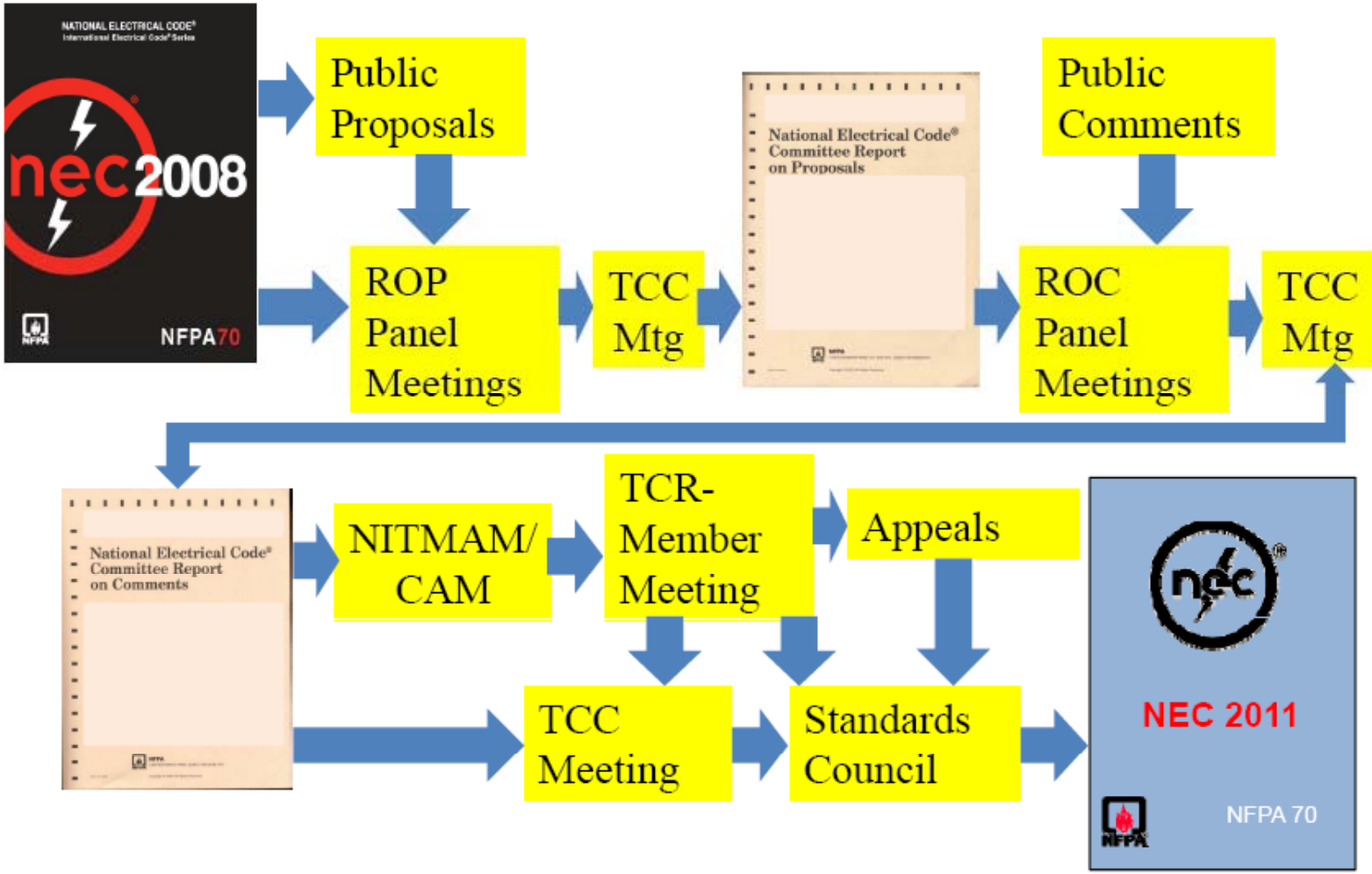
2011 NEC® ROP Report

NFPA Conference and Expo
Chicago, IL June 9, 2009



Important Upcoming Dates

- ROP Available: On or about 6/19
- Comment Closing Date: 10/23@ 5:00PM EDT
- ROC Meeting: 12/2-12
- TCC ROC Meeting: 2/22-26/2010
- ROC Available: On or about 3/28/2010
- NITMAM Closing Date: 5/7/2010
- NFPA Conference & Expo: 6/6-10/2010
- NFPA Standards Council Issuance: 7/2010

Proposed New Articles

- Article 399 – Outdoor, Overhead Conductors, Over 600 Volts (CMP-7)
- Article 606 – Prefabricated (Wiring) Assemblies (CMP-19)
- Article 694 – Small Wind Electric Systems (CMP-4)
- Article 840 – Premises Powered Broadband Communications Systems (CMP-16)

NEC CMP Article Responsibilities

1 – 90, 100, 110

2 – 210, 215, 220

3 – 300, 590, 725, 727, 760

4 – 225, 230, 690, 692, 694, 705

5 – 200, 250, 280, 285

6 – 310, 400, 402

7 – 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 382, 394, 396, 398, 399

8 – 342, 344, 350, 352, 353, 354, 355, 358, 360, 362, 366, 368, 370, 372, 374, 376, 378, 380, 384, 386, 388, 390, 392

9 – 312, 314, 404, 408, 450, 490

10 – 240

11 – 409, 430, 440, 460, 470

12 – 610, 620, 626, 630, 640, 645, 647, 650, 660 665, 668, 669, 670, 685

13 – 445, 455, 480, 695, 700, 701, 702

14 – 500, 501, 502, 503, 504, 505, 506, 510, 511, 513, 514, 515, 516

15 – 517, 518, 520, 522, 525, 530, 540

16 – 770, 800, 810, 820, 830, 840

17 – 422, 424, 426, 427, 680, 682

18 – 406, 410, 411, 600, 605

19 – 545, 547, 550, 551, 552, 553, 555, 604, 605 675

NEC® Section: 90.2	Proposal: Multiple CMP Action: Reject
Proposed Revision:	

Additional Information:

- CMP-1 received 29 proposals to mitigate what some consider conflicts between the NESC and NEC and most of these proposals were rejected by a 7-3 vote.
- Central points of contention are the deletion of the phrase “other agreements” from 90.2(B)(5)b in the previous cycle and the location of utility facilities on private property.
- Several companion proposals related to this subject were submitted for Sections 90.2, 90.2(A), 90.2(A)(3), 90.2(A)FPN new, 90.2(B)FPN new, 90.2(B)(5), 90.2(B)FPN to (4) & (5), and Article 100 Definitions for Exclusive Control (new), Restricted Access (new), Service Drop, Service Lateral, Service Point, and Utilization Equipment.

NEC® Section: 90.5	Proposal: 1-37a CMP Action: Accept

Proposed Revision:

Changes “Fine Print Notes (FPN)” to “Informational Notes” and changes the title of Annexes to “Informative Annexes”

Additional Information:

To more clearly delineate the adoptable and enforceable requirements of the NEC.

NEC® Section: Article 100	Proposals: 1-69a, 1-70, 1-71, 1-72 CMP Action: Accept

Proposed Revision:

Engineering Supervision. Technical oversight by one thoroughly familiar with scientific principles and practices in the design, construction, maintenance, operation and performance of an installation, equipment or system.

Additional information:

TCC directs this proposal be reported as **Reject** because less than two-thirds of the members eligible to vote have voted in the affirmative.

NEC® Section: 110.12(A)	Proposal: 1-141 CMP Action: Accept

Proposed Revision:

(A) Unused Openings. Unused openings, other than those intended for the operation of equipment, those intended for mounting purposes, or those permitted as part of the design for listed equipment, shall be closed to afford protection substantially equivalent to the wall of the equipment. ~~Where metallic plugs or plates are used with nonmetallic enclosures, they shall be recessed at least 6 mm (¼ in.) from the outer surface of the enclosure.~~

Additional Information:

NEC® Section: 110.14(A)	Proposal: 1-149 CMP Action: Accept in Principle

Proposed Revision:

Terminals. Connection of conductors to terminal parts shall ensure a thoroughly good connection without damaging the conductors and shall be made by means of pressure connectors (including set-screw type), solder lugs, or splices to flexible leads. Connection by means of wire-binding screws or studs and nuts that have upturned lugs or the equivalent shall be permitted for 10 AWG or smaller conductors.

Terminals for more than one conductor and terminals used to connect aluminum shall be so identified.

Terminals used for flexible, fine-stranded conductors and cables shall be identified for such use.

Additional Information:

NEC® Section: 110.16	Proposal: 1-162 CMP Action: Accept

Proposed Revision:

Flash Protection. Electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers, that are in other than dwelling ~~occupancies~~ units, and are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential electric arc flash hazards. The marking shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

Additional Information:

Proposal changes the words “dwelling occupancies” to “dwelling units”, which expands the requirement for arc flash warning labels to multifamily dwellings. (Similar to Proposals 1-164 & 1-165)

NEC® Section: 110.24	Proposal: 1-183 CMP Action: Accept in Principle

Proposed Revision:

(A) Field Marking. Service equipment in other than dwelling units shall be legibly marked in the field with the available fault current. The field marking(s) shall include the installation date and be of sufficient durability to withstand the environment involved.

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

Additional Information:

The field marking is not required in industrial installations where conditions of maintenance and supervision ensure that only qualified persons service the equipment.

NEC® Section: Article 100	Proposal: 2-5 CMP Action: Accept in Principle

Proposed Revision:

Bathroom. An area including a basin with one or more of the following: a toilet, a urinal, a tub, a shower, a foot bath, a bidet, or similar plumbing fixtures.

Additional Information:

NEC® Section: 210.8 (A) & (B)	Proposal: 2-77 CMP Action: Accept in Principle in Part

Proposed Revision:

(A) Dwelling Units. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in (1) through (8) shall have ground-fault circuit-interrupter protection for personnel. The ground-fault circuit interrupter shall be installed in a readily accessible location.

Additional Information:

Same requirement added to 210.8(B).

NEC® Section: 210.8(A)(7)	Proposal: 2-103 CMP Action: Accept in Principle

Proposed Revision:

(7) Sinks — <u>for other than kitchens as covered in 210.8(A)(6)</u>, where receptacles are installed within 1.8m (6 ft) of the outside edge of the sink

Additional Information:

NEC® Section: 210.8(B)(7)	Proposal: 2-110 CMP Action: Accept
Proposed Revision: (7) Locker rooms with adjacent showering facilities	
Additional Information:	

NEC® Section: 210.8(B)(8)	Proposal: 2-122 CMP Action: Accept
Proposed Revision: (8) Garages, service bays, and similar areas	
Additional Information:	

NEC® Section: 210.12(B)	Proposal: 2-153 CMP Action: Accept in Principle

Proposed Revision:

Exception No. 1: ~~Where RMC, IMC, EMT or steel armored cable, Type AC, meeting the requirements of 250.118 using metal outlet and junction boxes is installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet~~ It shall be permitted to install a listed outlet branch circuit AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

Additional Information:

TCC directs this proposal be reported as **Reject** because less than two-thirds of the members eligible to vote have voted in the affirmative.

NEC® Section: 210.12(B)	Proposal: 2-165 CMP Action: Reject

Proposed Revision:

All 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets installed or extended in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms or areas shall be protected by a listed arc-fault circuit interrupter, combination-type, installed to provide protection of the branch circuit.

Additional Information:

The decision on applying the new construction AFCI requirements to a circuit modification is that of the authority having jurisdiction.

NEC® Section: 210.52(I)	Proposal: 2-223 CMP Action: Accept in Principle
Proposed Revision: **(I) Foyers.** Foyers that have an area that is greater than 60 ft2 shall have a receptacle(s) located in each wall space as defined in 210.52 (A)(2)(1).	
Additional Information:	

NEC® Section: 210.52(C)(3)	Proposal: 2-251 CMP Action: Accept in Principle

Proposed Revision:

Exception: A receptacle in a wall countertop space shall be permitted to serve as the receptacle for a peninsular countertop space where the spaces are contiguous and the receptacle is located within 1.8 m (6 ft) of the outside end of the peninsula.

