National Fire Protection Association

1 Batterymarch Park, Quincy, MA 02169-7471
Phone: 617-770-3000 • Fax: 617-770-0700 • www.nfpa.org

WORKING DRAFT OF NEC CODE-MAKING PANEL 8 MEETING OUTPUT

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

Document: National Electrical Code®

Revision Cycle: A2025

Meeting Dates: January 15 - 17, 2024

Panel Activity: Input Stage

This is a working draft, prepared by NFPA staff, to record the output generated at the Code-Making Panel 8 First Draft Meeting. It includes draft copies of the First Revisions and any Global Revisions.

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

First Revision No. 7671-NFPA 70-2024 [Detail]

380.3 Reconditioned Equipment.

Reconditioned multioutlet assemblies and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 10:29:04 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7671-NFPA 70-2024

First Revision No. 7791-NFPA 70-2024 [Detail]

Table C.14 Number of Type MC Cables Permitted in Cable Tray (3C Multiconductor MC Cable Non Jacketed Assembly)
(Based on fill in accordance with 392.22, Table 392.22(A)(1), ~~column 1~~, ampacity in accordance with 392.80)

Table C.15 Number of Type MC Cables Permitted in Cable Tray (4C Multiconductor MC Cable Non Jacketed Assembly) (Based on fill in accordance with 392.22, Table 392.22(A)(1), ~~column 1,~~ ampacity in accordance with 392.80)

Table C.16 Number of Type TC Cables Permitted in Cable Tray (3C Multiconductor TC Cable Assembly) (Based on fill in accordance with 392.22, Table 392.22(A)(1), ~~column 1,~~ ampacity in accordance with 392.80)

Table C.17 Number of Type TC Cables Permitted in Cable Tray (4C Multiconductor TC Cable Assembly) (Based on fill in accordance with 392.22, Table 392.22(A)(1), ~~column 1,~~ ampacity in accordance with 392.80)

Table C.18 Number of Single Conductor Cables Permitted in Cable Tray
(Based on fill in accordance with 392.22, Table 392.22(B)(1), ~~column 1,~~ ampacity in accordance with 392.80)

Table C.19 Number of Single Conductor Cables Permitted in Cable Tray
(Based on fill in accordance with 392.22, Table 392.22(B)(1), ~~column 1,~~ ampacity in accordance with 392.80)

Table C.20 Number of Single Conductor Cables Permitted in Cable Tray
(Based on fill in accordance with 392.22, Table 392.22(B)(1), ~~column 1,~~ ampacity in accordance with 392.80)

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7791_Detail_AnnexC.docx	For Staff Use	

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 09:35:27 EST 2024

Committee Statement

Committee Statement: Tables references corrected.
Response Message: FR-7791-NFPA 70-2024

Public Input No. 1588-NFPA 70-2023 [Annex C]

First Revision No. 7805-NFPA 70-2024 [Detail]

[New Section After 342.28]

342.29 Paired Locknuts.

Paired locknuts shall be used per each enclosure opening that is not a threaded hub. The locknuts shall be installed with a minimum of one locknut on each side of the penetrated enclosure wall. Other fittings listed for the purpose are permitted to serve as the locknut installed inside the enclosure.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 10:18:37 EST 2024

Committee Statement

Committee Statement: This revision identifies the requirements for the use of paired locknuts to maintain electrical and mechanical continuity.
Response Message: FR-7805-NFPA 70-2024

Public Input No. 1393-NFPA 70-2023 [New Section after 342.28]

First Revision No. 7824-NFPA 70-2024 [Detail]

[New Section After 344.28]

344.29 Paired Locknuts.

Paired locknuts shall be used per each enclosure opening that is not a threaded hub. The locknuts shall be installed with a minimum of one locknut on each side of the penetrated enclosure wall. Other fittings listed for the purpose are permitted to serve as the locknut installed inside the enclosure.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 10:51:55 EST 2024

Committee Statement

Committee Statement: This revision identifies the requirements for the use of paired locknuts to maintain electrical and mechanical continuity.

