Commonwealth of Massachusetts Codes, Regulations, and Laws. References are included in Appendix A for Building Codes, Elevator Regulations, Plumbing and Fuel Gas Code, Board of Fire Prevention Regulations, Division of Industrial Safety, State Sanitary Code, Fire Safety Code, Permit Applications, and Chapters of the General Laws. See Appendix A.

Article 100, Coordination, Selective (Selective Coordination). Revise this definition to read as follows:

Localization of an overcurrent condition to restrict outages to the circuit or equipment affected for fault current events that extend beyond 0.1 second, and accomplished by the selection and installation of overcurrent protective devices and their ratings or settings for the range of available overcurrents under such conditions, whether originating from overload, ground-fault, or short circuit, and for the full range of overcurrent protective device opening times applicable to such events.

Article 100. Manufactured Home, Informational Note No. 2. Add the following sentence.

Manufactured Housing that is not designed to be transportable on running gear, and that is not produced under regulations that expressly cover such housing, is covered under Article 545.

Article 100, Occupiable Space. Insert the following definition:

A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes or in which occupants are engaged for labor, and which is equipped with means of egress and light and ventilation facilities.

110.14(A). Delete the last sentence of the first paragraph and insert the following two sentences in its place:

Connection by means of wire binding screws or studs and nuts having upturned lugs or equivalent shall be permitted for 10 AWG or smaller solid conductors, or conductors with Class B stranding. Where Class C stranded conductors are terminated on and not looped through such terminals, the uninsulated strands shall be completely enclosed within the termination, or the strands at the terminals shall be made solid.

110.24. Insert an additional informational note as follows:

Informational Note No. 3. The marking required in this section is useful in determining compliance with 110.9, but must be understood as transitory and requiring reconfirmation prior to the performance of additional electrical work. This and numerous other locations in the NEC require field markings of the available fault current. A major component of this current is usually that contributed by the utility through the service. The utility contribution is inherently dynamic in value, particularly on the medium voltage portions of their distributions. Without notice, automatic line sectionalizing can transfer a service from the tail end of one circuit to the head end of an adjacent circuit, with a significant increase in available fault current. In addition, there are numerous sources of on-site contributions to available fault current.

110.26(A)(1). Add a fourth paragraph (d) as follows:

(d) Adequate Accessibility. By special permission, smaller spaces may be permitted where it is judged that the particular arrangement of the installation will provide adequate accessibility.

210.8. Revise the second paragraph to read as follows:

For the purposes of this section, when determining distance from receptacles the distance shall be measured as the shortest path the supply cord of equipment connected to the receptacle would follow without piercing a floor, wall, ceiling, fixed barrier, or without passing through a cabinet door opening, doorway, or window.

210.8(A)(7). Revise to read as follows:

(7) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink, or where located within a cabinet supporting a sink.

210.8(B)(5). Revise to read as follows:

(5) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink, or where located within a cabinet supporting a sink.

210.8(F). Delete this requirement.

210.12(B. Replace the parent text and list items with the following:

All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling units shall be protected by any of the means described in 210.12(A)(1) through (A)(6).

210.21(B). Insert a new fifth paragraph as follows:

(5) Receptacle Outlets on Individual Branch Circuits. A receptacle outlet installed to comply with a requirement for an individual branch circuit shall contain a single receptacle, or a multiple receptacle if, and then only to the extent that, the supplied equipment includes multiple supply cord connections.

210.25(B). Add an exception as follows:

Exception: Branch circuits supplying lighting outlets in common areas on the same floor as a dwelling unit in a new or existing two-family or an existing three-family building shall be permitted to be supplied from equipment that supplies one or more of those dwelling units.

210.52(A)(2)(1). Revise to read as follows:

Any space 600 mm (2 ft) or more in width (including space measured around corners) and unbroken along the floor line by doorways, fireplaces, stationary appliances, and similar openings.

210.52(A)(4). Delete 210.52(A)(4) in its entirety.

210.52(C). Make the following three revisions:

I Revise the parent language to read as follows:In kitchens, pantries, breakfast rooms, dining rooms, and similar areas of dwelling units, receptacle outlets for countertop and work surfaces that are 300 mm (12 in.) or wider shall be installed in accordance with 210.52(C)(1) through (C)(3). Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception No. 1, or appliances occupying assigned spaces shall not be considered as these required outlets.