Additional Information:

NEC® Section: 210.52(D)	Proposal: 2-258 CMP Action: Accept in Principle

Proposed Revision:

(D) Bathrooms. In dwelling units, at least one receptacle outlet shall be installed in bathrooms within 900 mm (3 ft) of the outside edge of each basin. The receptacle outlet shall be located on a wall or partition that is adjacent to the basin or basin countertop, located on the countertop, or installed on the side or face of the basin cabinet not more than 300 mm (12 in.) below the countertop.

Additional Information:

NEC® Section: 210.52(E)(3) Exception	Proposal: 2-266 CMP Action: Accept

Proposed Revision:

~~*Exception to (3): Balconies, decks, or porches with a usable area of less than 1.86 m2 (20 ft2) are not required to have a receptacle installed.*~~

Additional Information:

NEC® Section: 210.52(G)(1)	Proposal: 2-270 CMP Action: Accept

Proposed Revision:

(1) At least one receptacle outlet, in addition to those for specific equipment, shall be installed in each basement, in each attached garage, and in each detached garage or accessory building with electric power.

Additional Information:

Similar proposal (2-289) for 210.70(A)(2)(a) on requiring a lighting outlet in accessory buildings was rejected.

NEC® Section: 210.55	Proposal: 2-276 CMP Action: Accept

Proposed Revision:

Meeting Rooms. In meeting rooms located in office buildings and hotels/motels, a receptacle outlet in a listed floor box shall be installed in the center of each room. For a dividable meeting room a single receptacle outlet in a listed floor box shall be installed in the center of each partitioned area.

Additional Information:

NEC® Section: 300.4(E)	Proposal: 3-34 CMP Action: Accept in Principle

Proposed Revision:

Cables, Raceways, or Boxes Installed in or Under Roof Decking. A cable, raceway, or box, installed in exposed or concealed locations under metal-corrugated sheet roof decking, shall be installed and supported so there is not less than 38 mm (1 ½ in.) measured from the lowest surface of the roof decking to the top of the cable, raceway, or box. A cable, raceway, or box shall not be installed in concealed locations in metal-corrugated sheet decking type roof.

Additional Information:

NEC® Section: 300.11(A)(2)	Proposal: 3-73 CMP Action: Accept in Principle

Proposed Revision:

Non–Fire-Rated Assemblies. Wiring located within the cavity of a non–fire-rated floor–ceiling or roof–ceiling assembly shall not be secured to, or supported by, the ceiling assembly, including the ceiling support wires. An independent means of secure support shall be provided and shall be permitted to be attached to the assembly. Where independent support wires are used, they shall be distinguishable by color, tagging, or other effective means.

Additional Information:

NEC® Section: 300.22	Proposal: 3-94 CMP Action: Accept in Principle

Proposed Revision:

Wiring in Ducts Not for Air Handling, Fabricated Ducts for Environmental Air, and Other Spaces For Environmental Air (Plenums). The provisions of this section apply to the installation and uses of electrical wiring and equipment in ducts used for dust, loose stock, or vapor removal; ducts specifically fabricated for environmental air; and other spaces used for environmental air (plenums).

(C) Other Spaces Used for Environmental Air (Plenums).

FPN No. 2: The phrase "other space used for environmental air (plenum)" used in this section correlates with the use of the term "plenum" in NFPA 90A, the *Standard for the Installation of Air-Conditioning and Ventilating Systems,* 2009, and other mechanical codes where the plenum is used for return air purposes, as well as some other air-handling spaces.

Additional Information:

NEC® Section: 300.50(B)	Proposal: 3-105 CMP Action: Accept

Proposed Revision:

Wet Locations. The interior of enclosures or raceways installed underground shall be considered to be a wet location. Insulated conductors and cables installed in these enclosures or raceways in underground installations shall be listed for use in wet locations and shall comply with 310.10(C). Any connections or splices in an underground installation shall be approved for wet locations.

Additional Information:

NEC® Section: 590.4(D)	Proposal: 3-123 CMP Action: Accept in Principle

Proposed Revision:

Receptacles. All receptacles shall be of the grounding type. Unless installed in a continuous metal raceway that qualifies as an equipment grounding conductor in accordance with 250.118 or a continuous metal-covered cable that qualifies as an equipment grounding conductor in accordance with 250.118, all branch circuits shall include a separate equipment grounding conductor, and all receptacles shall be electrically connected to the equipment grounding conductor(s). Receptacles on construction sites shall not be installed ~~connected to the same ungrounded conductor of a multiwire~~ on any branch circuit that supplies temporary lighting.

Additional Information:

NEC® Section: 590.6(A)(3)	Proposal: 3-140 CMP Action: Accept in Principle

Proposed Revision:

Receptacles on 15 kW or less Portable Generators. All 125-volt and 125/250-volt, single-phase, 15-, 20-, and 30-ampere receptacle outlets that are a part of a 15 kW or smaller portable generator shall have listed ground-fault circuit interrupter protection for personnel. Listed cord sets or devices incorporating listed ground-fault circuit-interrupter protection for personnel identified for portable use shall be permitted for use with 15kW or less portable generators manufactured or remanufactured prior to January 1, 2011.

Additional Information:

NEC® Section: Article 100	Proposal: 4-3 & 4-15 CMP Action: Accept in Principle

Proposed Revision:

Service Conductors, Overhead. The overhead conductors between the service point and the first point of connection to the service entrance conductors at the building or other structure.

Service Conductors, Underground. The underground conductors between the service point and the first point of connection to the service-entrance conductors in a terminal box, meter or other enclosure, inside or outside the building wall. Where there is no terminal box, meter, or other enclosure, the point of connection is considered to be the point of entrance of the service conductors into the building

Additional Information:

NEC® Section: Article 100	Proposal: 4-16, 4-20a & 4-20b CMP Action: Accept

Proposed Revision:

Service-Entrance Conductors, Overhead System. The service conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where joined by tap or splice to the service drop or overhead service conductors.

Service-Entrance Conductors, Underground System. The service conductors between the terminals of the service equipment and the point of connection to the service lateral or underground service conductors.

Service Lateral. The underground ~~service~~ conductors between the utility distribution system and the service point. ~~street main, including any risers at a pole or other structure or from transformers, and the first point of connection to the service-entrance conductors in a terminal box or meter or other enclosure, inside or outside the building wall. Where there is no terminal box, meter, or other enclosure, the point of connection is considered to be the point of entrance of the service conductors into the building.~~

NEC® Section: 225.2 and other sections in Part III for installations over 600 volts – See ROP for complete text	Proposal: 4-21 CMP Action: Accept in Principle

Proposed Revision:

Electric Supply Station. Any building, room, or separate space within which electric supply equipment is located and the interior of which is accessible only to qualified persons. This includes generating stations and substations, including their associated generator, storage battery, transformer, and switchgear rooms or enclosures, but does not include facilities such as pad-mounted equipment and installations in manholes and vaults.

Generating Station. *A plant wherein electric energy is* produced by conversion from some other form of energy (e.g., chemical, nuclear, solar,mechanical, or hydraulic) by means of suitable apparatus. This includes all generating station auxiliaries and other associated equipment required for the operation of the plant. Not included are stations producing power exclusively for use with communications systems.

Substation. *An enclosed assemblage of equipment, e.g.,* switches, circuit breakers, buses, and transformers, under the control of qualified persons,through which electric energy is passed for the purpose of switching or modifying its characteristics.

NEC® Section: Article 225 – Part II, & 225.30	Proposal: 4-38 CMP Action: Accept in Principle

Proposed Revision:

II. ~~More than One Building or Other Structure~~ Buildings or Other Structures Supplied by a Feeder(s) or Branch Circuit(s)

Number of Supplies. ~~Where more than one~~ A building or other structure ~~is on the same property and under single management, each additional building or other structure~~ that is served by a branch circuit or feeder on the load side of the a service disconnecting means shall be supplied by only one feeder or branch circuit unless permitted in 225.30(A) through (E). For the purpose of this section, a multiwire branch circuit shall be considered a single circuit.

Additional Information:

See additional revisions to Section 225.30 in next slide.

NEC® Section: 225.30	Proposal: 4-36 & 4-37 CMP Action: Accept

Proposed Revision:

Number of Supplies. A building or other structure that is served by a branch circuit or feeder on the load side of a service disconnecting means shall be supplied by only one feeder or branch circuit unless permitted in 225.30(A) through (E).

Where a branch circuit or feeder originates in these additional buildings or other structures, only one feeder or branch circuit shall be permitted to supply power back to the original building or structure, unless permitted in 225.30(A) through (E).

For the purpose of this section, a multiwire branch circuit shall be considered a single circuit.

Additional Information:

NEC® Section: 230.24 Exception No. 5	Proposal: 4-82 CMP Action: Accept

Proposed Revision:

Where the voltage between conductors does not exceed 300 and the roof area is guarded or isolated, a reduction in clearance to 900 mm (3 ft) shall be permitted.

Additional Information:

NEC® Section: 230.92	Proposal: 4-161 CMP Action: Accept

Proposed Revision:

Locked Service Overcurrent Devices. Where the service overcurrent devices are locked or sealed or are not readily accessible to the occupant, branch-circuit or feeder overcurrent devices shall be installed on the load side, shall be mounted in a readily accessible location, and shall be of lower ampere rating than the service overcurrent device.

Additional Information:

NEC® Section: 230.205(A)	Proposal: 4-169 CMP Action: Accept

Proposed Revision:

Location. The service disconnecting means shall be located in accordance with 230.70. For either overhead or underground primary distribution systems on private property, the service disconnect shall be permitted to be located in a location that is not readily accessible, provided the disconnecting means can be operated by mechanical linkage from a readily accessible point, or electronically in accordance with 230.205(C) where applicable.

Additional Information:

NEC® Section: 690.4(E)	Proposal: 4-187 CMP Action: Accept

Proposed Revision:

Circuit Routing. Photovoltaic source and PV output conductors, in and out of conduit, and inside of a building or structure, shall be routed along building structural members such as beams, rafters, trusses, and columns where the location of those structural members can be determined by observation. Where circuits are imbedded in built-up, laminate, or membrane roofing materials in roof areas not covered by PV modules and associated equipment, the location of circuits shall be clearly marked.

Additional Information:

NEC® Section: Article 694 – Small Wind Electric Systems	Proposal: 4-263 CMP Action: Accept in Principle

Proposed Revision:

694.1 Scope. The provisions of this article apply to small wind (turbine) electric systems that consisting of one or more wind electric generators with individual systems up to and including 100 kW. These systems can include generators, alternators, inverters, and controllers.

FPN No. 1: See FPN Figure 694.1 No. 1 and FPN Figure 694.1 No. 2

FPN No. 2: These systems can be interactive with other electrical power production sources or may be stand-alone systems. These systems can have ac or dc output, with or without electrical energy storage, such as batteries.

Additional Information:

NEC® Section: Article 100	Proposal: 5-13 CMP Action: Accept

Proposed Revision:

~~**Grounding Conductor.** A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.~~

Additional Information:

Revisions were made throughout Article 250 to change this term to either "grounding electrode conductor" or "equipment grounding conductor" depending on how the term is used in that rule. Similar coordinated proposals were submitted to revise the rules in Chapter 8 where the term "grounding conductor" was used in prior editions.

NEC® Section: Article 100	Proposal: 5-18 CMP Action: Accept in Principle

Proposed Revision:

Grounding Electrode Conductor (GEC). A conductor used to connect the system grounded conductor, equipment, communications system protectors, antenna discharge units, communications cables, or network interface units to a grounding electrode or to a point on the grounding electrode system.

Additional Information:

NEC® Section: 200.4	Proposal: 5-49 CMP Action: Accept in Principle

Proposed Revision:

Neutral Conductors. Neutral conductors shall not be permitted to be used for more than one multiwire branch circuit or for more than one set of ungrounded feeder conductors unless specifically permitted elsewhere in this *Code.*

Additional Information:

NEC® Section: 250.2	Proposal: 5-52 CMP Action: Accept in Principle

Proposed Revision:

Bonding Jumper, System. The connection between the grounded circuit conductor and the supply-side bonding jumper (SSBJ), or the equipment grounding conductor, or both, at a separately derived system.

Additional Information:

NEC® Section: 250.21(C)	Proposal: 5-86a CMP Action: Accept

Proposed Revision:

Marking. If systems are ungrounded, they shall be legibly marked "Ungrounded System" at the source or first disconnecting means of the system. The marking shall be of sufficient durability to withstand the environment involved.