Response Message: FR-7824-NFPA 70-2024

Public Input No. 1394-NFPA 70-2023 [New Section after 344.28]

First Revision No. 7853-NFPA 70-2024 [Detail]

[Add the following product safety standards to Annex A, Table A.1(a)]

371	UL 1386	Flexible Bus Systems, 2022
	UL 1387	Flexible Insulated Bus , 2022

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 13:34:04 EST 2024

Committee Statement

Committee Statement: This first revision adds the two product safety standards associated with Article 371 to Table A.1(a) for clarity and completeness.
Response Message: FR-7853-NFPA 70-2024

Public Input No. 4397-NFPA 70-2023 [New Definition after Definition:]

First Revision No. 7889-NFPA 70-2024 [Detail]

312.3 Recondition Equipment. [Move existing 312.3 to 312.5]
Reconditioned Cabinets, Cutout Boxes, and Meter Socket Enclosures shall not be permitted.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 15:42:06 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7889-NFPA 70-2024

First Revision No. 7865-NFPA 70-2024 [Section No. 312.1]

312.1 Scope.

This article covers the installation and construction specifications of cabinets, cutout boxes, and meter socket enclosures. It does not apply to equipment operating at over 1000 volts ac , 1500 volts dc, nominal, except as specifically referenced elsewhere in the *Code*.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 14:21:47 EST 2024

Committee Statement

Committee Statement: The language is revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.

Response Message: FR-7865-NFPA 70-2024

First Revision No. 7886-NFPA 70-2024 [Section No. 312.2]

312.2 Damp or Wet Locations.

Enclosures in damp or wet locations shall comply with 312.2(A) and 312.2(B).

(A) Weatherproof Enclosure.

In damp or wet locations, surface-type enclosures within the scope of this article shall be placed or equipped so as to prevent moisture or water from entering and accumulating within the cabinet or cutout box, and shall be mounted so there is at least 6-mm (¼-in.) airspace between the enclosure and the wall or other supporting surface. Enclosures installed in wet locations shall be weatherproof.

(B) Raceways or Cables Above Live Parts.

For enclosures in wet locations, raceways or cables entering above the level of uninsulated live parts shall use fittings listed for wet locations.

Exception: Nonmetallic enclosures shall be permitted to be installed without the airspace on a concrete, masonry, tile, or similar surface.

Informational Note: See 300.6 for protection against corrosion.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7886_312.2.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:32:33 EST 2024

Committee Statement

Committee Statement: Section 312.2 which contains multiple requirements is parsed into two list items without technical changes to the provisions. This change improves clarity and is in accordance with NFPA Style Manual section 3.5.1.2. The content is relocated from 312.2 to Section 312.4 for correlation with NEC Style Manual Section 2.2.1 regarding Listing Requirements being located as the xxx.2 section and reconditioning requirements located as xxx.3.

Response Message: FR-7886-NFPA 70-2024

Public Input No. 3969-NFPA 70-2023 [Section No. 312.2]

312.2 Damp or Wet Locations. [Move text to (A) and (B)]

Enclosures in damp or wet locations shall comply with 312.2(A) and 312.2(B).~~In damp or wet locations, surface-type enclosures within the scope of this article shall be placed or equipped so as to prevent moisture or water from entering and accumulating within the cabinet or cutout box, and shall be mounted so there is at least 6-mm (1⁄4-in.) airspace between the enclosure and the wall or other supporting surface. Enclosures installed in wet locations shall be weatherproof. For enclosures in wet locations, raceways or cables entering above the level of uninsulated live parts shall use fittings listed for wet locations.~~

~~*Exception: Nonmetallic enclosures shall be permitted to be installed without the airspace on a concrete, masonry, tile, or similar surface.*~~

~~Informational Note: See 300.6 for protection against corrosion.~~

(A) Weatherproof Enclosure.

In damp or wet locations, surface-type enclosures within the scope of this article shall be placed or equipped so as to prevent moisture or water from entering and accumulating within the cabinet or cutout box, and shall be mounted so there is at least 6-mm (1⁄4-in.) airspace between the enclosure and the wall or other supporting surface. Enclosures installed in wet locations shall be weatherproof.

(B) Raceways or Cable Above Live Parts.

For enclosures in wet locations, raceways or cables entering above the level of uninsulated live parts shall use fittings listed for wet locations.

Exception: Nonmetallic enclosures shall be permitted to be installed without the airspace on a concrete, masonry, tile, or similar surface.

Informational Note: See 300.6 for protection against corrosion.

First Revision No. 7877-NFPA 70-2024 [Section No. 312.5(A)]

(A) Openings to Be Closed.