”For the purposes of this section, where using multioutlet assemblies, each 300 mm (12 in.) of multioutlet assemblies containing two or more receptacles installed in individual or continuous lengths shall be considered to be one receptacle outlet.”

II. Revise 210.52(C)(2) to read as follows: “At least one receptacle outlet shall be installed to serve each island and peninsular countertop of work surface, and shall be located in accordance with 210.52(C)(3). A receptacle in a wall countertop or work surface that directly faces a peninsular countertop or work surface shall be permitted to serve as the receptacle for the peninsular space.”

III. Revise:210.52(C)(3) to read as follows: “Receptacle outlets shall be located in one or more of the following spaces:

1) On or above, but not more than 500 mm (20 in.) above, a countertop or work surface.

2) In a countertop or work surface, using a receptacle outlet assembly listed for the location.

3) Not more than 300 mm (12 in.) below countertops or work surfaces on peninsular or island countertops or work surfaces where the surface is flat across its entire surface (no backsplashes, dividers, etc.) and there are no means to mount a receptacle within 500 mm (20 in.) above the countertop or work surface, such as an overhead cabinet. Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 in.) beyond the face of such receptacles.

Exception to (3): Receptacle outlets shall be permitted below wall-mounted countertops or work surfaces in construction for the physically impaired.

215.15. Barriers. Revise to read as follows:

"Barriers shall be placed in panelboards, switchboards, switchgear, and motor control centers such that no energized, uninsulated, ungrounded supply terminal is exposed to inadvertent contact by persons or maintenance equipment while servicing load terminations. This requirement shall be applied to the supply terminals of equipment supplied by feeder taps as covered in 240.21(B) or by transformer secondary conductors as covered in 240.21(C), in all instances where the equipment disconnecting means is located within the same enclosure, or is located remotely and also controls other loads."

220.40. Insert the following informational Note:

Informational Note No. 3: Beginning on January 1, 2024, cities and towns that have adopted the Specialized Stretch Energy Code will require new one- and two-family homes built with fossil fuel equipment to be pre-wired for future electrification conversion. For heating equipment, this will apply to heat pumps or to resistance heat or to both as applicable. The requirements will also extend to fossil-fueled major appliances. This will effectively require the service, and intermediate feeders if present, to be wired based on the future requirements as if it were an all-electric home at the time the home is built. In addition, where this Energy Code is in effect, the advance installation of branch-circuit wiring for all future electrical equipment that would be required to accomplish the future conversion from fossil fuel applications must be in place, routed to locations that are appropriate to meet this intent.

225.30(F). Revise to read as follows:

(F) Documented Switching Procedures. Additional feeders or branch circuits shall be permitted to supply large capacity multibuilding industrial or institutional installations under single management where documented safe switching procedures are established and maintained for disconnection.

225.31 Exception No. 1. Revise to read as follows:

Exception No. 1: For large capacity multibuilding industrial or institutional installations under single management where documented safe switching procedures are established and maintained for disconnection, and where the disconnection is monitored by qualified individuals, the disconnecting means shall be permitted to be located elsewhere on the premises.

230.85. Make the following changes in this Section:

I. Replace the parent language with the following:

For one- and two-family dwelling units, an emergency disconnecting means shall be installed. This section shall apply to new one- and two-family dwellings, or new buildings of double occupancy, at least one of which is a dwelling unit. It shall also apply to two-family dwellings or buildings of double occupancy at least one of which is a dwelling unit, and newly created by subdivision of an existing one-family dwelling.

II. In 230.85(A)(1), identify the existing exception as Exception No. 1. Insert a second exception to read as follows:

This section shall apply to one- and two-family dwellings if the service(s) is (are) entirely replaced. This section shall also apply to one- and two-family dwellings if the service(s) is (are) increased in capacity in terms of its (their) rating in amperes. This section shall not apply to service equipment repairs that consist exclusively of replacement of one or more of the following components of the service equipment:

(1) Meter socket(s)
(2) Service entrance conductors
(3) Service entrance or other related raceways and fittings

(4) Main overcurrent device 250.130(C). Delete this subsection.
250.140(B). Revise the final clause to read: “and the grounded conductor complies with list item (4).” Delete list item (5).

300.4(D). Delete this subsection.

300.5(A). Add an informational note to this subsection as follows:

Informational Note: Cables suitable for direct burial are often sleeved in various raceways for design reasons. If such cable is installed with sufficient cover for direct burial, then the characteristics of that raceway need not be evaluated. Other rules of this Code that apply to raceways generally may apply. See 300.5(H).