Additional Information:

NEC® Section: 250.30	Proposal: 5-102 CMP Action: Accept in Principle in Part

Proposed Revision: Entire Section

(C) Outdoors Source. If the source of the separately derived system is located outside the building or structure supplied, a grounding electrode connection shall be made at the source location to one or more grounding electrodes in compliance with 250.50. In addition, the installation shall comply with 250.30(A) for grounded systems or with 250.30(B) for ungrounded systems.

Exception: The grounding electrode conductor connection shall not be made at the outdoor source for high-impedance grounded neutral systems. The system shall meet the requirements of 250.36.

Additional Information:

- Revised to provide a more logical layout.
- System bonding jumper is required to not extend beyond the enclosure where it originates.
- Connection of a grounding electrode conductor tap to a common grounding electrode conductor is required to be made with a connector listed as grounding and bonding equipment instead of just a listed connector providing consistency with that connection required for services.
- New subdivision (C) addresses outdoor sources and requires a grounding electrode connection at the source location.

NEC® Section: 250.52(A)(2)	Proposal: 5-150 CMP Action: Accept in Principle

Proposed Revision:

Metal Frame of the Building or Structure. The metal frame of the building or structure that is connected to the earth by one or more of the following methods:

(1) At least one structural metal member that is in direct contact with the earth for 3.0 m (10 ft) or more, with or without concrete encasement.

(2) The hold-down bolts securing the structural steel column are connected to a concrete encased electrode that complies with 250.52(A)(3) located in the support footing or foundation. The hold-down bolts shall be connected to the concrete-encased electrode by welding, exothermic welding, the usual steel tie wires, or other approved means.

Additional Information:

NEC® Section: 250.53(A)(2)	Proposal: 5-169a CMP Action: Accept

Proposed Revision:

Supplemental Electrode Required. A rod, pipe or plate electrode shall be supplemented by an additional electrode of a type specified in 250.52(A)(2) through (A)(8). The supplemental electrode shall be permitted to be bonded to one of the following:

(1) The rod, pipe or plate electrode
(2) The grounding electrode conductor
(3) The grounded service-entrance conductor
(4) The nonflexible grounded service raceway
(5) Any grounded service enclosure

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

Additional Information:

Section 250.56 was deleted by the action on Proposal 5-176a.

NEC® Section: 250.64(B)	Proposal: 5-194 CMP Action: Accept in Principle

Proposed Revision:

Securing and Protection Against Physical Damage. If exposed, a grounding electrode conductor or its enclosure shall be securely fastened to the surface on which it is carried. Grounding electrode conductors shall be permitted to be installed on or through framing members.

Additional Information:

Remainder of this section has been modified by CMP-5 action on Proposal 5-195.

NEC® Section: 250.108	Proposal: 5-259 CMP Action: Accept

Proposed Revision:

Use of Equipment Grounding Conductors. An equipment grounding conductor shall not be used as a grounding electrode conductor.

Additional Information:

NEC® Section: 250.190	Proposal: 5-313 CMP Action: Accept

Proposed Revision: **(C) Equipment Grounding Conductor.** Equipment grounding conductors shall comply with (C)(1) through (C)(3).

(1) General. Equipment grounding conductors that are not an integral part of a cable assembly shall not be smaller than 6 AWG copper or 4 AWG aluminum.

(2) Shielded Cables. If the cable assembly is suitably rated for the ground fault current and is of the concentric neutral type, the shield conductors shall be permitted as the equipment grounding conductor. For solidly grounded systems, the cable copper screen or ribbon shield or combination of both shall not be used as an equipment grounding conductor

(3) Sizing. Equipment grounding conductors shall be sized in accordance with (a) and (b) as follows:

(a) Equipment grounding conductors shall be sized in accordance with Table 250.122 based on the current rating of the fuse or the overcurrent setting of the protective relay.

FPN: The overcurrent rating for a circuit breaker is the combination of the current transformer ratio and the current pickup setting of the protective relay.

(b) Equipment grounding conductors that are not an integral part of a cable assembly shall not be smaller than 6 AWG copper or 4 AWG aluminum.

NEC® Section: 280.5	Proposal: 5-316 CMP Action: Accept

Proposed Revision:

~~Listing. A surge arrester shall be a listed device.~~

Additional Information:

NEC® Section: Article 310	Proposal: 6-8/ 6-52 CMP Action: Accept in Principle/Accept in Principle in Part

Proposed Revision: Complete reorganization/renumbering of Article 310 text and tables. See ROP Draft for Proposed Revision and table renumbering.

Additional Information:

- Revision will comply with the NEC Style Manual and provide consistency with other articles in Chapter 3. Other than some additional part headings, renumbering of sections, and relocation of text, all rules and contents of tables have remained the same as currently in the 2008 Code.
- Not intended to make any changes to the existing rules.
- Table contents and equations that appear in the 2008 NEC have been omitted but their locations have been indicated.
- Section 310.6 was revised to include conductors rated over 2000 V since 310.6 addresses all conductor types within Article 310.
- Additional references were proposed when the existing rules had to be separated into separate sections to comply with 2.3.1 of the NEC Style Manual which states “That tables and figures shall be referenced in the text and shall be designated by the number of the NEC rule in which they are referenced.”

NEC® Section: Article 100	Proposal: 6-2 CMP Action: Accept in Principle in Part

Proposed Revision:

Voltage, Low. A class of nominal system voltages not exceeding 2,000 volts.

Voltage, High. A class of nominal system voltages over 2,000 Volts but not exceeding 69 kV.

Additional Information:

TCC directs this proposal be reported as **Reject** to correlate with the actions of other Code-Making Panels throughout the document on related proposals.

NEC® Section: Article 100	Proposal: 6-3 CMP Action: Reject

Proposed Revision:

Ampacity. The maximum allowable current, in amperes, that a conductor can carry continuously under the conditions of use without exceeding its temperature rating.

Additional Information:

This is not a definition of permissible use. The added text does not clarify or benefit usability. The existing definition is accurate.

NEC® Section: 310.4(B) & (F)	Proposal: 6-17 CMP Action: Accept

Proposed Revision:

(B) Conductor Characteristics. The paralleled conductors in each phase, polarity, neutral, grounded circuit conductor, ~~or~~ equipment grounding conductor, or equipment bonding jumper shall comply with all of the following:

(F) Equipment Bonding Jumpers. Where parallel equipment bonding jumpers are installed in raceways, they shall be sized and installed in accordance with 250.102

Additional Information:

NEC® Section: 310.6 Exception No. 1	Proposal: 6-22 CMP Action: Reject

Proposed Revision:

Nonshielded insulated conductors listed by a qualified testing laboratory shall be permitted for use up to ~~2400~~ 5000 volts under the following conditions: (Remaining text of exception is unchanged)

Additional Information:

- The substantiation does not provide any technical information or documentation to justify the proposed changes. The Panel has addressed existing installations in 6-21b and new installations in Proposal 6-24.
- All previous editions of the code are there due to compliance with the rules of the Code. Any challenge to the decisions of the panel needed to be made to the TCC. Stating disagreement with the Panel's previous action is not proper substantiation on its own - evidence supporting the disagreement must be presented.
- Compliance with installation requirements is always required.
- This special condition allowance does not transfer as rationalization for general allowance.

NEC® Section: 310.6 Exception No. 2	Proposal: 6-21b CMP Action: Accept

Proposed Revision:

Nonshielded insulated conductors listed by a qualified testing laboratory shall be permitted for use up to 5000 volts to replace existing nonshielded conductors in industrial establishments only, under the following conditions:

(a)Where the condition of maintenance and supervision ensures that only qualified personnel install and service the installation.

(b)Conductors shall have insulation resistant to electric discharge and surface tracking, or the insulated conductor(s) shall be covered with a material resistant to ozone, electric discharge, and surface tracking.

(c) Where used in wet locations, the insulated conductor(s) shall have an overall nonmetallic jacket or a continuous metallic sheath.

(d) Insulation and jacket thicknesses shall be in accordance with Table 310.13(D).

Additional Information:

NEC® Section: 310.6	Proposal: 6-24 CMP Action: Accept in Part

Proposed Revision:

Non-shielded, ozone-resistant insulated conductors with a maximum phase-to-phase voltage of 5000 volts shall be permitted in industrial establishments where the conditions of maintenance and supervision ensure that only qualified persons service the installation and the cables have an overall metallic sheath. For other establishments, solid dielectric insulated conductors operated above 2000 volts in permanent installations shall have ozone-resistant insulation and shall be shielded.

Additional Information:

TCC directs this proposal be reported as **Reject** because less than two-thirds of the members eligible to vote have voted in the affirmative.

NEC® Section: 310.15(B)(2)(c) and associated table	Proposal: 6-70 CMP Action: Reject

Proposed Revision:

Delete Section 310.15(B)(2)(c) and associated FPN. Delete Table 310.15(B)(2)(c) and associated FPN.

Additional Information:

- Technical substantiation was provided during the 2008 code cycle to support the ambient adjustment factors to conduit exposed on rooftops. This testing proved to the panel's satisfaction that the adjustments are required.
- The testing was based on the temperature readings, not on the location. The adjustment factors noted are based on raised ambient temperatures based on the tables. It is the elevated ambient temperature that affects the long-term aging of the conductor.
- Additional testing and technical substantiation has been provided in Proposal 6-67 during the2011 cycle to support the application of the adjustment factors.

NEC® Section: 310.15(B)(6)	Proposal: 6-83A CMP Action: Accept

Proposed Revision:

120/240-Volt, Single-Phase Dwelling Services and Feeders.

(a) For individual dwelling units of one-family, two-family, and multifamily dwellings, conductors, as listed in Table 310.15(B)(6), shall be permitted as 120/240-volt, single-phase, service-entrance conductors and service-lateral conductors. ~~and feeder conductors that serve as the main power feeder to each dwelling unit and are installed in raceway or cable with or without an equipment grounding conductor. For application of this section, the main power feeder shall be the feeder between the main disconnect and the panelboard that supplies, either by branch circuits or by feeders, or both, all loads that are part or associated with the dwelling unit.~~

(b) Feeder conductors for a dwelling unit, after adjustments and corrections, shall not be required to have an allowable ampacity rating greater than the Table 310.15(B)(16) allowable ampacity of the service-entrance conductors.

Additional Information:

NEC® Section: 400.5(C)	Proposal: 6-145 CMP Action: Accept

Proposed Revision:

(C) Engineering Supervision. Under engineering supervision, conductor ampacities shall be permitted to be calculated in accordance with 310.15(C).

Additional Information:

Relocates material formerly located in the exception to 400.5(B) and makes technical corrections by not referring to “adjustment factors”.

NEC® Section: 320.2	Proposal: 7- 3 CMP Action: Accept

Proposed Revision:

Armored Cable, Type AC. A fabricated assembly of insulated conductors in a flexible interlocked metallic armor ~~enclosure~~. See 320.100.

Additional Information:

NEC® Section: 330.10(A)(11)b.	Proposal: 7-39 CMP Action: Accept

Proposed Revision:

A ~~lead sheath or~~ moisture-impervious jacket is provided under the metal covering

Additional Information:

Lead is not commonly used anymore because of environmental considerations.

NEC® Section: 334.10(1)	Proposal: 7-77 CMP Action: Accept
Proposed Revision: One- and two-family dwellings and their accessory structures.	
Additional Information:	

NEC® Section: 334.15(C) Exception	Proposal: 7-97 CMP Action: Accept in Principle

Proposed Revision:

Where the height of a crawl space does not exceed 1.4 m (4 ½ ft), it shall be permissible to secure nonmetallic-sheathed cables, installed at angles to the joists, to the bottom edge of joists. Nonmetallic-sheathed cable installed within 2.1 m (7 ft) of crawl space access shall be protected by substantial guard strips that are at least as high as the cable.

Additional Information:

NEC® Section: 338.10(B)(4)(a)	Proposal: 7-133 CMP Action: Accept in Principle

Proposed Revision:

(a) *Interior Installations.* In addition to the provisions of this article, Type SE service-entrance cable used for interior wiring shall comply with the installation requirements of Part II of Article 334, excluding 334.80.

