CODES AND STANDARDS COMMITTEE
CODES AMENDMENT SUBCOMMITTEE
MEETING MINUTES

April 10, 2024

A meeting of the Codes Amendment Subcommittee of the Codes and Standards Committee was held on-line using Microsoft Teams Meeting platform. The Chair called the meeting to order at 1:32 PM.

CAS in Attendance:
John Butkus, AIA, Architect
Johnny Carrier, Residential Contractor
Anthony Cinicola, Building Official
Paul Costello, National Building Trades Labor
Terry Deveney, Builder - Nonresidential
Thomas DiBlasi, PE, Structural
Louis Free, AIA, Architect, CAS Chair
David McKinley, Public Member – Accessibility
Henry Miga, Building Official
Timothy Mikloiche, Electrical Contractor
Michael Musco, PE, Electrical
Illona Prosol, PE, Fire Protection Engineer
Michael Sinsigalli, Fire Marshal
Fred Wajcs, Jr., Public Member
William Zoeller, RA, Energy Efficiency

DAS in Attendance:
William Abbott, OSFM, State Fire Marshal
Royal Brooks, DAS Construction Services, Building Official
Danielle Hart, DAS Construction Services, Administrative Staff
Darren Hobbs, DAS, Deputy Commissioner, Real Estate & Construction
Kimberly Rogers, OSBI, Deputy State Building Inspector
Omarys Vasquez, AIA, NOMA, OSBI, State Building Inspector

Also Present:
Christopher Baldwin
Abigail Brown
George Carey
Joseph Cassidy
Roman Kuzmicki
Gregory Grew
Eric Lacey
Thomas Manning
Shawn Mullins
William Nash
Michael Ose
Scott Reagon
Dominique Taudin
Patrick Walsh
Joel Whitten
Walter Woycik
Scott Yusina

1. CAS MINUTES

a. No CAS meeting minutes to approve.

2. COMMUNICATIONS

The following correspondence has been acknowledged as being received by the CAS since the last CAS meeting.

a. Proposed Change of the Connecticut State Building Code received from Leo Smith, DarkSky International dated April 2, 2024 related to IBC (ADD) Section 2703.2 Maximum correlated color temperature. Section addresses limits on color temperature of exterior lighting. This document has been logged by DAS on April 9, 2024 as Code Change Proposal Number CCP25-017-BC-IBC.

b. Proposed Change of the Connecticut State Building Code received from Peter Zvingilas, Connecticut Department of Administrative Services dated April 5, 2024 related to IBC (ADD) Section 420.12 Specialized R-2 dwelling units with a single exit. Section addresses a single exit for R-2 occupancy in not more than five stories meeting specific conditions. This document has been logged by DAS on April 9, 2024 as Code Change Proposal Number CCP25-018-BC-IBC.

c. Proposed Change of the Connecticut State Building Code received from Peter Zvingilas, Connecticut Department of Administrative Services dated April 5, 2024 related to IBC (AMD) Section 1006.3.4 Single exits. Section amendment addresses a single exit or access to a single exit allowed from any story or occupiable roof meeting specific conditions. This document has been logged by DAS on April 9, 2024 as Code Change Proposal Number CCP25-019-BC-IBC.

d. Proposed Change of the Connecticut State Building Code received from Timothy Suden, Milford Fire Marshal Division dated March 1, 2024 related to IBC (ADD) Section 406.2.7.1, (ADD) Section 406.2.7.2, (ADD) Section 406.2.7.3, (ADD) Section 406.2.7.4, (ADD) Section 406.2.7.5, (ADD) Section 406.2.7.6. All sections address the installation of Electric Vehicle (EV) charging stations within parking structures. This document has been logged by DAS on April 9, 2024 as Code Change Proposal Number CCP25-020-BC-IBC.

State Building Inspector Omarys Vasquez reported that one additional Code Change Proposal has been received this afternoon.

e. Proposed Change of the Connecticut State Fire Safety Code received from Brain Long related to NFPA 1 - Fire Code, Annex C - Safety Building Marking Systems. Michael Sinsigalli noted that NFPA 1 is the Connecticut State Fire Prevention Code and should not be coming to CAS. Chair Louis Free requested that the document submitted be forwarded to State Fire Marshall William Abbott and the Office of State Fire Marshal.

3. OLD BUSINESS

a. 2025 Connecticut State Building Code and Fire Safety Code Development

i) General Discussion.

(1) Chair Louis Free requested William Nash, Senior Regional Manager, International Code Council, to provide an update on the anticipated availability of the 2024 International Energy Conservation Code (IECC). Mr. Nash reported that the ICC maintains mid-April for publishing of the IECC.