300.11(B). Revise this subsection as follows:

I. Delete the second sentence in 300.11(B) which reads: “Support wires and associated fittings that provide secure support and that are installed in addition to the ceiling grid support wires shall be permitted as the sole support.”

II. Revise 300.11(B)(2) to read as follows:
(2) Nonfire-Rated Assemblies. Branch-circuit wiring associated with equipment that is located within, supported by, or secured to a suspended ceiling that is not an integral portion of a fire-rated floor/ceiling or roof/ceiling assembly shall be permitted to be supported by the ceiling support wires.

III. Delete 300.11(B)(2) Exception.

300.17. Add a second paragraph as follows:

Where different raceway wiring methods are joined together without a pull point at the transition, there shall not be more than the equivalent of four quarter bends (360 degrees total) between pull points, e.g., conduit bodies and boxes.
305.15(A). In Note 4 to Table 305.15(A), insert the words “or institutional” after the word “industrial”.

310.12. Delete the second paragraph.

310.15(C)(1). Delete the fourth itemized adjustment provision (d) covering AC and MC cable.

310.15(C)(1). Revise Table 310.15(C)(1) to read as follows:

Number of Number of Conductors1 Percent of Values in Tables 310.16 through 310.19, as Adjusted for Ambient Temperature if Necessary

4 through 6 80
7 through 24 70

25 through 42 60
43 and above 50

1Number of Conductors is the total number of conductors in the raceway or cable, including spare conductors. The count shall be adjusted in accordance with 310.15(E) and (F), and shall not include conductors that are connected to electrical components but that cannot be simultaneously energized.

Informational Note: Overheating may occur where continuous, fully loaded conductor diversity is less than 50 percent and the number of current-carrying conductors exceeds nine. See 310.15(C).

314.29A) Revise to read as follows:

(A) In Buildings and Other Structures. Boxes and conduit bodies shall be installed so the contained wiring and devices are accessible. Boxes and conduit bodies that are recessed into or behind finished surfaces of buildings shall have access to their internal contents maintained by openings in their covers and in the building finish that comply with 314.29(A)(1), (A)(2), or (A)(3) as applicable. Removable finished covers that maintain this access shall be permitted.

(1) Boxes 1650 cm3 (100 in.3) or Less in Size. The openings, if reduced from the outer walls of the box, shall be centered not more than 25 mm (1 in.) from the centerline of the box, and shall not extend beyond the walls of the box. If rectangular, the opening shall be not less than 73 mm (2 7/8 in.) by 45 mm (1 3/4 in.) in size. If circular, the opening shall not be less than 90 mm (3½ in.) in diameter.

Exception: Smaller openings in building surfaces that accommodate one or more individual devices shall be permitted if all of the following conditions are met:
a) The outlet box that supplies the device(s) is nonmetallic.
b) The branch circuit wiring that supplies each device consists of a separate nonmetallic cable assembly originating outside the box, or conductors in a nonmetallic raceway all of which originate outside the box. Other than connections to a single device, these conductors shall not be spliced in the box, and no other wiring shall enter the box.
c) Each device shall be capable of removal from the building surface opening without being damaged. If a special tool is required for this purpose, the applicable circuit directory for the device shall record the location of the tool, together with a product code/QR code for acquiring a replacement if necessary.
d) All connections for each device to the branch circuit wiring shall be made with listed clamping-type wire connectors, which shall be supplied with the devices. The branch-circuit conductors shall be arranged to permit the connector(s) to be exposed after the device has been fully removed
e) The device(s) shall be listed for this application.

(2) Boxes Larger Than 1650 cm3 (100 in.3) in Size. The openings shall not be smaller than the outer walls of the box.

(3) Conduit Bodies. The openings shall not be smaller than outer walls of the conduit body.

320.80(A). Delete the last sentence of the first paragraph, which reads: “The 90°C (194°F) rating shall be permitted to be used for ampacity adjustment and correction calculations; however, the ampacity shall not exceed that for a 60°C (140°F) rated conductor.”

334.10. Insert an exception to follow (3) to read as follows:

Exception to (2) and (3): For buildings or structures required to be of Type I or Type II construction, Type NM, or Type NMC cables shall be permitted to be used, provided that where so applied in buildings or structures exceeding three stories above grade, circuits run in Type NM or NMC cable shall not leave the floor or dwelling unit from which the circuits originate. Cables shall be installed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire- rated assemblies.