Openings through which conductors, cables, or raceways enter shall be effectively closed ~~in an approved manner~~ .

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:17:07 EST 2024

Committee Statement

Committee Statement: This revision clarifies that openings may be suitable for not only conductors, but also cables and raceways. Unused openings are addressed in 110.12(A) and are not duplicated here.

Response Message: FR-7877-NFPA 70-2024

Public Input No. 2377-NFPA 70-2023 [Section No. 312.5(A)]

First Revision No. 7879-NFPA 70-2024 [Section No. 312.5(C)]

(C) Cables.

Where a cable wiring method is used, each cable shall be secured to the cabinet, cutout box, or meter socket enclosure.

Exception No. 1: Cables with entirely nonmetallic sheaths shall be permitted to enter the top of a surface-mounted enclosure through one or more nonflexible raceways not less than 450 mm (18 in.) and not more than 3.0 m (10 ft) in length, provided all of the following conditions are met:

(1) Each cable is fastened within 300 mm (12 in.), measured along the sheath, of the outer end of the raceway.

(2) The raceway extends directly above the enclosure and does not penetrate a structural ceiling.

(3) A fitting is provided on each end of the raceway to protect the cable(s) from abrasion and the fittings remain accessible after installation.

(4) The raceway is sealed or plugged at the outer end using approved means so as to prevent access to the enclosure through the raceway.

(5) The cable sheath is continuous through the raceway and extends into the enclosure beyond the fitting not less than 6 mm (¼ in.).

(6) The raceway is fastened at its outer end and at other points in accordance with the applicable article.

(7) Where installed as conduit or tubing, the cable fill does not exceed the amount that would be permitted for complete conduit or tubing systems by Table 1 of Chapter 9 of this Code and all applicable notes thereto. Note 2 to the tables in Chapter 9 does not apply to this condition.

Informational Note: See Chapter 9, Table 1, including Note 9, for allowable cable fill in circular raceways. See 310.15(C)(1) for required ampacity reductions for multiple cables installed in a common raceway.

Exception No. 2: Single conductors and multiconductor cables shall be permitted to enter enclosures in accordance with 392.46(A) or (B).

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:19:18 EST 2024

Committee Statement

Committee Statement: This revision clarifies that the securing requirement does not apply to cables contained in a raceway wiring method.

Response Message: FR-7879-NFPA 70-2024

Public Input No. 220-NFPA 70-2023 [Section No. 312.5(C)]

First Revision No. 7880-NFPA 70-2024 [Section No. 312.6]

312.6 Deflection of Conductors.

Conductors at terminals or conductors entering or leaving cabinets, cutout boxes, and meter socket enclosures shall comply with 312.6(A) ~~through (C~~ and 312.6(B).

Exception: Wire-bending space in enclosures for motor controllers with provisions for one or two wires per terminal shall comply with 430.10(B).

(A) Width of Wiring Gutters.

Conductors shall not be deflected within a cabinet or cutout box unless a gutter having a width in accordance with Table 312.6(A) is provided. Conductors in parallel in accordance with 310.10(G) shall be judged on the basis of the number of conductors in parallel.

Table 312.6(A) Minimum Wire-Bending Space at Terminals and Minimum Width of Wiring Gutters

Wire Size (AWG or kcmil)		Wires per Terminal									
		1		2		3		4		5	
All Other Conductors	Compact Stranded AA-8000 Aluminum Alloy Conductors (see Note 2)	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
14–10	12–8	Not specified		—	—	—	—	—	—	—	—
8–6	6–4	38.1	1½	—	—	—	—	—	—	—	—
4–3	2–1	50.8	2	—	—	—	—	—	—	—	—
2	1/0	63.5	2½	—	—	—	—	—	—	—	—
1	2/0	76.2	3	—	—	—	—	—	—	—	—
1/0–2/0	3/0–4/0	88.9	3½	127	5	178	7	—	—	—	—
3/0–4/0	250–300	102	4	152	6	203	8	—	—	—	—
250	350	114	4½	152	6	203	8	254	10	—	—
300–350	400–500	127	5	203	8	254	10	305	12	—	—
400–500	600–750	152	6	203	8	254	10	305	12	356	14
600–700	800–1000	203	8	254	10	305	12	356	14	406	16
750–900	—	203	8	305	12	356	14	406	16	457	18
1000–1250	—	254	10	—	—	—	—	—	—	—	—
1500–2000	—	305	12	—	—	—	—	—	—	—	—

Notes:

1. Bending space at terminals shall be measured in a straight line from the end of the lug or wire connector (in the direction that the wire leaves the terminal) to the wall, barrier, or obstruction.