(2) State Building Inspector Vasquez reported that OSBI is developing a list of trends regarding code questions and modifications requests received by OSBI. Once the trends list is formalized, it will be sent to the specific Code Work Groups for review and development of recommendations for code change proposal to address the trends.

(3) State Fire Marshal Abbott reported that OSFM has conducted three meeting related to adopting IFC Chapter 11 - Construction Requirements for Existing Buildings and eliminating the use of NFPA 101. Existing buildings/occupancies references back to legacy buildings for which a permit was issued prior to January 1, 2006. So far this effort is presenting itself to be a challenge however OSFM is making slow progress. Additionally, State Fire Marshal Abbott understands the Connecticut Fire Marshals Association 541 Committee has disseminated the IFC chapters out to their groups for review and comment.

ii) Work Group Presentation – National Electrical Code

- Reference Documents: 2023 NFPA 70; 2024 IBC, Chapter 27.
- CAS: Michael Musco, Work Group Chair; Paul Costello, Timothy Mikloiche;
  OSBI: Royal Brooks;
  Constituency: Michael Ose (IAEI).
- Presentation Material: AMENDMENTS TO THE 2023 NFPA 70, NATIONAL ELECTRICAL CODE dated April 10, 2024 (12 pages, copy attached)

Michael Musco, Paul Costello and Timothy Mikloiche reported for the Electrical Code Work Group (ECWG).

Michael Musco stated that the review and amendments noted by the ECWG are associated the 2023 NFPA 70 National Electrical Code on Revision 3. The ECWG has not started to work on the coordination with the IECC, IFC and the IRC.

(1) Review of 2023 NFPA 70 National Electrical Code (Revision 3)

(a) Article 90 - Introduction, (Amd) 90.2 Scope.

(A) Covered. (2) Added the word "carnivals" after "parking lots," to the list because there appears to be issues with carnivals not following proper protocol when they are taking out the permits.

(B) Not covered. (5) b. Delete "Are located in" and insert "Are in".

(B) Not covered. (5) c. Add "," after " transmission".

(b) Article 90 - Introduction, (Amd) 90.4 Enforcement.

Amended the language who administers the code, brought in the reference to the 2025 Connecticut State Building code and who is allowed to make the interpretations.

(c) Chapter 1 - General, Article 100 – Definitions.

(Amd) Authority having jurisdiction. Defines local building official enforces the code, State Building Inspector administers, interprets and grants exceptions to the State Building Code.

(Amd) Special Permission. Defines Request for Modifications of the State Building Code.

(d) Chapter 2 - Wiring and Protection, (Amd) Section 210.8(A) GFCI Protection. Dwelling Units.

Revise (12) deleting "and" and inserting "or". This change for indoor damp or wet locations is consistent with a Tentative Interim Amendment (TIA) to the 2023 NFPA 70 issued by NFPA.

(e) Chapter 2 - Wiring and Protection, (Amd) Section 210.8(F) GFCI Protection for Outdoor Outlets.

Delete Exception No. 2 related to GFCI protection not required for listed HVAC equipment, this exception expires September 1, 2026.

(f) Chapter 2 - Wiring and Protection, (Add) Section 210.15 Receptacle Outlet Locations Prohibited

Section 210.15 was added to address the issue that arises when receptacles are installed on cabinet sides or wall surfaces that are below countertops and work surfaces. This is consistent with proposed language in the 2026 NEC.

(g) Chapter 2 - Wiring and Protection, (Amd) Section 210.52(C)(2) Island and Peninsular Countertops and Work Surfaces.

The second sentence in the section was deleted to eliminate the requirement for provision of a future addition of a receptacle outlet.

(h) Chapter 2 - Wiring and Protection, Section 225.41 Emergency Disconnects.

Section 225.41 is new in the 2023 NEC and provides a new requirement to have an emergency disconnect for one-and two-family dwelling units supplied by an outside feeder or branch circuit (similar to the requirements in Section 230.85 for services). After discussion, the ECWG determined no action is necessary.

(i) Chapter 2 - Wiring and Protection, Section 230.46 Spliced and Tapped Conductors.

Delete the current 2022 Connecticut State Building Code Amendment Section 230.46, the effective date has expired.

(j) Chapter 2 - Wiring and Protection, (Amd) Section 230.85 Emergency Disconnects.

Retain the current 2022 Connecticut State Building Code Amendment.

(k) Chapter 2 - Wiring and Protection, Section 250.50 Grounding Electrode System.

Delete the current 2022 Connecticut State Building Code Amendment Section 250.50.

(l) Chapter 2 - Wiring and Protection, (Add) Section 250.52 (A)(3) Concrete Encased Electrode.

Retain the current 2022 Connecticut State Building Code Amendment.