Where installed in thermal insulation, the ampacity shall be in accordance with the 60°C (140°F) conductor temperature rating. The 90°C (194°F) rating shall be permitted to be used for ampacity adjustment and correction purposes, provided the final derated ampacity does not exceed that for a 60°C (140°F) rated conductor.

Additional Information:

NEC® Section: Article 399 – Outdoor, Overhead Conductors, Over 600 Volts	Proposal: 7-162 CMP Action: Accept

Proposed Revision: **399.1 Scope.** This article covers the use, installation and construction specifications for outdoor, overhead conductors, over 600 volts.

399.2 Definition. Outdoor Overhead Conductors, Over 600 Volts. Single conductors, insulated, covered, or bare, installed outdoors on support structures.

Additional Information:

- Premises wiring installations, utilizing over 600 volt systems currently exist in numerous locations and have become more common as electrical usage has increased.
- Many of those installations utilize overhead bare conductors on insulators as feeders and branch circuits to safely distribute power to multiple building, structure and equipment locations.
- NEC Chapter 3 wiring methods do not currently recognize this “wiring method” nor provide prescriptive permission or limitation for these installations.
- Submitted text allows and requires designers to utilize existing industry standards for the specific details of the design and provides enforcement a basis for approval of the installations.

NEC® Section: 342.30(C)	Proposal: 8-24a CMP Action: Accept

Proposed Revision:

~~(C) Unsupported Raceways. Where oversized, concentric or eccentric knockouts are not encountered, Type IMC shall be permitted to be unsupported where the raceway is not more than 450 mm (18 in.) and remains in unbroken lengths (without coupling). Such raceways shall terminate in an outlet box, junction box, device box, cabinet, or other termination at each end of the raceway.~~

Additional Information:

Similar proposals accepted for Articles 344, 352, 355 & 358

NEC® Section: 366.22(A)	Proposal: 8-154 & 8-155 CMP Action: Accept

Proposed Revision:

Sheet Metal Auxiliary Gutters. The sum of the cross-sectional areas of all contained conductors at any cross section of a sheet metal auxiliary gutter shall not exceed 20 percent of the interior cross-sectional area of the sheet metal auxiliary gutter. The ~~derating~~ adjustment factors in 310.15(B)(3)(a) shall be applied only where the number of current-carrying conductors, including neutral conductors classified as current-carrying under the provisions of 310.15(B)(5), exceeds 30. ~~Conductors for signaling circuits or controller conductors between a motor and its starter and used only for starting duty shall not be considered as current-carrying conductors.~~

Additional Information:

Similar proposals accepted for 366.23 and for Articles: 372, 376, 378, 384, 386, 390, & 392

NEC® Section: 380.23	Proposal: 8-212 CMP Action: Accept in Principle

Proposed Revision:

Insulated Conductors. Insulated conductors installed in multi-outlet assemblies shall comply with 380.23(A) and (B).

(A) Deflected Insulated Conductors. Where insulated conductors are deflected within a multi-outlet assembly, either at the ends or where conduits, fittings, or other raceways or cables enter or leave the multi-outlet assembly, or where the direction of the multi-outlet assembly is deflected greater than 30 degrees, dimensions corresponding to one wire per terminal in Table 312.6(A) shall apply.

(B) Multi-outlet Assemblies Used as Pull Boxes. Where insulated conductors 4 AWG or larger are pulled through a multi-outlet assembly, the distance between raceway and cable entries enclosing the same conductor shall not be less than that required by 314.28(A)(1) for straight pulls and 314.28(A)(2) for angle pulls. When transposing cable size into raceway size, the minimum metric designator (trade size) raceway required for the number and size of conductors in the cable shall be used.

Additional Information:

NEC® Section: Article 392	Proposal: 8-235a CMP Action: Accept

Proposed Revision:

- Complete revision of Article 392
- Revision includes changes in headings and numbering scheme to comply with the NEC Style Manual and for consistency with other Chapter 3 articles
- This proposal is makes only editorial changes, technical changes have resulted from panel action on other proposals

Additional Information:

NEC® Section: 392.60	Proposal: 8-263 CMP Action: Accept

Proposed Revision:

(A) Metallic Cable Trays. Metallic cable trays shall be permitted to be used as equipment grounding conductors where continuous maintenance and supervision ensure that qualified persons service the installed cable tray system and the cable tray complies with provisions of this section. Metallic cable trays that support electrical conductors shall be grounded as required for conductor enclosures in accordance with 250.96 and Part IV of Article 250. Metal cable tray containing non-power conductors (communication, data, signal, etc.) shall be electrically continuous, through listed connections or the use of an insulated stranded bonding jumper not smaller than a 10 AWG.

Additional Information:

NEC® Section: 392.120	Proposal: 8-260 CMP Action: Accept in Principle

Proposed Revision:

Marking. Cable trays containing conductors rated over 600 volts shall have a permanent, legible warning notice carrying the wording "DANGER-HIGH VOLTAGE" placed in a readily visible position on all cable trays with maximum spacing of warning notices not to exceed 3 m (10 ft).

Additional Information:

NEC® Section: 312.10(B)	Proposal: 9-36 CMP Action: Accept

Proposed Revision:

Enclosure Edges. All sharp edges of metal enclosures within the scope of this article that are subject to hand contact during customary installation activity shall, at the time of manufacture, be protected or shall be de-burred and rounded to minimize the risk of injury.

Additional Information:

NEC® Section: 314.27(A)	Proposal: 9-77 CMP Action: Accept in Principle

Proposed Revision:

(A) Boxes at Luminaire Outlets. Outlet boxes or fittings designed for the support of luminaires and installed as required by 314.23 shall be permitted to support a luminaire.

(1) Luminaire Outlets in the Wall. Boxes used at luminaire or lampholder outlets in a wall shall be designed for the purpose and shall be marked on the interior of the box to indicate the maximum weight of the luminaire that is permitted to be supported by the box in the wall, if other than 23 kg (50 lb).

Exception: A wall-mounted luminaire weighing not more than 3 kg (6 lb) shall be permitted to be supported on other boxes or plaster-rings that are secured to other boxes provided the luminaire or its supporting yoke is secured to the box with no fewer than two No. 6 or larger screws.

(2) Luminaire Outlets in the Ceiling. At every outlet used exclusively for lighting, the box shall be designed or installed so that a luminaire may be attached. Boxes shall be required to support a luminaire weighing a minimum of 23 kg (50 lb). A luminaire that weighs more than 23 kg (50 lb) shall be supported independently of the outlet box unless the outlet box is listed and marked for the maximum weight to be supported.

NEC® Section: 404.2(C)	Proposal: 9-95 CMP Action: Accept in Principle

Proposed Revision:

(C) Switches Controlling Lighting Loads. Where switches control lighting loads supplied by a grounded general purpose branch circuit, a grounded circuit conductor shall be provided at the switch location.

Exception: The grounded circuit conductor shall be permitted to be omitted from the switch enclosure where either of the conditions in (1) or (2) apply:

(1) Conductors for switches controlling lighting loads enter the device box through a raceway.

(2) Cable assemblies for switches controlling lighting enter the box through a framing cavity that is open at the top or bottom on the same floor level, or through a wall, floor, or ceiling that is unfinished on one side.

Additional Information:

NEC® Section: 404.9(B) Exception No. 2	Proposal: 9-110 CMP Action: Accept in Principle

Proposed Revision:

Exception No. 2 to (B): Listed snap switches equipped with nonmetallic yokes and faceplates, where the plate cannot be installed on any other type of snap switch, shall not be required to be connected to an equipment grounding conductor.

Additional Information:

NEC® Section: 404.9(B) Exception No. 3	Proposal: 9-111 CMP Action: Accept in Principle

Proposed Revision:

Exception No. 3 to (B): A snap switch with integral nonmetallic enclosure complying with 300.15(E) shall be permitted without a connection to an equipment grounding conductor.

Additional Information:

NEC® Section: 408.3(F)(2)	Proposal: 9-142 CMP Action: Accept in Principle

Proposed Revision:

Ungrounded Systems. A switchboard or panelboard containing an ungrounded electrical system as permitted in 250.21 shall be legibly and permanently field marked as follows:

"Caution Ungrounded System Operating _____ Volts Between Conductors"

Additional Information:

NEC® Section: 408.4(B)	Proposal: 9-140 CMP Action: Accept in Principle
Proposed Revision: **Source of Supply.** All switchboards and panelboards supplied by a feeder in other than one- or two-family dwellings shall be marked as to where the power supply originates.	
Additional Information:	

NEC® Section: 450.14	Proposal: 9-176 CMP Action: Accept in Principle in Part

Proposed Revision:

450.14 Disconnecting Means. Transformers, other than Class 2 or Class 3, shall have a disconnecting means located either in sight of the transformer or in a remote location. Where located in a remote location, the disconnecting means shall be lockable, and the location shall be field marked on the transformer.

Additional Information:

NEC® Section: 240.15(B)(1)	Proposal: 10-30 CMP Action: Accept

Proposed Revision:

Multiwire Branch Circuit. ~~Except where limited by 210.4(B),~~ Individual single-pole circuit breakers, with ~~or without~~ identified handle ties, shall be permitted as the protection for each ungrounded conductor of multiwire branch circuits that serve only single-phase line-to-neutral loads.

Additional Information:

NEC® Section: 240.15(C)	Proposal: 10-40 CMP Action: Accept

Proposed Revision:

~~**Closed-Loop Power Distribution Systems**. Listed devices that provide equivalent overcurrent protection in closed-loop power distribution systems shall be permitted as a substitute for fuses or circuit breakers.~~

Additional Information

NEC® Section: 240.21(B)(1)(1)(b)	Proposal: 10-46 CMP Action: Accept in Part (Rejected Part)

Proposed Revision:

Not less than the rating of the switchboard or other distribution equipment ~~device~~ supplied by the tap conductors or not less than the rating of the overcurrent protective device at the termination of the tap conductors.

Additional Information:

•**Submitter:** As defined in Article 100, the word "device" applies very broadly and can include conductors as well as panelboards. Section 408.36 requires overcurrent protection within or on the supply side of the panelboard so "panelboard" is not included in 240.21(B)(1)b. No such requirement for switchboards is found in Article 408.

•**CMP-10** The panel does not accept the change from "device" to switchboard or power distribution equipment" since the language narrows the use of this section well beyond the present permission without necessary substantiation.

•**Proposal 10-52** recommended a similar revision to Section 240.21(C)(2)(1)(b) and this was also the rejected portion of an "Accept in Part" action for which the same panel statement was used to explain their rejection.

NEC® Section: 240.35	Proposal: 10-72 CMP Action: Accept in Principle in Part

Proposed Revision:

Marking with Available Short-Circuit Current. Equipment enclosures, in other than dwelling occupancies, containing service or feeder circuit overcurrent protective devices, shall be field marked with a label containing the following:

(1) The available short-circuit current as calculated for equipment rating purposes

(2) The date on which the short-circuit calculation was performed or obtained.

Exception: In installations with written safety procedures, where conditions of maintenance and supervision ensure that only qualified persons service the equipment, marking on the enclosure is not required if documentation of 240.35 (1) and (2) is available upon request to the authority having jurisdiction.

Additional Information:

Task Group of CMP-1 and CMP-10 members will be formed to correlate actions on Proposals 1-183 & 10-72

NEC® Section: 240.87	Proposal: 10-82 CMP Action: Accept in Principle

Proposed Revision:

Non-instantaneous Trip. Where a circuit breaker without an instantaneous trip is utilized, one of the following or approved equivalent means shall be provided:

(1) Zone-selective interlocking

(2) Differential relaying

(3) Energy-reducing maintenance switching with a local status indicator

FPN: An energy-reducing maintenance switch allows a worker to set a circuit breaker trip unit to instantaneous while the worker is working within an arc-flash boundary as defined in NFPA 70E, and then to set the trip unit back to a normal setting after the potentially hazardous work is complete.

Additional Information:

NEC® Section: 240.91	Proposal: 10-83 CMP Action: Accept

Proposed Revision:

Protection of Conductors. Conductors shall be protected in accordance with 240.91(A) or (B).

(A) General. Conductors shall be protected in accordance with 240.4.

(B) Devices Rated over 800 Amperes. Where the overcurrent device is rated over 800 amperes, the ampacity of the conductors it protects shall be equal to or greater than 95% of the rating of the overcurrent device defined in 240.6, where the conductor is protected within recognized time vs. current limits for all short circuit currents of up to 1000 seconds duration.