2. This column shall be permitted to be used to determine the minimum wire-bending space for compact stranded aluminum conductors in sizes up to 1000 kcmil and manufactured using AA-8000 series electrical grade aluminum alloy conductor material in accordance with 310.3(B). The minimum width of the wire gutter space shall be determined using the all other conductors value in this table.

(B) Wire-Bending Space at Terminals.

Wire-bending space at each terminal shall be provided in accordance with 312.6(B)(1) or (B)(2).

(1) Conductors Not Entering or Leaving Opposite Wall.

Table 312.6(A) shall apply where the conductor does not enter or leave the enclosure through the wall opposite its terminal.

(2) Conductors Entering or Leaving Opposite Wall.

Table 312.6(B)(2) shall apply where the conductor does enter or leave the enclosure through the wall opposite its terminal.

Exception No. 1: Where the distance between the wall and its terminal is in accordance with Table 312.6(A), a conductor shall be permitted to enter or leave an enclosure through the wall opposite its terminal, provided the conductor enters or leaves the enclosure where the gutter joins an adjacent gutter that has a width that conforms to Table 312.6(B)(2) for the conductor.

Exception No. 2: A conductor not larger than 350 kcmil shall be permitted to enter or leave an enclosure containing only a meter socket(s) through the wall opposite its terminal, provided the distance between the terminal and the opposite wall is not less than that specified in Table 312.6(A) and the terminal is a lay-in type or removable lug with integral mounting tang, where the terminal is either of the following:

(1) Directed toward the opening in the enclosure and within a 45-degree angle of directly facing the enclosure wall

(2) Directly facing the enclosure wall and offset not greater than 50 percent of the bending space specified in Table 312.6(A)

Informational Note: *Offset* is the distance measured along the enclosure wall from the axis of the centerline of the terminal to a line passing through the center of the opening in the enclosure.

Table 312.6(B)(2) Minimum Wire-Bending Space at Terminals

Wire Size (AWG or kcmil)		Wires per Terminal							
		1		2		3		4 or More	
All Other Conductors	Compact Stranded AA-8000 Aluminum Alloy Conductors (See Note 3.)	mm	in.	mm	in.	mm	in.	mm	in.
14–10	12–8	Not specified		—	—	—	-		— —
8	6	38.1	1½	—	—	—	-		— —
6	4	50.8	2	—	—	—	-		— —
4	2	76.2	3	—	—	—	-		— —
3	1	76.2	3	—	—	—	-		— —
2	1/0	88.9	3½	—	—	—	-		— —
1	2/0	114	4½	—	—	—	-		— —
1/0	3/0	140	5½	140	5½	178	7	—	—
2/0	4/0	152	6	152	6	190	7½	—	—
3/0	250	165[a]	6½[a]	165[a]	6½[a]	203	8	—	—
4/0	300	178[b]	7[b]	190[c]	7½[c]	216[a]	8½[a]	—	—
250	350	216[d]	8½[d]	216[d]	8½[d]	229[b]	9[b]	254	10
300	400	254[e]	10[e]	254[d]	10[d]	279[b]	11[b]	305	12
350	500	305[e]	12[e]	305[e]	12[e]	330[e]	13[e]	356[d]	14[d]
400	600	330[e]	13[e]	330[e]	13[e]	356[e]	14[e]	381[e]	15[e]
500	700–750	356[e]	14[e]	356[e]	14[e]	381[e]	15[e]	406[e]	16[e]
600	800–900	381[e]	15[e]	406[e]	16[e]	457[e]	18[e]	483[e]	19[e]
700	1000	406[e]	16[e]	457[e]	18[e]	508[e]	20[e]	559[e]	22[e]
750	—	432[e]	17[e]	483[e]	19[e]	559[e]	22[e]	610[e]	24[e]

Wire Size (AWG or kcmil)		Wires per Terminal							
		1		2		3		4 or More	
All Other Conductors	Compact Stranded AA-8000 Aluminum Alloy Conductors (See Note 3.)	mm	in.	mm	in.	mm	in.	mm	in.
800	—	457	18	508	20	559	22	610	24
900	—	483	19	559	22	610	24	610	24
1000	—	508	20	—	—	—	-	—	-
1250	—	559	22	—	—	—	-	—	-
1500	—	610	24	—	—	—	-	—	-
1750	—	610	24	—	—	—	-	—	-
2000	—	610	24	—	—	—	-	—	-

Notes:

1. Bending space at terminals shall be measured in a straight line from the end of the lug or wire connector in a direction perpendicular to the enclosure wall.