(m) Chapter 3 - Wiring Methods and Materials, (Add) Section 300.4.1 Drilling and notching.

Retain the current 2022 Connecticut State Building Code Amendment.

(n) Chapter 3 - Wiring Methods and Materials, (Add) Section 300.4(C) Conductors and Wiring Methods Subject to Water, Fire, or Overheating.

This new section is added to address the issue with conductors and wiring methods that were affected from the event of a fire or other exposure to water. The section provides guidance where to go to get information.

Question was asked if code references for informational purposes, in this case NEMA GD 1-2019 and NEMA GD 2-2021, is enforceable? Timothy Mikloiche pointed out that it is standard for the NEC to provide references to informational information. Paul Costello clarified that the NEC informational notes are not enforceable, but they are there only to provide guidance, as necessary.

(o) Chapter 3 - Wiring Methods and Materials, (Amd) 314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets.

Amended section to provide clarification on the boxes to be used for suspended paddle fans or ceiling mounted power fans.

(p) Chapter 4 - Equipment for General Use, (Amd) Section 406.9(C) Bathtub and Shower Space.

Amended section based on a TIA for receptacle location restrictions clarified in and around bathtubs and showers and new exception added to accommodate the toilets with electronic seats, bidets, and other functions.

(q) Chapter 4 - Equipment for General Use, (Amd) 440.14 Location

Retain the current 2022 Connecticut State Building Code Amendment to add Exception No. 3.

(r) Chapter 5 - Special Occupancies, (Amd) 517.13 Equipment Grounding Conductor for Receptacles and Fixed Electrical Equipment in Patient Care Spaces.

This amendment from the current 2022 Connecticut State Building Code Amendment is addressed by the 2023 NEC. Therefore the ECWG has determined this amendment can be deleted without substitution and the 2023 NEC Section 517.13 retained.

(s) Chapter 5 - Special Occupancies, (Amd) 525.5 Overhead Conductor Clearances.

Retain the current 2022 Connecticut State Building Code Amendment to add an exception to (B)(2).

(t) Chapter 6 - Special Equipment, (Del) 680.4 Inspections After Installation.

Retain the current 2022 Connecticut State Building Code Amendment to delete Section 680.4.

(u) Chapter 7 - Special Conditions, (Amd) 700.3 Tests and Maintenance.

(Amd) (D) Record Keeping. Amend Section 700.3(D) to make the records available to those authorized to design, install, inspect, maintain, and operate the system.

(Del) (F) Temporary Source of Power for Maintenance or Repair of the Alternate Source of Power. Retain the current 2022 Connecticut State Building Code Amendment to delete without substitution Section 700.3(F).

(v) Chapter 7 - Special Conditions, (Amd) 700.7 Signs.

Retain the current 2022 Connecticut State Building Code Amendment to amend Section 700.7(A) Emergency sources.

(w) Chapter 7 - Special Conditions, (Amd) 701.3 Tests and Maintenance.

(Amd) (B) Tested Periodically. Amend Section 701.3(N) for the AHJ to approve the periodic testing schedule.

(Amd) (D) Record Keeping. Amend Section 701.3(D) to make the records available to those authorized to design, install, inspect, maintain, and operate the system.

(x) Chapter 7 - Special Conditions, (Amd) 701.7 Signs.

Retain the current 2022 Connecticut State Building Code Amendment to amend Section 701.7(A) Mandated standby.

(y) Chapter 7 - Special Conditions, (Amd) 702.7 Sign.

Retain the current 2022 Connecticut State Building Code Amendment to amend Section 702.7(A) Standby.

(z) Chapter 7 - Special Conditions, (Amd) 708.6 Testing and Maintenance.

(Amd) (A) Conduct or Witness Test. Amend Section 708.6(A) for the AHJ to periodically witness the test after installation.

(Amd) (D) Record Keeping. Amend Section 708.6(D) to make the records available to those authorized to design, install, inspect, maintain, and operate the system.

(aa) Chapter 7 - Special Conditions, 725.121 Power Sources for Class 2 and Class 3 Circuits.

Delete the current 2022 Connecticut State Building Code Amendment Section 725.121, the effective date has expired.

iii) Chair Free reminded the CAS that when the State of Connecticut adopts the next NEC, we adopt the edition and printing of the document we reviewed, voted on and get approved through regulation review process.