Additional Information:

NEC® Section: 409.5	Proposal: 11-5 CMP Action: Reject

Proposed Revision:

Equipment Approval. The equipment required or permitted by this Article shall be acceptable only if listed.

Similar proposals addressing approval were submitted for Article 409 and for other CMP-11 articles. All were rejected.

Additional Information:

- The proposal limits the ability of installing and constructing electrical equipment.
- The authority having jurisdiction already has the authority to require listing of electrical equipment through NEC Sections 90.4, 90.7, and 110.2.
- Information is provided for the basis of approval in Section 409.1.

NEC® Section: 409.110(3)	Proposal: 11-23 CMP Action: Accept in Principle

Proposed Revision:

(3) When an industrial control panel is supplied by more than one power source such that more than one disconnecting means is required to disconnect all power within the control panel, it shall be marked to indicate that more than one disconnecting means is required to de-energize the equipment.

Additional Information:

NEC® Section: 430.22(C)	Proposal: 11-48a CMP Action: Accept

Proposed Revision:

(C) Wye-Start, Delta-Run Motor. For a wye-start, delta-run connected motor, the ampacity of the branch-circuit conductors on the line side of the controller shall not be less than 125 percent of the motor full-load current as determined by 430.6(A)(1). The ampacity of the conductors between the controller and the motor shall not be less than 72 percent of the motor full-load current rating as determined by 430.6(A)(1).

FPN: The individual motor circuit conductors of a wye-start, delta-run connected motor carry 58 percent of the rated load current. The multiplier of 72 percent is obtained by multiplying 58 percent by 1.25 .

Additional Information:

NEC® Section: 430.22(G)	Proposal: 11-50 CMP Action: Accept

Proposed Revision:

(G) Conductors for Small Motors. Conductors for small motors shall not be smaller than 14 AWG unless otherwise permitted in 430.22(G)(1) or 430.22(G)(2).

(1) 18 AWG Copper. 18 AWG Copper shall be permitted if part of a jacketed multiconductor cable assembly or flexible cord or individual conductors used in a cabinet or enclosure, under the following conditions:

(2) 16 AWG Copper. 16 AWG copper shall be permitted if part of a jacketed multiconductor cable assembly or flexible cord, or individual conductors used in a cabinet or enclosure, under the following conditions:

See ROP for complete text of specified conditions under which 18 AWG and 16 AWG can be used as motor circuit conductors.

Additional Information:

NEC® Section: 430.24	Proposal: 11-50a CMP Action: Accept

Proposed Revision:

430.24 Several Motors or a Motor(s) and Other Load(s). Conductors supplying several motors, or a motor(s) and other load(s), shall have an ampacity not less than the sum of each of the following:

(1) 125 percent of the full-load current rating of the highest rated motor as determined by 430.6(A)

(2) the sum of the full-load current ratings of all the other motors in the group, as determined by 430.6(A)

(3) 100 percent of the non-continuous non-motor load

(4) 125 percent of the continuous non-motor load.

Additional Information:

NEC® Section: 430.102(B) Similar action taken on other sections	Proposal: 11-95 CMP Action: Accept in Principle

Proposed Revision: Exception to (1) and (2): The disconnecting means for the motor shall not be required under either condition (a) or condition (b), provided the controller disconnecting means required in accordance with 430.102(A) is a lockable disconnecting means. ~~individually capable of being locked in the open position. The provision for locking or adding a lock to the controller disconnecting means shall be installed on or at the switch or circuit breaker used as the disconnecting means and shall remain in place with or without the lock installed.~~

Additional Information:

TCC directs the panel to reconsider the proposal and correlate with the action taken on Proposal 1-63.

Proposal 1-63: Disconnecting Means, Lockable. A disconnecting means with provisions for being locked in the open position by either a keyed or combination lockout device in which the provision for applying the lockout device remains in place on the disconnecting means and the disconnecting means remains operable until the lockout device is applied.

CMP-1: Reject - The proposed definition contains multiple requirements, which contradicts 2.2.2. of the NEC Style Manual. This issue is best handled in other Articles such as Article 110, for example.

NEC® Section: 430.123	Proposal: 11-107a CMP Action: Accept

Proposed Revision: 430.123 Branch Circuit Short-Circuit and Ground Fault Protection.

(A) Drive Protection and Markings. The branch circuit short-circuit and ground-fault protection for a circuit supplying power conversion equipment shall be of the type and size specified by the manufacturer's instructions provided with the power conversion equipment. When the instructions do not specify the type and size, a branch-circuit fuse or inverse-time circuit breaker shall be used and shall be sized based upon the input current rating of the power conversion equipment multiplied by the percentage from Table 430.52.

*See ROP for two Exceptions to (A)

(B) Drive and Bypass Protection. Where a branch circuit short-circuit and ground-fault protective device provides protection for both the adjustable speed drive system and a bypass circuit, the specific branch circuit protective device and its ratings or settings must not exceed those marked on the adjustable speed drive controller. Where the bypass circuit requires a different branch circuit short-circuit and ground-fault protective device, ratings or settings other than those marked on the adjustable speed drive controller, then separate branch circuit short-circuit and ground-fault protection shall be provided for both the adjustable speed drive controller and bypass circuit.

NEC® Section: 430.225(B)(1)	Proposal: 11-113 CMP Action: Accept in Principle

Proposed Revision:

Type of Overload Device. Each motor shall be protected against dangerous heating due to motor overloads and failure to start by a thermal protector integral with the motor or external current-sensing devices, or both. Protective device settings for each motor circuit shall be determined under engineering supervision.

Additional Information:

NEC® Section: 440.9	Proposal: 11-129 CMP Action: Accept in Principle

Proposed Revision:

440.9 Equipment Grounding. Any wiring method employed shall contain an equipment grounding conductor in accordance with 250.118(1).

Additional Information:

NEC® Section: Article 100	Proposal: 12-3 CMP Action: Accept in Principle

Proposed Revision:

Uninterruptible Power Supply. A power supply used to provide power to a load for some period of time in the event of a power failure. In addition, it may provide a more constant voltage and frequency supply to the load, reducing the effects of voltage and frequency variations.

Additional Information:

NEC® Section: 610.2	Proposal: 12-4 CMP Action: Accept in Principle

Proposed Revision:

Festoon Cable. Single- and multiple-conductor cable intended for use and installation in accordance with Article 610 where flexibility is required. The cable consists of one or more insulated conductors cabled together with an overall jacket. The cable is rated (140°F) 60°C, (167°F) 75°C, (194°F) 90°C or (221°F) 105°C and 600 V.

Additional Information:

NEC® Section: 620.21(A)(1)	Proposal: 12-20 CMP Action: Accept

Proposed Revision:

(1) Hoistways.

~~(a) Flexible metal conduit, liquidtight flexible metal conduit, or liquidtight flexible nonmetallic conduit shall be permitted in hoistways between risers and limit switches, interlocks, operating buttons, and similar devices~~

(~~d~~c) The following wiring methods shall be permitted in the hoistway in lengths not to exceed 1.8 m (6 ft):

(1) Flexible metal conduit
(2) Liquidtight flexible metal conduit
(3) Liquidtight flexible nonmetallic conduit
(4) (No change in 2008 text)

Exception 620.21(A)(1)(c)(1), (2) and (3): the length is not limited between risers and limit switches, interlocks, operating buttons and similar devices.

Additional Information:

NEC® Section: 620.53 Exception No. 1	Proposal: 12-33 CMP Action: Accept in Principle

Proposed Revision:

Where an individual branch circuit supplies car lighting, receptacle(s), and a ventilation motor not exceeding 2-hp, the disconnecting means required by 620.53 shall be permitted to comply with 430.109(C). This disconnecting means shall be listed and shall be capable of being locked in the open position. The provision for locking or adding a lock to the disconnecting means shall be installed on or at the switch or circuit breaker used as the disconnecting means and shall remain in place with or without the lock installed. Portable means for adding a lock to the switch or circuit breaker shall not be permitted as the means required to be installed at the disconnecting means and shall remain with the equipment.

Additional Information:

NEC® Section: 625.2	Proposal: 12-42a CMP Action: Accept

Proposed Revision:

Plug-in Hybrid Electric Vehicle (PHEV). A hybrid vehicle intended for on-road use with the ability to store and use off-vehicle electrical energy in the rechargeable energy storage system. The PHEV also has a second source of motive power.

Additional Information:

NEC® Section: 626.11(D)	Proposal: 12-74 CMP Action: Accept in Principle

Proposed Revision:

Conductor Rating. Truck space branch-circuit ~~conductors shall have an ampacity not less than the loads~~ supplied loads shall be considered to be continuous.

Additional Information:

NEC® Section: 626.24(B)(1)	Proposal: 12-84 CMP Action: Accept

Proposed Revision:

Two ~~single~~ duplex receptacles, each 2-pole, 3-wire grounding type and rated 20 amperes, 125 volts, and <u>each</u> connected to a~~n~~ ~~individual~~ separate branch circuit <u>that shall have no other outlets.</u>

Additional Information:

NEC® Section: 640.45	Proposal: 12-120 CMP Action: Accept in Principle

Proposed Revision:

640.45 Protection of Wiring. Where accessible to the public, flexible cords and cables laid or run on the ground or on the floor shall be covered with approved nonconductive mats. Cables and mats shall be arranged so as not to present a tripping hazard. The cover requirements of 300.5 shall not apply to wiring protected by burial.

Additional Information:

Provision applies only to portable and temporary audio system installations covered in Part III of Article 640.

NEC® Section: 645.2	Proposal: 12-129 CMP Action: Accept

Proposed Revision:

Critical Operations Data System. An information technology equipment system that requires continuous operation for the reasons of public safety, emergency management, national security, or business continuity.

Remote Disconnect Control. An electric device and circuit that controls a disconnecting means through a relay or equivalent device.

Zone. A physically identifiable area (such as barriers or separation by distance) within an information technology equipment room with dedicated power and cooling systems for the information technology equipment or systems.

Additional Information:

NEC® Section: 645.10	Proposal: 12-129 CMP Action: Accept

Proposed Revision:

645.10 Disconnecting Means. An approved means shall be provided to disconnect power to all electronic equipment in the information technology equipment room or in designated zones within the room. There shall also be a similar approved means to disconnect the power to all dedicated HVAC systems serving the room or designated zones and shall cause all required fire/smoke dampers to close. ~~The control for these disconnecting means shall be grouped and identified and shall be readily accessible at the principal exit doors. A single means to control both the electronic equipment and HVAC systems in the room or in a zone shall be permitted. Where a pushbutton is used as a means to disconnect power, pushing the button in shall disconnect the power. Where multiple zones are created, each zone shall have an approved means to confine fire or products of combustion to within the zone.~~ Disconnecting means shall be implemented by either (A) or (B).

Additional Information:

NEC® Section: 645.10(A)	Proposal: 12-129 CMP Action: Accept

Proposed Revision:

Remote Disconnect Controls.

(1) Remote disconnect controls shall be located at approved locations readily accessible in case of fire to authorized personnel and emergency responders.

(2) The remote disconnect controls for the control of electronic equipment power and HVAC systems shall be grouped and identified. A single means to control both shall be permitted.

(3) Where multiple zones are created, each zone shall have an approved means to confine fire or products of combustion to within the zone.

(4) Additional means to prevent unintentional operations of remote disconnect controls shall be permitted.

Additional Information:

NEC® Section: 645.10(B)	Proposal: 12-129 CMP Action: Accept

Proposed Revision:

Critical Operations Data Systems. Remote disconnecting controls shall not be required for critical operations data systems when all of the following are met:

(1) An approved procedure has been established and maintained for removing power and air movement within the room or zone.

(2) Qualified personnel are continuously available to meet emergency responders and to advise them of disconnecting methods.

(3) A smoke-sensing fire detection system is in place.

FPN: For further information see NFPA 72-2007, *National Fire Alarm Code.*

(4) An approved fire suppression system suitable for the application is in place.

(5) Cables installed under a raised floor, other than branch circuit wiring and power cords installed in compliance with 645.5(D)(2) or (3), are in compliance with 300.22(C), 725.154(A), 770.154, or 800.154.