334.12(A)(2). Revise to read as follows:

(2) In dropped or suspended ceilings in other than one- and two-family and multifamily dwellings, unless run so as to closely follow the surface of framing members, running boards, or the equivalent, or unless connected to luminaires or other pieces of electrical equipment in accordance with 334.30(B)(2).

334.17. Revise to read as follows:

334.17 Through or Parallel to Framing Members and Furring Strips. Types NM, and NMC cable shall comply with 300.4 where installed through studs, joists, rafters, and similar members. Grommets or bushings shall be used in metal studs as required in 300.4(B)(1), shall remain in place during the wall finishing process, shall cover the complete opening, and shall be listed for the purpose of cable protection.

In both exposed and concealed locations, where the cable is installed parallel to framing members, such as joists, rafters, or studs, or is installed parallel to furring strips, the cable shall be secured so that the nearest outside surface of the cable is not less than 19 mm (¾ in.) from the nearest edge of the framing member or furring strip where nails or screws are likely to penetrate. Where this distance cannot be maintained, the cable shall be protected from penetration by nails or screws by a steel plate, sleeve, or equivalent at least 1.6 mm (1/16 in.) thick. A listed and marked steel plate less than 1.6 mm (1/16 in.) thick that provides equal or better protection against nail or screw penetration shall be permitted for this purpose.

Exception: For concealed work in finished buildings, or finished panels for prefabricated buildings where such supporting is impracticable, it shall be permitted to fish the cable between access points.

334.30. Revise 334.30 as follows [(A), (B), and (C) unchanged from the NEC]:

334.30 Securing and Supporting. Nonmetallic-sheathed cable shall be secured by staples, cable ties, straps, or similar fittings so designed and installed as to not damage the cable. The cable length between the cable entry and the closest cable support shall not exceed 450 mm (18 in.) Where staples are used for cable sizes smaller than three 8 AWG conductors, they shall be of the insulated type, or listed

noninsulated staples driven by staple guns shall be permitted. Cable shall be secured in place at intervals not exceeding 1.4 m (4½ ft) and within 300 mm (12 in.) from every cabinet, box, or fitting. Where the cable is run diagonally behind strapping of a nominal 19 mm (¾-in.) thickness it shall be considered supported, secured, and in compliance with 334.17 where it is not pulled taut. For other than within 300 mm (12 in.) of a cable termination at a cabinet, box, or fitting, cables passing through successive holes in adjacent framing members no more than 600 mm (24 in.) apart shall be considered to be secured. Sections of cable protected from physical damage by raceway shall not be required to be secured within the raceway.

334.80. Delete the second paragraph and revise the first paragraph to read as follows:

334.80 Ampacity. Type NM, and NMC cables shall have conductors rated at 90°C (194°F). Where installed in thermal insulation, the ampacity of conductors shall be that of 60°C (140°F) conductors. The ampacity of Types NM, and NMC cables installed in cable tray shall be determined in accordance with 392.11.

338.10(B)(4). Insert an informational note as follows:

Informational Note: This section includes service entrance cables with a round configuration commonly known as SER cable. The interior installation of this cable is governed by the same rules as apply to nonmetallic sheathed cable.

338.10(B)(4)(a)(3). Revise to read as follows:

Where installed in thermal insulation, the ampacity shall be in accordance with the 60°C (140°F) conductor temperature rating. The maximum conductor temperature rating shall be permitted to be used for ampacity adjustment and correction purposes, if the final derated ampacity does not exceed that for a 60°C (140°F) rated conductor.

344.6. Add an exception as follows:

Exception: Rigid metal conduit made from nonferrous metals other than aluminum shall be permitted to be approved.

352.12. Add a new (F) to read as follows:

(F) High-Rise Buildings. Where used in buildings more than 21 m (70 ft) above mean grade, rigid nonmetallic conduit shall not be used unless the building is protected by an approved fire sprinkler system(s) installed on all floors as a complete system, or the conduit is concealed behind a thermal barrier as described in 362.10(2) or 362.10(5), or the conduit is encased in not less than 50 mm (2 in.) of concrete.