This establishes the regulation that will be enforced for public use. NFPA notes within their codes and standards that these documents may be superseded at any time by the issuance of a new edition, may be amended from time to time with the issuance of Tentative Interim Amendments (TIAs), or be corrected by Errata. An official NFPA code and standard at any point in time consists of the current edition of the document together with any TIAs and Errata then in effect. The NEC available for the AHJ and public may not be same version as the one the State has adopted, especially now with the NFPA on-line digital standards in which the TIAs will be incorporated.

iv) Johnny Carrier reported back on his review and recommendation related to 2024 IMC Section 505 Domestic Cooking Exhaust Equipment, Subsection 505.4 Markup air required (see CAS Meeting Minutes dated March 27, 2024, Item 3.a.ii)(1)(b)). This relates to the 600-cfm alternative added in the 2016

Connecticut Amendments when the 400-cfm requirement was new to the IMC for the first time. The 600-cfm amendment was proposed to be dropped with the 2018 amendments but with COVID shutdown the amendments never moved forward. In the current Connecticut Amendments it was overlooked,, Mr. Carrier continues to support the deletion of the 600-cfm amendment.

v) Proposed Subcommittee Meeting Schedule (Two-Month Look Ahead). The following is subject to change pending the outcome of the code reviews by the Code Work Groups.

(1) April 24, 2024 (To Be Confirmed)
Existing Building Code Work Group Presentation

- 2024 IEBC.
- CAS: John Butkus, Work Group Chair; Johnny Carrier, Terry Deveney, Keith Flood, Louis Free, Michael Sinsigalli
  OSBI: Omarys Vasquez
  Constituency: Anthony Cinicola (CBOA), Terrance Dunn (CFMA), Henry Miga (CBOA)

(2) May 8, 2024 Building Code (General) Work Group Presentation

- 2024 IBC, Chapters 1, 2, 12, 13, 17, 24 – 26, 30-35, Appendices.
- CAS: John Butkus, Work Group Chair; Anthony Cinicola, Terry Deveney, Louis Free, Henry Miga
  OSBI: Anthony Arborio, Kimberly Rogers
  Constituency: Laurie Audette (OEC), Anthony Cinicola (CBOA), Lori Mathieu (DPH), Henry Miga (CBOA), Elizabeth Proiette (OEC), Sue Wyeth (AIA)

(3) May 22, 2024 Residential Code Work Group Presentation

- 2024 IRC (Except Chapter 11); 2024 International Swimming Pool and Spa Code.
- CAS: Johnny Carrier, Work Group Chair; John Butkus, Anthony Cinicola, Donald Harwood,
  OSBI: Anthony Arborio, Kimberly Rogers
  Constituency: Johnny Carrier (HBRA) Anthony Cinicola (CBOA), Lori Mathieu (DPH) Kelly McKeivey (NSPA) Henry Miga (CBOA) Jim Perras (HBRA)

4. NEW BUSINESS

No new business.

5. GOOD OF THE ORDER

6. ADJOURNMENT

Johnny Carrier made a motion to adjourn the meeting at 3:17 PM, Henry Mega second the motion. No discussion, the vote was all in favor and none opposed, the motion for adjournment is APPROVED.

The next Codes Amendment Subcommittee meeting is set for Wednesday, April 24, 2024 at 1:30 PM and will be held on-line using Microsoft Teams Meeting platform.

Louis Free, Chair
Codes Amendment Subcommittee

Attachment: AMENDMENTS TO THE 2023 NFPA 70, NATIONAL ELECTRICAL CODE dated April 10, 2024

2024-0410-CAS_Minutes-Draft

AMENDMENTS TO THE 2023 NFPA 70, NATIONAL ELECTRICAL CODE

ARTICLE 90 – INTRODUCTION

(Amd) 90.2 Scope.

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

(1) Public and private premises, including:

a. buildings and structures;

b. utility connections, additions and alterations to mobile homes;

c. utility connections to recreational vehicles; and

d. floating buildings.

(2) Yards, lots, parking lots, carnivals and industrial substations.

(3) Installations of conductors and equipment that connect to the supply of electricity.

(4) Installations used by the electric utility, such as office buildings, warehouses, garages, machine shops and recreational buildings that are not an integral part of a generating plant, substation or control center.

(5) Installations supplying shore power to ships and watercraft in marinas and boatyards, including monitoring of leakage current.

(6) Installations used to export electric power from vehicles to premises wiring or for bidirectional current flow.

(B) Not covered. This code does not cover the following:

(1) Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft or automotive vehicles other than mobile homes and recreational vehicles.

(2) Installations underground in mines and self-propelled mobile surface mining machinery and its attendant electrical trailing cable.

(3) Installations of railways for generation, transformation, transmission or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communications purposes.

(4) Installations of communications equipment under the exclusive control of communications utilities located outdoors or in building spaces used exclusively for such installations.