Additional Information:

NEC® Section: 645.25	Proposal: 12-48 CMP Action: Accept in Principle in Part

Proposed Revision:

Engineering Supervision. As an alternative to the feeder and service load calculations required by Parts III and IV of Article 220, feeder and service load calculations for new or existing loads shall be permitted to be used if performed by qualified persons under engineering supervision.

Additional Information:

NEC® Section: 670.5	Proposal: 12-177 CMP Action: Accept in Principle

Proposed Revision:

Short-Circuit Current Rating. Industrial machinery shall be installed where the available fault current does not exceed its marked short-circuit current rating as marked in accordance with 670.3(A)(4).

Additional Information:

NEC® Section: 445.20	Proposal: 13-19 CMP Action: Accept

Proposed Revision:

Ground-Fault Circuit-Interrupter Protection for Receptacles on 15 kW or Smaller, Portable Generators. All 125-volt, single-phase, 15- 20-, and 30-ampere receptacle outlets, that are a part of a 15 kW or smaller, portable generator, shall have ground-fault circuit-interrupter protection for personnel integral to the generator or receptacle.

Additional Information:

NEC® Section: 480.2	Proposal: 13-28 CMP Action: Accept in Principle
Proposed Revision: **Battery System.** Interconnected battery subsystems consisting of storage batteries, battery chargers, inverters, converters, and associated electrical equipment.	
Additional Information:	

NEC® Section: 695.3(A)(3)	Proposal: 13-60a & 13-77 CMP Action: Accept & Accept in Principle

Proposed Revision:

(A) Individual Sources.

(3) Dedicated Feeder. A dedicated feeder shall be permitted where it is derived from a service connection as described in 695.3(A)(1). [**20:**9.2.2(3)]

Additional Information:

NEC® Section: 695.3(F)	Proposal: 13-61 CMP Action: Accept
Proposed Revision: **Phase Converters.** Phase converters shall not be permitted to be used for fire pump service. [**20:**9.1.7]	
Additional Information:	

NEC® Section: 695.4(B)(1)(c)	Proposal: 13-77a & 13-86 CMP Action: Accept & Accept in Principle

Proposed Revision:

On-Site Standby Generator. Where an on-site generator is used to supply a fire pump, an additional disconnecting means and associated overcurrent protective device(s) shall be permitted.

Additional Information:

NEC® Section: 695.4(B)(2)(b)	Proposal: 13-77a & 13-86 CMP Action: Accept & Accept in Principle

Proposed Revision: **(2) Overcurrent Device Selection.** Overcurrent devices shall comply with (a) or (b).

(a) *Individual Sources. Overcurrent protective device(s)* shall be selected or set to carry indefinitely the sum of the locked-rotor current of the fire pump motor(s) and the pressure maintenance pump motor(s) and the full-load current of the associated fire pump accessory equipment when connected to this power supply. Where the locked-rotor current value does not correspond to a standard overcurrent device size, the next standard overcurrent device size shall be used in accordance with 240.6. The requirement to carry the locked-rotor currents indefinitely shall not apply to conductors or devices other than overcurrent devices in the fire pump motor circuit(s). [**20:**9.2.3.4]

(b) *On-Site Standby Generators. Overcurrent protective* devices between an on-site standby generator and a fire pump controller shall be selected and sized to allow for instantaneous pickup of the full pump room load, but shall not be larger than the value selected to comply with 430.62 to provide short-circuit protection only. [**20:**9.6.1.1]

NEC® Section: 695.6(H)	Proposal: 13-97 CMP Action: Accept in Principle

Proposed Revision:

(H) Listed Electrical Circuit Protective System to Controller Wiring.

Electrical circuit protective system installation shall comply with any restrictions provided in the listing of the electrical circuit protective system used and the following:

(1) A junction box shall be installed ahead of the fire pump controller a minimum of 12 in. beyond the fire-rated wall or floor bounding the fire zone.

(2) Where required by the manufacturer of a listed electrical circuit protective system or by the listing, or as required elsewhere in this *Code, the raceway between a junction box* and the fire pump controller shall be sealed at the junction box end as required and in accordance with the instructions of the manufacturer. [**20:**9.8.2]

(3) Standard wiring between the junction box and the controller shall be permitted. [**20:**9.8.3]

NEC® Section: 700.2	Proposal: 13-145 CMP Action: Accept in Principle

Proposed Revision:

Relay, Automatic Load Control. A device used to energize switched or normally-off lighting equipment from an emergency supply in the event of loss of the normal supply, and to de-energize or return the equipment to normal status when the normal supply is restored.

Additional Information:

NEC® Section: 700.12(F) Exception No. 2	Proposal: 13-182 CMP Action: Accept in Principle

Proposed Revision:

Remote heads providing lighting for the exterior of an exit door shall be permitted to be supplied by the unit equipment serving the area immediately inside the exit door.

Additional Information:

NEC® Section: 700.24	Proposal: 13-188 CMP Action: Accept in Principle

Proposed Revision:

Automatic Load Control Relay. If an emergency lighting load is automatically energized upon loss of the normal supply, a listed automatic load control relay shall be permitted to energize the load. The load control relay shall not be used as transfer equipment.

Additional Information:

NEC® Section: 700.27	Proposal: 13-203 CMP Action: Accept in Principle in Part

Proposed Revision:

Coordination. Emergency system(s) overcurrent devices shall be selectively coordinated with all supply side overcurrent protective devices. The selectively coordinated devices shall be selected by a licensed professional engineer engaged primarily in the design or maintenance of electrical installations. The selection shall be documented and stamped by the professional engineer. This documentation shall be available to those authorized to design, install, inspect, maintain, and operate the system.

Additional Information:

Same provision accepted for Sections 701.18 & 708.54.

TCC reports these proposals as **Reject** because less than two-thirds of the members eligible to vote have voted in the affirmative.

NEC® Section: 708.10(A)(2)	Proposal: 13-270 CMP Action: Accept in Principle

Proposed Revision:

Receptacle Identification. In a building in which COPS are present with other types of power systems described in other sections in this article, the cover plates for the receptacles or the receptacles themselves supplied from the COPS shall have a distinctive color or marking so as to be readily identifiable.

Exception: If the COPS supplies power to a DCOA that is a stand-alone building, receptacle cover plates or the receptacles themselves shall not be required to have distinctive marking.

Additional Information:

NEC® Section: 501.15(F)(1)	Proposal: 14-58 CMP Action: Reject
Proposed Revision: Revise “approved” to “identified”	

Additional Information:

The submitter has not presented any definitive technical substantiation supporting a problem with the current text. The panel has reviewed all of the editorial proposals presented by the submitter and one or more of the following statements apply to the specific proposal:

(1) The panel has previously conducted extensive studies of the use of the terms "approved", "listed", and "identified". The term used in the current text is appropriate within the context of this provision of the code.

(2) The current text is correct. "May" is not subjective, but denotes physical possibility and is the appropriate term. The term "is likely to be" denotes probability, or a greater chance of occurrence.

(3) The word “suitable” as used in this section is not unenforceable and does not create confusion, as indicated in the requirements of the NEC Style Manual. As such, it does not need to be replaced.

NEC® Section: 501.15(F)(3)	Proposal: 14-60 CMP Action: Accept in Principle

Proposed Revision:

501.17 Process Sealing. This section applies to process connected equipment which includes, but is not limited to, canned pumps, submersible pumps, flow, pressure, temperature, or analysis measurement instruments. A process seal is a device to prevent the migration of process fluids from the designed containment into the external electrical system. One of the following means shall be provided to prevent process fluids from entering the electrical raceway or cable system:

See ROP for Remainder of Accepted Text Covering Acceptable Methods of Sealing

Additional Information:

The provisions of ANSI/ISA-12.27.01 include both construction and performance requirements for single and dual sealed electrical equipment. The additional requirements for single seal equipment include both pressure and temperature cycling, followed by a leakage and burst test.

NEC® Section: 501.30(B)	Proposal: 14-66 CMP Action: Accept

Proposed Revision:

Types of Equipment Grounding Conductors. Flexible metal conduit and liquidtight flexible metal conduit shall include an equipment bonding jumper of the wire type, in compliance with 250.102. ~~not be used as the sole ground-fault current path. Where equipment bonding jumpers are installed, they shall comply with 250.102.~~

Additional Information:

NEC® Section: 501.40	Proposal: 14-67 CMP Action: Reject

Proposed Revision:

Delete Section. All multi-wire branch circuits are now required by 210.4(B) to be disconnected simultaneously.

Additional Information:

This multi-wire branch circuit requirement must be retained due to its importance. This is directed at prevention of fire and explosion as well as personnel safety, as addressed in 210.4. These two sections are not in conflict.

NEC® Section: 501.140(A)(5)	Proposal: 14-85 CMP Action: Accept

Proposed Revision:

(5) For temporary portable assemblies consisting of receptacles, switches, and other devices that are not considered portable utilization equipment but are individually listed for the location.

Additional Information:

NEC® Section: 514.8	Proposal: 14-277 CMP Action: Reject

Proposed Revision: *Exception No. 2: Rigid PVC, RTRC or HDPE ~~nonmetallic~~ conduit shall be permitted where buried under not less than 600 mm (2 ft) of cover. Where rigid PVC, RTRC or HDPE ~~nonmetallic~~ conduit is used, threaded rigid metal conduit or threaded steel intermediate metal conduit shall be used for the last 600 mm (2 ft) of the underground run to emergence or to the point of connection to the aboveground raceway, …* (remaining text not changed)

Additional Information:

CMP-14: This is an issue that extends throughout the code. At the present time, CMP-14 is not sure what constitutes rigid nonmetallic conduit. Furthermore, it is of great concern to CMP-14 that the suitability of the conduit is appropriate for use in hazardous (classified) locations, including items such as minimum wall thickness, rigidity, etc. CMP-14 respectfully requests direction from the TCC.

TCC: In response to the request from Code-Making Panel 14, the Technical Correlating Committee notes that term "rigid nonmetallic conduit" includes Types PVC, RTRC, and HDPE. The suitability of any type of rigid nonmetallic conduit in a hazardous (classified) location is under the purview of Code-Making Panel 14.

NEC® Section: 514.11(A)	Proposal: 14-279 CMP Action: Accept in Principle

Proposed Revision:

General. Each circuit leading to or through dispensing equipment, including all associated power, communication, data, and video circuits, and equipment for remote pumping systems, shall be provided with a clearly identified and readily accessible switch or other approved ~~acceptable~~ means, located remote from the dispensing devices, to disconnect simultaneously from the source of supply, all conductors of the circuits, including the grounded conductor, if any.
Single-pole breakers utilizing handle ties shall not be permitted.

Additional Information:

NEC® Section: 517.2	Proposal: 15-7 CMP Action: Accept

Proposed Revision:

~~**Emergency System.** A system of circuits and equipment intended to supply alternate power to a limited number of prescribed functions vital to the protection of life and safety. [99:3.3.41]~~

Additional Information:

CMP-15 acted on other proposals for Article 517 to correlate with the deletion of the term “emergency system”

TCC directs this action be reconsidered and correlated with the final text of NFPA 99 after its adoption.

NEC® Section: 517.2	Proposal: 15-16 CMP Action: Accept

Proposed Revision:

Patient Care Room ~~Area~~.

Basic Care Room. Rooms in which the failure of equipment or systems is not likely to cause injury to the patients or caregivers but may cause patient discomfort.

FPN: Basic care rooms are typically rooms in which basic medical or dental care, treatment or examinations are performed. Examples include but are not limited to examination or treatment rooms in hospitals, clinics, medical or dental offices, nursing homes, and limited care facilities.

General Care Room ~~Area~~.

Critical Care Room ~~Area~~.

Additional Information:

NEC® Section: 517.18(C)	Proposal: 15-53 CMP Action: Accept in Part

Proposed Revision:

Pediatric Locations. Receptacles located within the rooms, bathrooms, playrooms, activity rooms, and patient care ~~*areas*~~ rooms of designated pediatric ~~wards~~ locations, other than nurseries, shall be listed tamper- resistant or shall employ a listed tamper resistant cover.