368.8. Insert a new Section 368.8 in Part I of Article 368 as follows:

368.8 Tests Prior to Energizing. Busway system joint tightness, phasing, and insulation resistance shall be verified -by test prior to energizing the system for the first time. Joint resistance shall be evaluated by a qualified person using equipment identified for the specific function. A written record of these tests shall be made available to the authority having jurisdiction.

368.14. Insert a new Section 368.14 in Part II of Article 368 as follows:

368.14 Protection from Liquids, Moisture and Other Contaminants. Busway shall be protected from liquids, moisture, and other contaminants or corrosion that may result in electrical failure.

(A) During Construction. Indoor busways shall be protected from moisture during storage as well as during or after installation. Special consideration shall be given to riser busways to protect them from moisture from uncompleted roofs, walls, etc.
Outdoor busways shall be treated the same as indoor busways until after busway is properly installed, as it is not weather resistant until completely and properly installed.
Busway shall have the exposed ends of uncompleted runs protected to prevent accidental contamination during the construction period.

(B) Protection from Snow Buildup. Outdoor busway shall be mounted in such a manner as to prevent snow or ice buildup forcing water into the busway through weep holes. This may require that consideration be given to horizontal snow or ice buildup or drifting of snow.

(C) Protection from Falling Liquids. Slant shields, drip pans, or other approved protective shields shall be installed to protect indoor busway in locations where there is a possibility of water spillage or dripping condensate from roof drains, water pipes, and the like.

368.56(B). Revise the rule in list item (2) and the exception to (B)(2) to read as follows:

(2) The length of the cord or cable from a busway plug-in device to a suitable tension take- up support device shall not exceed 2.5 m (8 ft).

Exception to (B)(2): By special permission in industrial establishments only, where the conditions of maintenance and supervision ensure that only qualified persons will service the installation, flexible cord suitable for hard usage or extra hard usage or bus drop cable shall be permitted to extend horizontally greater lengths than 2.5 m (8 ft) where the longer length is essential for periodic repositioning of equipment. The flexible cord or bus drop cable shall be supported at intervals not to exceed 2.5 m (8 ft), and suitable tension take-up device(s) shall be installed at the end of the horizontal run to relieve strain in both the horizontal and vertical directions.

372.23. Revise this section to read as follows:

372.23 Ampacity of Conductors. The ampacity adjustment factors in 310.15(C)(1) shall not apply where 30 or fewer current-carrying conductors occupy no more than 20 percent of the interior cross-sectional area of cellular concrete floor raceways.

374.23. Revise this section to read as follows:

374.23 Ampacity of Conductors. The ampacity adjustment factors in 310.15(C)(1) shall not apply where 30 or fewer current-carrying conductors occupy no more than 20 percent of the interior cross-sectional area of cellular metal floor raceways.

390.23. Revise this section to read as follows:

390.23 Ampacity of Conductors. The ampacity adjustment factors in 310.15(C)(1) shall not apply where 30 or fewer current-carrying conductors occupy no more than 20 percent of the interior cross-sectional area of underfloor raceways.

400.5. Revise Table 400.5(A)(3) to read as follows:

Number of Conductors	Percent of Values in Tables 400-5(A) and 400-5(B)
4 through 6	80
7 through 24	70
25 through 42	60
43 and above	50

Informational Note: Overheating may occur where continuous, fully loaded conductor diversity is less than 50 percent and the number of current-carrying conductors exceeds nine. See 310.14(A)(3).

400.12(4). Revise the existing exception as follows:

Exception to (4): Flexible cord and cable shall be permitted to be installed in accordance with 368.56(B) and 590.4. For other applications, where the length of the cord from the supply termination to a suitable tension take-up device is limited to 2.5 m (8 ft), flexible cord shall be permitted to have one connection to the building surface.

400.17. Revise the second paragraph to read as follows:

Flexible cords and cables shall be permitted to be installed in raceways not longer than 15 m (50 ft) in length where required to protect the flexible cord or cable from physical damage. The ampacity of the conductors within a raceway shall be adjusted in accordance with Table 400.5(A)(3) based on the total number of current-carrying conductors within the raceway, and then further derated by a factor of 0.8, or the ampacity shall be calculated in accordance with 310.14(B). The raceway shall be exposed over its entire length.

406.4(D)(3). Delete the exception.

406.9(C). Replace the entire content with the following sentence: “Receptacles shall not be installed within or directly over a bathtub or shower stall.”