(5) Installations under the exclusive control of an electric utility where such installations:

a. Consist of service drops or service laterals, and associated metering; or

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

c. Are on property owned or leased by the electric utility for the purpose of communications, metering, generation, control, transformation, transmission or distribution of electric energy; or

d. Are located by other written agreements either designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations. These written agreements shall be limited to installations for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy where legally established easements or rights-of-way cannot be obtained. These installations shall be limited to federal lands, Native American reservations through the U.S. Department of the Interior Bureau of Indian Affairs, military bases, lands controlled by port authorities and state agencies and departments, and lands owned by railroads.

(C) Special permission. The State Building Inspector may grant an exception for the installation of conductors and equipment that are not under the exclusive control of the electric utilities and are used to connect the electric utility supply system to the service-entrance conductors of the premises served, provided such installations are outside a building or terminate immediately inside a building wall.

(Amd) 90.4 Enforcement. Administration of this code shall be in accordance with the provisions of Chapter 1 of the 2024 International Building Code portion of the 2025 Connecticut State Building Code. For the purposes of this code, the authority having jurisdiction for interpreting the rules and for granting the special permission contemplated in a number of rules is the State Building Inspector. Interpretations shall be requested verbally or in writing from the Office of the State Building Inspector. Special permission shall be requested in writing using the Request for Modification of the State Building Code form available from local building departments or from the Office of the State Building Inspector, 450 Columbus Boulevard, Suite 1303, Hartford CT 06103. www.portal.ct.gov/DAS.

Where this Code contains requirements for a new product, construction, or material that has an effective date after the adoption date of the 2025 Connecticut State Building Code, those requirements are not part of this Code.

CHAPTER 1 – GENERAL

ARTICLE 100 – Definitions.

(Amd) Authority having jurisdiction. The organization, office or individual responsible for approving equipment, material, an installation, or a procedure. The local building official has the esponsibility for approving construction documents, issuing permits, approving materials and procedures and for making inspections from time to time as the construction process requires. The State Building Inspector has the responsibility for administering the Connecticut State Building Code, interpreting the Connecticut State Building Code and for granting exceptions from specific rules of the Connecticut State Building Code. See the definition of "Special Permission," and Article 90.4.

(Amd) Special Permission. For the purposes of this code, the authority having jurisdiction for granting the special permission contemplated in a number of rules is the State Building Inspector. Special permission shall be requested in writing using the Request for Modification of the State Building Code form available from local building departments or from the Office of the State Building Inspector, 450 Columbus Boulevard, Suite 1303, Hartford CT 06103. www.portal.ct.gov/DAS.

CHAPTER 2 – WIRING AND PROTECTION

(Amd) 210.8(A)(12)

(12) Indoor damp or wet location

Commented [PC1]: Corrected indoor damp ~~and~~ or wet location

(Amd) 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. (F) as follows

(F) Outdoor Outlets. For dwellings, all outdoor outlets, other than those covered in 210.8(A), Exception No. 1, including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall be provided with GFCI protection:

(1) Garages that have floors located at or below grade level

(2) Accessory buildings

(3) Boathouses

If equipment supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be supplied with GFCI protection.

Exception No. 1: GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

Exception No. 2: GFCI protection shall not be required for listed HVAC equipment.

Commented [PC2]: This exception shall expire September 1, 2026 was removed from Exception No.2.

(Add) 210.15 Receptacle Outlet Locations Prohibited

Receptacle outlets in kitchens shall not be installed on cabinet sides or wall surfaces that are below countertops and work surfaces.

Exception No. 1: Receptacle outlets installed in a drawer, cabinet or similar area shall be permitted to be installed below countertops and work surfaces.

Commented [PC3]: Section 210.15 was added to address the issue that arises when receptacles are installed on the sides of cabinets.

(Amd) 210.52(C)(2)

(2) Island and Peninsular Countertops and Work Surfaces.
Receptacle outlets, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with 210.52(C)(3). ~~If a receptacle outlet is not provided to serve an island or peninsular countertop or work surface, provisions shall be provided at the island or peninsula for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.~~

Commented [PC4]: The second sentence in the section was deleted to eliminate the requirement for provision of a future addition of a receptacle outlet.

~~**(Amd) 230.46 Spliced and Tapped Conductors.** Service-entrance conductors shall be permitted to be spliced or tapped in accordance with 110.14, 300.5(E), 300.13, and 300.15. Power distribution blocks, pressure connectors, and devices for splices and taps shall be listed.~~

Commented [PC5]: The effective date has expired.

(225.41) Emergency Disconnects

For one-and two-family dwelling units, an emergency disconnecting means shall be installed.

Commented [PC6]: New in the 2023, Will this make a difference those because it will be a new feeder anyways and not an existing? Discussion on deleting.

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

Commented [PC7]: The 2022 SBC amendment retains.

(1) Service disconnects marked as follows:

EMERGENCY DISCONNECT, SERVICE DISCONNECT

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

EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT

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

EMERGENCY DISCONNECT, NOT SERVICE EQUIPMENT

Markings shall comply with 110.21(B).