2. For removable and lay-in wire terminals intended for only one wire, bending space shall be permitted to be reduced by the following number of millimeters (inches):

[a] 12.7 mm (½ in.)

[b] 25.4 mm (1 in.)

[c] 38.1 mm (1½ in.)

[d] 50.8 mm (2 in.)

[e] 76.2 mm (3 in.)

3. This column shall be permitted to determine the required wire-bending space for compact stranded aluminum conductors in sizes up to 1000 kcmil and manufactured using AA-8000 series electrical grade aluminum alloy conductor material in accordance with 310.3(B).

~~**(C)** Conductors 4 AWG or Larger.~~

~~Installation shall comply with 300.4(G).~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:22:57 EST 2024

Committee Statement

Committee Statement: 312.6(C) is removed as it is redundant with the requirements of 300.4(G) which apply where 4 AWG or larger insulated circuit conductors enter a cabinet, a box, an enclosure, or raceway. The charging text in 312.6 is modified for correlation with the removal of 312.6(C).

Response Message: FR-7880-NFPA 70-2024

Public Input No. 961-NFPA 70-2023 [Section No. 312.6(C)]

First Revision No. 7884-NFPA 70-2024 [Section No. 312.8(A)]

(A) Splices, Taps, and Feed-Through Conductors.

The wiring space of enclosures for switches or overcurrent devices shall be permitted for conductors feeding through, spliced, or tapping off to other enclosures, switches, or overcurrent devices where all of the following conditions are met:

(1) The total of all conductors installed at any cross section of the wiring space does not exceed 40 percent of the cross-sectional area of that space.

(2) The total area of all conductors, splices, and taps installed at any cross section of the wiring space does not exceed 75 percent of the cross-sectional area of that space.

(3) The bending space for conductors 4 AWG and larger complies with 314.28(A)(2).

(4) A warning label complying with 110.21(B) is applied to the enclosure that identifies the closest disconnecting means for any feed-through conductors.

(5) The conductors are not service conductors.

The wiring space of enclosures for meter sockets shall not contain conductors feeding through or tapping off to other enclosures, switches, or overcurrent devices. This requirement does not preclude conductors terminating to the meter socket.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:26:02 EST 2024

Committee Statement

Committee Statement: This revision modifies the requirements by adding a new list item (5) and adds additional language relative to meter socket wiring spaces. This change will preclude meter socket enclosures from containing non-service conductors and will clarify that service conductors are not permitted to run through other enclosures located prior to the service entrance enclosure. It is recognized that splicing of service conductors is permitted in meter socket enclosures and are not included in the new language.

Response Message: FR-7884-NFPA 70-2024

Public Input No. 3003-NFPA 70-2023 [Section No. 312.8(A)]

Public Input No. 3946-NFPA 70-2023 [Section No. 312.8]

First Revision No. 7876-NFPA 70-2024 [Section No. 312.100(C)]

~~(C)~~ ~~Nonmetallic Cabinets.~~ 312.2 Listing Requirements.

Nonmetallic cabinets shall be listed, or they shall be submitted for approval prior to installation.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:12:05 EST 2024

Committee Statement

Committee Statement: The language from existing 312.100(C) is relocated without change as a new 312.2. This revision complies with the NEC Style Manual Section 2.2.1 regarding Listing Requirements and provides correlation and parallel numbering throughout the document.

Response Message: FR-7876-NFPA 70-2024

Public Input No. 3497-NFPA 70-2023 [New Section after 312.1]

First Revision No. 7887-NFPA 70-2024 [Section No. 312.100 [Excluding any Sub-Sections]]

Cabinets, cutout boxes, and meter socket enclosures shall comply with 312.100(A) ~~through~~ and (~~C~~ B).