410.16(C). Revise items (1) through (4) to read as follows:

(1) 300 mm (12 in.) for surface-mounted incandescent luminaires with a completely enclosed light source, or for LED luminaires not covered in (2) following, that are installed on the wall above the door or on the ceiling.

(2) 150 mm (6 in.) for surface-mounted fluorescent luminaires, or for surface-mounted LED luminaires that are factory wired with their drivers, and that are installed on the wall above the door or on the ceiling.

(3) 150 mm (6 in.) for recessed incandescent luminaires, or for LED luminaires not covered in (4) following, with a completely enclosed light source, and that are installed in the wall or the ceiling.

(4) 150 mm (6 in.) for recessed fluorescent luminaires, or for recessed LED luminaires that are factory wired with their drivers, and that are installed in the wall or the ceiling.

410.36(B). Add a second paragraph as follows:

In addition to, or lieu of, the mechanical fastening means, luminaires equaling or exceeding 1.8 kg (4 lb) shall be directly supported to the building structure or to approved intermediate supports rigidly secured to the building structure. The luminaire support shall be by wire, chain, or threaded rod of sufficient strength to carry the luminaire. Luminaires equal to or greater than 600 mm (2 ft.), nominal, on a side shall be supported at each end of a diagonal axis regardless of weight.

440.14. Insert a second informational note as follows:

Informational Note No. 2: Article 440 generally only applies to equipment that incorporates hermetic refrigerant motor-compressors. See also 430.109(B) for specific provisions governing the disconnecting requirements for such equipment, wherever located, that uses a motor that is 1/8 hp or less.

517.13. Delete the Exception.

517.26. Delete (2), which would otherwise read: “Section 700.10(D) shall not apply.”

680.4. Delete this requirement.

680.8. Insert an informational note ahead of 680.8(A) as follows:

Informational Note: Unlisted swimming pool pump motors have been observed in the field as having been supplied by their manufacturer with undersized cords, cords of excessive length,cord connectors on outdoor applications that are unsuitable for wet locations, and other violations of this Code. The fact that a manufacturer may supply them in this form does not excuse compliance with the rules of this Code.

Listed storable swimming pool pump motors with long factory-supplied cords are prominently marked as such and are not covered in Part II of Article 680. They are not manufactured for use with permanently installed pools and they need not be bonded where used as intended. See 680.31.

680.23(B)(2)(a). Amend this provision to read as follows:

(a) Metal Conduit. Metal conduit shall be listed stainless steel or approved red brass.

680.23(F)(1). Wiring Methods. Revise the requirement to read as follows:

Branch circuit wiring on the supply side of enclosures and junction boxes connected to underwater luminaires and running in corrosive, wet, or below-grade locations shall comply with 680.14 or shall be liquidtight flexible nonmetallic conduit. Wiring methods in dry, noncorrosive locations within or on buildings shall be selected and run in accordance with the applicable requirements in Chapter 3. Wiring in all locations shall include an insulated or covered equipment grounding conductor of a wire type, sized in accordance with 250.122 but not smaller than 12 AWG.

(Exception unchanged from the NEC.)

680.26(B)(2)(b). Insert an additional paragraph to follow the five item list and reading as follows:

“This method shall only be permitted for above-ground pools.”

680.74(A). Delete numbered paragraphs (3), (4), and (5). Delete Exception No. 1 and Exception No. 3, and designate Exception No. 2 as Exception.

690.31(D)(2). Revise the second sentence of the second paragraph to read as follows:

The labels shall be reflective, all letters shall be capitalized, and the letters shall have a minimum height of 9.5 mm (⅜ in.) in white on a red background.

690.56. Insert the following Informational Note after the section title and before 690.56(A):

Informational Note: The Massachusetts Comprehensive Fire Code, 527 CMR 1.00, requires signage adjacent to the building or service disconnect that provides contact information and identifies the party responsible for the operation of the PV system.

Article 691. Delete this article.

700.10(D). Revise as follows:

I. Insert the following title and parent wording:
Fire Protection. Emergency systems shall meet the additional requirements in 700.10(D)(1) through (D)(3).

II. Delete (D)(1); renumber (D)(2) through (D)(4) as (D)(1) through (D)(3).

III. In the resulting (D)(3), change “700.10(D)(2)” to read “700.10(D)(1).”
700.12(H)(2)(2). In the third sentence, delete the word “also”. Then delete the second sentence that reads:

Flexible cord- and plug-connection shall be permitted provided that the cord does not exceed 900 mm (3 ft) in length.