~~(Amd) 250.50 Grounding Electrode System. All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are available at each building or structure served shall be bonded together to form the grounding electrode system. Where none of these grounding electrodes exist, one or more of the grounding electrodes specified in 250.52(A)(4) through (A)(8) shall be installed and used.~~

Commented [PC8]: Delete the 2022 ammendment

~~Exception: Concrete-encased electrodes of existing buildings or structures shall not be required to be part of the grounding electrode system where the steel reinforcing bars or rods are not accessible for use without disturbing the concrete.~~

~~(Amd) 250.68(C) Grounding Electrode Conductor Connections. Grounding electrode conductors and bonding jumpers shall be permitted to be connected at the following locations and used to extend the connection to an electrode(s):~~

~~(1) Interior metal water piping that is electrically continuous with a metal underground water pipe electrode and is located not more than 1.52 m (5 ft) from the point of entrance to the building shall be permitted to extend the connection to an electrode(s). Interior metal water piping located more than 1.52 m (5 ft) from the point of entrance to the building shall not be used as a conductor to interconnect electrodes of the grounding electrode system.~~

~~Exception: In industrial, commercial, and institutional buildings or structures, if conditions of maintenance and supervision ensure that only qualified persons service the installation, interior metal water piping located more than 1.52 m (5 ft) from the point of entrance to the building shall be permitted as a bonding conductor to interconnect electrodes that are part of the grounding electrode system, or as a grounding electrode conductor, if the entire length, other than short sections passing perpendicularly through walls, floors, or ceilings, of the interior metal water pipe that is being used for the conductor is exposed.~~

~~(2) The metal structural frame of a building shall be permitted to be used as a conductor to interconnect electrodes that are part of the grounding electrode system, or as a grounding electrode conductor. Hold-down bolts securing the structural steel column that are connected to a concrete-encased electrode complying with 250.52(A)(3) and located in the support footing shall be permitted to connect the metal structural frame of a building or structure to the concrete encased grounding electrode. 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.~~

~~(3) A rebar-type concrete-encased electrode installed in accordance with 250.52(A)(3) with an additional rebar section extended from its location within the concrete footing to an accessible location that is not subject to corrosion shall be permitted for connection of grounding electrode conductors and bonding jumpers in accordance with the following:~~

~~a. The additional rebar section shall be continuous with the grounding electrode rebar or shall be connected to the grounding electrode rebar and connected together by the usual steel tie wires, exothermic welding, welding, or other effective means.~~

~~b. The rebar extension shall not be exposed to contact with the earth without corrosion protection.~~

~~c. Rebar shall not be used as a conductor to interconnect the electrodes of grounding electrode systems.~~

(Add) 250.52(A)(3)
(3) Concrete-Encased Electrode.
A concrete-encased electrode shall consist of at least 6.0 m (20 ft) of either of the following:
(1) One or more bare or zinc galvanized or other electrically conductive coated rebar of not less than 13 mm (1⁄2 in.) in diameter, installed in one continuous 6.0 m (20 ft) length, or if in multiple pieces, the rebar shall be connected together by steel tie wires, exothermic welding, welding, or other effective means to create a 6.0 m (20 ft) or greater length
(2) Bare copper conductor not smaller than 4 AWG
Metal components shall be encased by at least 50 mm (2 in.) of concrete and shall be located horizontally within that portion of a concrete ~~foundation or~~ footing that is in direct contact with the earth or within vertical foundations or structural components or members that are in direct contact with the earth. If multiple concrete-encased electrodes are present at a building or structure, it shall be permissible to bond only one into the grounding electrode system.
Informational Note:
Concrete installed with insulation, vapor barriers, films, or similar items separating the concrete from the earth is not considered to be in "direct contact" with the earth.

CHAPTER 3 – WIRING METHODS AND MATERIALS

(Add) 300.4.1 Drilling and notching.

Commented [PC9]: Retain the amendment from the 2022 SBC.

(A) Structural floor, wall, ceiling and roof members.

(1) Solid sawn lumber. Notches in solid lumber joists, rafters and beams shall not exceed one-sixth of the depth of the member, shall not be longer than one-third of the depth of the member and shall not be located in the middle one-third of the span. Notches at the ends of the member shall not exceed one-fourth the depth of the member. The tension side of members 4 inches (102 mm) or greater in nominal thickness shall not be notched except at the ends of the members. The diameter of holes bored or cut into members shall not exceed one-third the depth of the member. Holes shall not be closer than 2 inches (51 mm) to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches (51 mm) to the notch.

Exception: Notches on cantilevered portions of rafters are permitted provided the dimension of the remaining portion of the rafter is not less than 4-inch (102 mm) nominal and the length of the cantilever does not exceed 24 inches (610 mm).