Additional Information:

NEC® Section: 517.19(C)	Proposal: 15-59 CMP Action: Accept in Principle

Proposed Revision:

(1) Minimum Number and Supply. Each operating rooms shall be provided with a minimum of 36 receptacles, at least 12 of which shall be connected to either of the following:

(1) The normal system branch circuit required in 517.19(A)

(2) A critical branch circuit supplied by a different transfer switch than the other receptacles at the same location

(2) Receptacle Requirements. The receptacles required in 517.19(C)(1) shall be permitted to be of the single or duplex types or a combination of both. All receptacles, whether 36 or more, shall be listed "hospital grade" and so identified. The grounding terminal of each receptacle shall be connected to the reference grounding point by means of an insulated copper equipment grounding conductor.

Additional Information:

NEC® Section: 517.26	Proposal: 15-68 CMP Action: Accept in Principle

Proposed Revision:

The life safety branch of the essential electrical system shall meet the requirements of Article 700, except as modified by Article 517.

Additional Information:

TCC directs the panel reconsider the panel action on this proposal and correlate it with the action taken on Proposal 15-13.

NEC® Section: 517.30(B)(1),(2), & (3)	Proposal: 15-72 CMP Action: Accept

Proposed Revision:

(1) Separate Branches ~~Systems~~. Essential electrical systems for hospitals shall be comprised of three separate branches ~~two separate systems~~ capable of supplying a limited amount of lighting and power service that is considered essential for life safety and effective hospital operation during the time the normal electrical service is interrupted for any reason. The branches are: life safety, critical, and equipment. ~~These two systems shall be the emergency system and the equipment system.~~

~~**(2) Emergency System.** The emergency system shall be limited to circuits essential to life safety and critical patient care. These are designated the life safety branch and the critical branch. [99:4.4.2.2.1.1]~~

~~**(3) Equipment System.** The equipment system shall supply major electrical equipment necessary for patient care and basic hospital operation~~

Additional Information :

TCC directs this action be reconsidered and correlated with the final text of NFPA 99 after its adoption.

NEC® Section: 517.30(F)	Proposal: 15-90 CMP Action: Accept

Proposed Revision:

(F) Selective Coordination. Overcurrent protective devices serving the essential electrical system shall be selectively coordinated for times longer than 0.1 seconds.

Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.

Exception No. 2: Isolated power systems inherently comply with this selective coordination requirement.

Additional Information:

TCC directs this proposal be reported as **Reject** because less than two-thirds of the members eligible to vote have voted in the affirmative.

NEC® Section: 525.21(C)	Proposal: 15-203 CMP Action: Accept in Principle

Proposed Revision:

Working Space for Electrical Equipment in Portable Structures. In portable structures where electrical equipment is installed, and the working space of 110.26 applies, the working spaces shall be permitted to be reduced, provided that the equipment shall be arranged so that work can be performed safely and so that persons in the vicinity cannot accidentally come into contact with energized parts or bring conducting objects into contact with energized parts.

Additional Information:

NEC® Section: 770.2	Proposal: 16-12 CMP Action: Accept in Principle

Proposed Revision:

Cable Routing Assembly. A unit or assembly of units or sections and associated fittings that are listed and form a structural system used to support listed cables.

Additional Information:

Same term added to 800.2 and 820.2.

NEC® Section: 770.100(B)(1)	Proposal: 16-33 CMP Action: Accept

Proposed Revision:

FPN: See Article 100 for the definition of *Intersystem Bonding Termination.*

Additional Information:

NEC® Section: 770.154	Proposal: 16-57 CMP Action: Accept in Principle

Proposed Revision:

770.113 Installation of Optical Fiber Cables, Optical Fiber Raceways, and Cable Routing Assemblies. Installation of optical fiber cables, optical fiber raceways, and cable routing assemblies shall comply with 770.113 (A) through (I).

(A) Listing. Optical fiber cables, optical fiber raceways, and cable routing assemblies installed in buildings shall be listed.

(D) Risers - Cables and Raceways in Vertical Runs. The following cables and raceways shall be permitted in vertical runs penetrating one or more floors and in vertical runs in a shaft:

(1) Types OFNP, OFCP, OFNR, and OFCR

(2) Plenum and riser optical fiber raceways installed in compliance with 770.110 and listed riser cable routing assemblies

(3) Types OFNP, OFCP, OFNR, and OFCR installed in plenum optical fiber raceway, plenum communications raceway, riser optical fiber raceway, riser communications raceway or listed riser cable routing assemblies.

NEC® Section: 770.154 (New Table 770.154(A))	Proposal: 16-56 CMP Action: Accept in Principle

Proposed Revision: Convert text of 770.154 (A) through (F) into application table.

(S

Table 770.154(A) Applications of Optical Fiber Cables and Raceways [ROP 16-56]

Cable or Raceway Type	Applications												
	In fabricated ducts and plenums as described in 300.22(B)	In other spaces used for environmental air (plenums) as described in 300.22(C)	In risers in vertical runs	In risers in metal raceways or fire-proof shafts	In risers in one- and two-family dwellings	In building locations other than fabricated ducts and plenums, other spaces used for environmental air (plenums), risers distributing frames and cross connect arrays	In cable trays	In distributing frames and cross connect arrays	In hazardous locations in accordance with Chapter 5	In any raceway in Chapter 3	In plenum optical fiber and communications raceways	In riser optical fiber communications raceways	In general-purpose optical fiber and communications raceways
OFNP, OFCP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OFNR, OFCR	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OFNG, OFCG, OFN, OFC	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Plenum Optical Fiber Raceways	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Riser Optical Fiber Raceways	N	N	Y	Y	Y	Y	Y	Y	Y	Y			
General-Purpose Optical Fiber Raceways	N	N	N	N	Y	Y	Y	Y	Y	Y			
Riser Cable Routing Assemblies	N	N	Y	Y	N	Y	N	Y	Y	N	N	N	N
General-Purpose Cable Routing Assemblies	N	N	N	N	N	Y	N	Y	Y	N	N	N	N

Note: An 'N' in the table indicates that the cable type shall not be permitted to be installed in the application. A 'Y' indicates that the cable shall be permitted to be installed in the application, subject to the limitations described in 770.113.

NEC® Section: 800.2	Proposal: 16-105 CMP Action: Accept

Proposed Revision:

Communications Raceway. A raceway listed as a Plenum Communications Raceway, or a Riser Communications Raceway, or a General-Purpose Communications Raceway.

Additional Information:

NEC® Section: 800.3(A)	Proposal: 16-110 CMP Action: Accept in Principle

Proposed Revision:

Chapters 1 through 7. The requirements of Chapters 1 through 7 shall not apply to Article 800 except where the requirements are specifically referenced in Article 800. See 90.3.

Additional Information:

NEC® Section: 800.100(A)(1)	Proposal: 16-140 CMP Action: Accept in Principle

Proposed Revision:

Insulation. The grounding conductor shall be ~~insulated and shall be~~ listed and shall be permitted to be insulated, covered, or bare.

Additional Information:

Same action taken in Sections 820.100(A)(1) and 830.100(A)(1) through panel action on Proposals 16-253 & 16-320.

NEC® Section: Article 810 – Multiple Sections	Proposal: 16-222 CMP Action: Accept in Principle

Proposed Revision:

810.1 Scope. This article covers antenna systems for radio and television receiving equipment, amateur and citizen band radio transmitting and receiving equipment, and certain features of transmitter safety. This article covers antennas such as wire-strung type multi-element, vertical rod, and dish, and also covers the wiring and cabling that connects them to equipment. This article does not cover equipment and antennas used for coupling carrier current to power line conductors.

III. Amateur and Citizen Band Transmitting and Receiving Stations — Antenna Systems

810.51 Other Sections. In addition to complying with Part III, antenna systems for amateur and citizen band transmitting and receiving stations shall also comply with 810.11 through 810.15.

Additional Information:

NEC® Section: 820.100 Exception	Proposal: 16-252 CMP Action: Accept in Principle

Proposed Revision:

Exception: For communication systems using coaxial cable confined within the premises and isolated from outside cable plant, the shield shall be permitted to be grounded by a connection to an equipment grounding conductor as described in 250.118. Connecting to an equipment grounding conductor through a grounded receptacle using a dedicated grounding conductor and permanently connected listed device shall be permitted. Use of a cord and plug for the connection to an equipment grounding conductor shall not be permitted.

Additional Information:

NEC® Section: 830.44(F)	Proposal: 16-312 CMP Action: Accept in Principle

Proposed Revision:

Between Buildings. Network-powered broadband communications cables extending between buildings or structures and also the supports or attachment fixtures shall be ~~acceptable~~ identified for the purpose and shall have sufficient strength to withstand the loads to which they may be subjected.

Additional Information:

Formerly Section 830.44(H).

NEC® Section: Article 840 – Premises-Powered Broadband Communications Systems	Proposal: 16-349 CMP Action: Accept in Principle

Proposed Revision:

840.1 Scope. This article covers premises-powered optical fiber-based broadband communications systems that provide any combination of voice, video, data, and interactive services through an optical network terminal (ONT).

FPN No. 1: A typical basic system configuration consists of an optical fiber cable to the premises (FTTP) supplying a broadband signal to an ONT that converts the broadband optical signal into component electrical signals such as traditional telephone, video, high-speed internet, and interactive services. Powering of the ONT is typically accomplished through an ONT power supply Unit (OPSU) and battery backup unit (BBU) that derives their power input from the available ac at the premises. The optical fiber cable is unpowered and may be nonconductive or conductive.

Additional Information:

NEC® Section: 422.31(C) & 422.32	Proposal: 17-21 CMP Action: Accept

Proposed Revision:

(C) Appliances Rated over 1/8 Horsepower. For permanently connected appliances rated over 1/8 hp, the branch-circuit switch or circuit breaker shall be permitted to serve as the disconnecting means where the switch or circuit breaker is within sight from the appliance. The disconnecting means shall comply with Sections 430.109 and 430.110.

~~**422.32 Disconnecting Means for Motor-Driven Appliance.** If a switch or circuit breaker serves as the connecting means for a permanently connected motor-driven appliance of more than 1/8 hp, it shall be located within sight from the motor controller and shall comply with Part IX of Article 430.~~

Exception: If an ~~motor-driven~~ appliance of more than 1/8 hp is provided with a unit switch that complies with 422.34(A), (B), (C), or (D), the switch or circuit breaker serving as the other disconnecting means shall be permitted to be out of sight from the ~~motor controller~~ appliance.

Additional Information:

NEC® Section: 424.19(A)(2)	Proposal: 17-44 CMP Action: Accept

Proposed Revision:

(2) Heater Containing a Motor(s) Rated over 1⁄8 Horsepower. The above disconnecting means shall be permitted to serve as the required disconnecting means for both the motor controller(s) and heater by one of the following means:

(1) Where the disconnecting means is in sight from the motor controller(s) and the heater, and complies with Part IX of Article 430.

(2) Where the motor(s) of more than 1⁄8 horsepower and the heater are provided with a single unit switch that complies with 422.34(A), (B), (C), or (D), the disconnecting means shall be permitted to be out of sight from the motor controller.

Additional Information:

NEC® Section: 424.44(G)	Proposal: 17-58 CMP Action: Accept

Proposed Revision:

Ground-Fault Circuit-Interrupter Protection. Ground-fault circuit-interrupter protection for personnel shall be provided for cables installed in electrically heated floors of bathrooms, kitchens, and in hydromassage bathtub locations.

Additional Information:

NEC® Section: 680.13	Proposal: 17-106 CMP Action: Accept

Proposed Revision:

680.13 Voltages for Wet Contact. Requirements of this article recognized for an operating voltage of 15 volts or less and for an operating voltage of more than 15 volts are based the assumed use of sinusoidal ac. Where the supply source is other than sinusoidal ac, the following wet contact voltage values shall apply instead of 15 volts sinusoidal ac:

(1) 21.2 volts peak for nonsinusoidal ac.
(2) 30 volts for continuous dc.
(3) 12.4 volts peak for dc that is interrupted at a rate of 10 to 200 Hz.

FPN: Immersion is not included in the meaning of wet. See Chapter 9, listing references, Table 11(A), Note 2, last sentence, and Table 11(B), Note 4, last sentence.

Additional Information:

NEC® Section: 680.22(B)	Proposal: 17-126 CMP Action: Accept

Proposed Revision:

(B) GFCI Protection. Outlets supplying pool pump motors from branch circuits with short-circuit and ground-fault protection rated 15 or 20 amperes, ~~125~~ 120 volt ~~or~~ through 240 volt, single phase, whether by receptacle or direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel.