(2) Engineered wood products. Cuts, notches and holes bored in trusses, structural composite lumber, structural glue-laminated members or I-joists are prohibited except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered in the design of the member by a registered design professional.

(3) Studs. Any stud in an exterior wall or interior bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing interior partitions may be notched to a depth not to exceed 40 percent of a single stud width. Any stud may be bored or drilled, provided

that the diameter of the resulting hole is no greater than 40 percent of the stud width, the edge of the hole is no closer than 5/8 inch to the edge of the stud and the hole is not located in the same section as a cut or notch.

Exception No. 1: A stud may be bored or drilled to a diameter not exceeding 60 per cent of its width, provided that such studs located in exterior walls or interior bearing partitions are doubled and not more than two successive studs are bored.

Exception No. 2: Approved stud shoes may be used when installed in accordance with the manufacturer's recommendations.

(4) Top plates. When wiring, conduit, piping or ductwork is placed in or partly in an exterior wall or interior bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 per cent of its width, a galvanized metal tie of not less than 0.054 inch thick (1.37 mm) (16 ga) and 1 ½ inches (38 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) nails at each side or equivalent. The metal tie must extend a minimum of 6 inches (152 mm) past the opening.

Exception: When the entire side of the wall with the notch or cut is covered by wood structural panel sheathing.

(Add) 300.4(C) Conductors and Wiring Methods Subject to Water, Fire, or Overheating.
Conductors and wiring methods subject to water, fire, or overheating shall be evaluated for damage.
Informational Note No. 1: See NEMA GD 1-2019, Evaluating Water-Damaged Electrical Equipment, for information on electrical equipment and wiring methods damaged by water.
Informational Note No. 2: See NEMA GD 2-2021, Evaluating Fire- and Heat-Damaged Electrical Equipment, for information on electrical equipment and wiring methods damaged by fire or heat.

Commented [PC10]: This new section was added to address the issue with conductors and wiring methods that were affected from the event of a fire or other exposure to water.

(Amd) 314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets.

Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed, shall be marked by their manufacturer on the interior of the box as suitable for this purpose, and shall not support ceiling-suspended (paddle) fans that weigh more than 32 kg (70 lb). For outlet boxes or outlet box systems designed to support ceiling-suspended (paddle) fans that weigh more than 16 kg (35 lb), the required marking shall include the maximum weight to be supported.

Outlet boxes mounted in the ceilings of family rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms and similar areas of dwelling occupancies and located in an area of the ceiling typical for the installation of a ceiling-suspended (paddle) fan shall be installed to accommodate a ceiling-suspended (paddle) fan.

(1) Listed for the sole support of ceiling-suspended (paddle) fans

(2) Installed so as to allow direct access through the box to structural framing capable of supporting a ceiling-suspended (paddle) fan without removing the box

CHAPTER 4 – EQUIPMENT FOR GENERAL USE

(Amd) 406.9(C)

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

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

(1) Horizontal Zone.

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

(2) Vertical Zone.

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

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

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

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

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

(Amd) 440.14 Location – Add exception No. 3.

Commented [PC11]: Retain

(Add) Exception No. 3: Where the interior section of a factory packaged split system is fed solely from the exterior section of the system and the disconnecting means for the exterior section is capable of being locked in the open position, a separate disconnecting means for the interior section shall not be required within sight from that section. The provisions for locking or adding a lock to the disconnecting means shall remain in place with or without the lock installed.

CHAPTER 5 - SPECIAL OCCUPANCIES

(Amd) 517.13 Equipment Grounding Conductor for Receptacles and Fixed Electrical Equipment in Patient Care Spaces. Wiring in patient care spaces shall comply with 517.13(A) and (B).

Commented [PC12]: Discuss removing the 2022 SBC amendment.

Exception No. 1: Luminaires more than 2.3 m (71/ 2 ft) above the floor and switches located outside of the patient care vicinity shall be permitted to be connected to an equipment grounding return path complying with 517.13(A) or (B).

(A) Wiring Methods. All branch circuits serving patient care spaces shall be provided with an effective ground-fault current path by installation in a metal raceway system or a cable having a metallic armor or sheath assembly. The metal raceway system, metallic cable armor, or sheath assembly shall itself qualify as an equipment grounding conductor in accordance with 250.118.

(B) Insulated Equipment Grounding Conductors and Insulated Equipment Bonding Jumpers.