Additional Information:

NEC® Section: 680.23(A)(3)	Proposal: 17-139 CMP Action: Accept in Principle in Part

Proposed Revision:

(3) GFCI Protection, Relamping. A ground-fault circuit-interrupter shall be installed in the branch circuit supplying luminaires ~~operating at more than 15 volts such that there is no~~ if there is a shock hazard during relamping. A shock hazard is considered to be present during relamping if the luminaire is supplied from a source that exceeds the Class 2 voltage limits "where wet contact is likely to occur" as specified in Chapter 9, Table 11(A) and Table 11 (B). The installation of the ground-fault circuit-interrupter shall be such that there is no shock hazard with any likely fault-condition combination that involves a person in a conductive path from any ungrounded part of the branch circuit or the luminaire to ground.

Additional Information:

NEC® Section: 680.26(B)(2)	Proposal: 17-175 CMP Action: Accept in Principle

Proposed Revision:

Perimeter Surfaces. The perimeter surface shall extend for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces as well as poured concrete surfaces and other types of paving. Perimeter surfaces less than 1 m (3 ft) separated by a permanent wall or building 1.5 m (5 ft) in height or more will require an equipotential bonding grid on the pool side of the permanent wall or building. (Remaining text of section is unchanged)

Additional Information:

NEC® Section: 680.43 Exception No. 2	Proposal: 17-207 CMP Action: Accept in Principle in Part

Proposed Revision:

The equipotential bonding requirements for perimeter surfaces in 680.26(B)(2) shall not apply to a listed self-contained spa or hot tub when installed above the finished floor.

Additional Information:

Section 680.43 covers indoor installations of spas and hot tubs.

NEC® Section: 680.74	Proposal: 17-230 CMP Action:

Proposed Revision:

680.74 Bonding. All metal piping systems and all grounded metal parts in contact with the circulating water shall be bonded together using a solid copper bonding jumper, insulated, covered, or bare, not smaller than 8 AWG. The bonding jumper shall be connected to the terminal on the circulating pump motor that is intended for this purpose. The bonding jumper shall not be required to be connected to a double insulated circulating pump motor. The 8 AWG or larger solid copper bonding jumper shall be required for equipotential bonding in the area of the hydromassage bathtub and shall not be required to be extended or attached to any remote panelboard, service equipment, or any electrode. The 8 AWG or larger solid copper bonding jumper shall be long enough to terminate on a replacement non-double insulated pump motor, and shall be terminated to the equipment grounding conductor of the branch circuit of the motor when a double insulated circulating pump motor is used.

Additional Information:

NEC® Section: 682.14	Proposal: 17-238 CMP Action: Accept in Part

Proposed Revision:

682.14 Submersible or Floating Equipment Power Connection(s). Submersible or floating equipment shall be cord- and plug-connected, using extra hard usage cord, as designated in Table 400.4 and listed with a "W" suffix. The plug and receptacle combination shall be arranged to be suitable for the location while in use. Disconnecting means shall be provided to isolate each submersible or floating electrical equipment from its supply connection(s) without requiring the plug to be removed from the receptacle.

Exception: Equipment listed for direct connection and equipment anchored in place and incapable of routine movement caused by water currents or wind shall be permitted to be connected using wiring methods covered in 682.13.

(B) Location. The disconnecting means shall be readily accessible on land, located not more than 750 mm (30 in.) from the receptacle it controls, and shall be located in the supply circuit ahead of the receptacle. The disconnecting means shall be located within sight but not closer than 1.5 m (5 ft) from the shoreline and shall be elevated not less than 300 mm (12 in.) above the ~~electrical~~ datum plane.

NEC® Section: 406.3(D)(3)	Proposal: 18-24 CMP Action: Accept in Principle

Proposed Revision:

Tamper-Resistant Receptacles. Listed tamper-resistant receptacles shall be provided where replacements are made at receptacle outlets that are required to be tamper-resistant elsewhere in this *Code*.

Additional Information:

NEC® Section: 406.3(D)(4)	Proposal: 18-30 CMP Action: Accept in Principle

Proposed Revision:

Arc-Fault Circuit-Interrupters. Listed combination arc-fault circuit-interrupter receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this code.

Exception: Unless the receptacle is protected by an upstream AFCI.

Additional Information:

NEC® Section: 406.3(D)(5)	Proposal: 18-33 CMP Action: Accept

Proposed Revision:

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

Additional Information:

NEC® Section: 406.11	Proposal: 18-71 & 18-82 CMP Action: Accept in Principle

Proposed Revision:

Tamper-Resistant Receptacles for Dwelling Units. In all areas specified in 210.52, all nonlocking type 125-volt, 15- and 20-ampere receptacles shall be listed tamper-resistant receptacles.

Exception No. 1: Receptacles located more than 1.7 m (5 ½ ft) above the floor.

Exception No. 2: Receptacles that are part of a luminaire or appliance.

Exception No. 3: A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that in normal use is not easily moved from one place to another and that is cord-and-plug connected in accordance with 400.7(A)(6), (A)(7), or (A)(8).

Exception No. 4: Nongrounding receptacles used for replacements as permitted in 406.3(D)(2)(a).

Additional Information:

NEC® Section: 406.13	Proposal: 18-87 CMP Action: Accept in Principle in Part

Proposed Revision:

Tamper-Resistant Receptacles in Guest Rooms and Guest Suites. All nonlocking type, 125-volt, 15- and 20-ampere receptacles shall be listed tamper-resistant receptacles.

Additional Information:

NEC® Section: 406.2 & 406.15	Proposal: 18-90 CMP Action: Accept in Principle

Proposed Revision:

406.2 Definitions: Child Care Facility. A building or structure, or portion thereof, for educational, supervision, or personal care services for more than four children 7 years or less of age.

406.15 Child Care Facilities. In all child care facilities, all nonlocking type 125-volt, 15- and 20- ampere receptacles shall be listed tamper-resistant receptacles.

Additional Information:

NEC® Section: 600.3	Proposal: 18-202 CMP Action: Accept

Proposed Revision:

Listing. Electric signs, section signs, and outline lighting — fixed, mobile, or portable — regardless of voltage shall be listed and installed in conformance with that listing, unless otherwise approved by special permission.

Additional Information:

NEC® Section: 600.5(B)	Proposal: 18-207 CMP Action: Accept in Principle

Proposed Revision:

Rating. Branch circuits that supply signs shall be rated in accordance with 600.5(B)(1) or (B)(2) and shall be considered to be continuous loads for the purposes of calculations.

Additional Information:

NEC® Section: 600.7(B)(1) Exception	Proposal: 18-223 CMP Action: Accept in Principle

Proposed Revision:

Exception: Remote metal parts of a section sign or outline lighting system only supplied by a remote Class 2 power supply shall not be required to be bonded to an equipment grounding conductor.

Additional Information:

NEC® Section: 547.5(G)	Proposal: 19-24 & 19-25 CMP Action: Accept

Proposed Revision:

~~GFCI protection shall not be required for an accessible receptacle supplying a dedicated load where a GFCI protected receptacle is located within 900 mm (3 ft) of the non-GFCI protected receptacle.~~

Additional Information:

NEC® Section: 547.10	Proposal: 19-43 CMP Action: Reject

Proposed Revision:

Delete requirements for equipotential planes and bonding of equipotential planes.

Additional Information:

- Substantiation provides insufficient technical justification for removing the requirement for equipotential planes.
- The use of equipotential planes is an accepted practice in various industries for reducing step-touch potential.
- Removing equipotential planes will reduce the level of safety afforded to livestock and personnel.
- No practical alternative methods have been proposed to provide an equivalent level of safety.

NEC® Section: 550.13(B) Exception	Proposal: 19-71 CMP Action: Accept in Principle

Proposed Revision:

Ground-Fault Circuit Interrupters (GFCI). All 125- volt, single-phase, 15- and 20-ampere receptacle outlets installed outdoors, in compartments accessible from outside the unit, or in bathrooms, including receptacles in luminaires, shall have GFCI protection. GFCI protection shall be provided for receptacle outlets serving countertops in kitchens, and receptacle outlets located within 1.8 m (6 ft) of a wet bar sink. The exceptions in 210.8(A) shall be permitted.

~~*Exception: Receptacles installed for appliances in dedicated spaces, such as for dishwashers, disposals, refrigerators, freezers, and laundry equipment.*~~

Feeders supplying branch circuits shall be permitted to be protected by a ground-fault circuit-interrupter in lieu of the provision for such interrupters specified herein.

Additional Information:

NEC® Section: 553.4 & 555.3	Proposal: 19-241 & 19-252 CMP Action: Reject

Proposed Revision:

Addition of GFCI requirements for floating building and marina distribution systems (service and feeder disconnecting means/OCPDs).

Additional Information:

Although the recommendation has merit, additional technical substantiation and product development is needed. The use of GFCI for personnel protection is not prohibited by the current Code. The proposed requirement for GFCI personnel protection (6 mA leakage) is not practical for all floating building environments.

NEC® Section: 555.13(B)(4)(b)	Proposal: 19-267 CMP Action: Accept in Principle

Proposed Revision:

Where portable power cables are used as permitted in 555.13(A)(2)(2), there shall be an approved junction box of corrosion-resistant construction with permanently installed terminal blocks on each pier section to which the feeder and feeder extensions are to be connected. A listed marine power outlet employing terminal blocks/bars shall be permitted in lieu of a junction box. Metal junction boxes and their covers, and metal screws and parts that are exposed externally to the boxes, shall be of corrosion-resistant materials or protected by material resistant to corrosion.

Additional Information:

NEC® Section: 604.6(A)(2) Exception No. 3 to (2)	Proposal: 19-289/19-295 CMP Action: Reject/Accept

Proposed Revision: *Exception No. 3 to (2): Listed manufactured wiring systems containing unlisted flexible metal conduit of non-circular cross section and/or trade sizes smaller than permitted in Article 348 when supplied with fittings and conductors.*

Additional Information: UL Certification Requirements Decision (CRD) to UL 183:

Exception: Flexible metal conduit is not required to comply with all specified construction dimensions under the following conditions:

a) Trade sizes of 9/16-inch and 5/8-inch oval shaped and flexible metal conduit shall comply with the 1/2-inch trade size performance requirements in UL 1, and trade size of 3/8-inch reduced wall flexible conduit shall be provided with internal and external diameters as specified in Table 7.1. All other construction and performance requirements shall be in accordance with UL 1;

b) All mating fittings and connector assemblies used with conduit specified in (a) shall be factory installed;

c) The field installation end of a fitting or connector intended for field assembly to the building electrical system shall comply with the construction requirements of the Standard For Safety For Conduit, Tubing, and Cable Fittings, UL 514B;

d) All conduit specified in (a) shall be provided with factory installed conductors;

e) The flexible metal conduit in (a) shall be subjected to follow up evaluation on performance testing in accordance with UL 1 on the indicated trade sizes.

NEC® Section: Article 606 – Prefabricated (Wiring) Assemblies	Proposal: 19-298 CMP Action: Accept in Principle in Part

Proposed Revision: 606.1 Scope. The provisions of this article apply to assemblies, partial systems of components, or unassembled kits of components, produced at a factory or assembled in areas not directly subject to inspection by the authority having jurisdiction.

606.2 Definition. Prefabricated (Wiring) Assembly. Assemblies of system components that are able to be inspected at the building site without damage or destruction to the assembly. Each component of an assembly is suitable for separate installation in accordance with this *Code. Assemblies include factory* made subassemblies, combinations of subassemblies, and separate system components in a single kit.

Additional Information: This article **does not pertain** to the following:

(1) Manufactured wiring systems-**Article 604**;
(2) Nonmetallic underground conduit with conductors (NUCC)-**Article 354**;
(3) Listed manufactured prewired assemblies-**Articles 356 and 362**;
(4) Assemblies consisting only of outlet boxes, junction boxes, conduit bodies of fittings supplied with a cover, whether or not it is assembled;
(5) Box support brackets attached by factory welding or other permanent means;
(6) Assemblies consisting only of outlet boxes, device boxes, or junction boxes provided with a ground screw, grounding pigtail or similar device intended to comply with section 250.148 (C), whether or not it is assembled;
(7) Floor boxes;
(8) Poke through floor fittings;
(9) Multioutlet assemblies-**Article 380**