(1) General. The following shall be directly connected to an insulated copper equipment grounding conductor that is clearly identified along its entire length by green insulation and installed with the branch circuit conductors in the wiring methods as provided in 517.13(A):

(1) The grounding terminals of all receptacles other than isolated ground receptacles

(2) Metal outlet boxes, metal device boxes, or metal enclosures

(3) All non–current-carrying conductive surfaces of fixed electrical equipment likely to become energized that are subject to personal contact, operating at over 100 volts

(4) Metal faceplates, by means of a metal mounting screw(s) securing the faceplate to a metal yoke or strap of a receptacle or to a metal outlet box

Exception No. 1: For other than isolated ground receptacles, an insulated equipment bonding jumper that directly connects to the equipment grounding conductor is permitted to connect the box and receptacle(s) to the equipment grounding conductor. Isolated ground receptacles shall be connected in accordance with 517.16.

(2) Sizing. Equipment grounding conductors and equipment bonding jumpers shall be sized in accordance with 250.122.

(Amd) 525.5 Overhead Conductor Clearances. Add the following exception to (B)(2):

Commented [PC13]: Retain

(Add) Exception: Tents erected and dismantled under the supervision of a licensed electrician or other person approved by the authority having jurisdiction may be placed within the 15 feet (4.5 m) space provided the finished height of the tent is a minimum of 10 feet (3.0 m) below the conductors.

CHAPTER 6 – SPECIAL EQUIPMENT

(Del) 680.4 Inspections After Installation. Delete in its entirety without substitution.

Commented [PC14]: Retain

CHAPTER 7 - SPECIAL CONDITIONS

700.3 Tests and Maintenance

(Del) (F) Temporary Source of Power for Maintenance or Repair of the Alternate Source of Power.

Delete in its entirety without substitution.

Commented [PC15]: Discuss removing the 2022 SBC amendment.

(Amd) 700.7 Signs. Amend (A) as follows:

Commented [PC16]: Retain

(Amd) (A) Emergency sources. A sign shall be placed at the service-entrance equipment, at the meter location, and on any equipment up to the service entrance-equipment indicating type and location of onsite emergency power sources.

Exception: A sign shall not be required for individual unit equipment as specified in 700.12(I).

(Amd) 701.7 Signs. Amend (A) as follows:

Commented [PC17]: Retain

(Amd) (A) Mandated standby. A sign shall be placed at the service entrance, at the meter location, and on any equipment up to the service entrance-equipment indicating type and location of on-site legally required standby power sources.

Exception: A sign shall not be required for individual unit equipment as specified in 701.12(J).

(Amd) 702.7 Signs. Amend (A) as follows:

Commented [PC18]: Retain

(Amd) (A) Standby. A sign shall be placed at the service-entrance equipment, at the meter location, and on any equipment up to the service-entrance equipment for all installations that indicates the type and location of on-site optional standby power sources. For one- and two-family dwelling units, a sign shall be placed at the disconnecting means required in 230.85 that indicates the location of each permanently installed on-site optional standby power source disconnect or means to shut down the prime mover as required in 445.18(D).

(Amd) 700.3(D) Record Keeping.

A written record shall be kept of such tests and maintenance and made available to those authorized to design, install, inspect, maintain, and operate the system.

Commented [PC19]: The requirement to make the records available to those authorized to design, install, inspect, maintain, and operate the system were added.

(Amd) 701.3(B)

Systems shall be tested periodically to ensure the systems are maintained in proper operating condition.

Commented [PC20]: The requirement for the AHJ to approve the periodic testing schedule.

(Amd) 701.3(D) Record Keeping.

A written record shall be kept of such tests and maintenance and made available to those authorized to design, install, inspect, maintain, and operate the system.

Commented [PC21]: The requirement to make the records available to those authorized to design, install, inspect, maintain, and operate the system were added.

(Amd) 708.6(A) Testing and Maintenance

(A) Conduct or Witness Test

The authority having jurisdiction shall conduct or witness a test of the complete system upon installation.

Commented [PC22]: The requirement for the AHJ to periodically witness after the test after the installation was removed.

(Amd) 708.6(D) Testing and Maintenance

Conduct or Witness Test

Systems shall be tested periodically to ensure that the systems are maintained in proper operating condition.

~~(Amd) 725.121 Power Sources for Class 2 and Class 3 Circuits. Amend (C) as follows:~~

~~(Amd) 725.121 (C) Marking. The power sources for limited power circuits in 725.121(A)(3), limited power circuits for listed audio/video equipment, listed information technology equipment, listed communications equipment, and listed industrial equipment in 725.121(A)(4) shall have a label indicating the maximum voltage and rated current output per conductor for each connection point on the power source.~~

~~Where multiple connection points have the same rating, a single label shall be permitted to be used. The labeling requirement shall apply to equipment with a rated current per conductor 0.3 amperes or greater.~~

Commented [PC23]: Delete the 2022 CT Amendment because the effective date has expired.