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 15:38:02 EST 2024

Committee Statement

Committee Statement: The charging text is modified to reflect the relocation of 312.100(C) to 312.2.
Response Message: FR-7887-NFPA 70-2024

First Revision No. 7997-NFPA 70-2024 [Section No. 312.101(A)(3)]

(3) Live Parts.

There shall be an airspace of at least 12.7 mm (0.500 in.) between the walls, back, gutter partition, if of metal, or door of any cabinet or cutout box and the nearest exposed current-carrying part of devices mounted within the cabinet where the voltage does not exceed 250. This spacing shall be increased to at least 25.4 mm (1.00 in.) for voltages of 251 to 1000 ac , 1500 volts dc, nominal.

Exception: Where the conditions in 312.101(A)(2), Exception, are met, the airspace for nominal voltages from 251 to 600 shall be permitted to be not less than 12.7 mm (0.500 in.).

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Thu Jan 18 15:40:00 EST 2024

Committee Statement

Committee Statement: Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.

Response Message: FR-7997-NFPA 70-2024

First Revision No. 7564-NFPA 70-2024 [New Section after 314.1]

314.2 Listing. [RENUMBER EXISTING 314.2 to 314.4 AND RENUMBER SUBSEQUENT SECTIONS]

The following equipment shall be listed and installed in accordance with the applicable requirements in this Article.

(A) Extenders.

Extenders for device boxes shall be listed.

(B) Drain Fittings.

Drain fittings larger than 6 mm (1/4 in) shall be listed.

(C) Floor Boxes.

Floor box assemblies shall be listed. Receptacles and covers shall be listed as an assembly for installation in show windows.

(D) Outlet Boxes for Ceiling-Suspended (Paddle) Fans.

Outlet boxes for ceiling-suspended (paddle) fans shall be listed for fan support.

(E) Reduced Dimension Boxes and Conduit Bodies.

Boxes and conduits bodies having reduced dimensions from code requirements shall be listed and marked with the allowable fill.

(F) Underground Boxes and Handhole Enclosures.

Underground boxes and handhole enclosures that are permissible to be covered by gravel, light aggregate, or noncohesive granulated soil shall be listed.

(G) Reduced Wall Boxes and Conduit Bodies.

Boxes and conduits bodies having reduced wall thickness from code requirements shall be listed.

(H) Box or Conduit Body Covers.

Covers made from different materials than the box or conduit body shall be listed. Metal covers of thinner construction than the box or conduit body on which they are installed shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 13:32:10 EST 2024

Committee Statement

Committee Statement: In seeking better usability, the 2023 NEC Style Manual, section 2.2.1, requires the listing requirements for an Article to be in the xxx.2 section of that Article. After a thorough review of the 30 plus instances of the use of the term “listing”, a new 314.2 was created with the eight product items under the purview of this Article that are required to be listed. All instances for listing requirements were reviewed by CMP-8 and those not included in the new 314.2 are either products under the purview of another code making panel, or are specific features of a product, where if provided require listing, but the product itself does not have a general requirement for listing.

CMP-8 firmly believes the term “listed” is clearly understood and needs to remain in the applicable section in context with its use. Only general listing requirements of a product should be in the xxx.2 section in concert with specific installation requirements found in the applicable sections.

Response Message: FR-7564-NFPA 70-2024

First Revision No. 7638-NFPA 70-2024 [New Section after 314.2]

314.3 Reconditioned Equipment.

Reconditioned outlet, device, pull, and junction boxes; conduit bodies; fittings; and handhole enclosures shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 08:24:13 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7638-NFPA 70-2024

Public Input No. 626-NFPA 70-2023 [New Section after 314.1]

First Revision No. 7519-NFPA 70-2024 [Section No. 314.3]

314.3 Nonmetallic Boxes.

Nonmetallic boxes shall be permitted only with open wiring on insulators, concealed knob-and-tube wiring, cabled wiring methods with entirely nonmetallic sheaths, flexible cords, and nonmetallic raceways.

~~Exception No. 1:~~ ~~Where internal bonding means are provided between all entries, nonmetallic~~ *Exception: Nonmetallic boxes shall be permitted to be* ~~used~~ *installed with metal* ~~raceways~~ *conduit or metal* ~~armored cables.~~ ~~Exception No. 2:~~ ~~Where integral bonding means with a provision for attaching an equipment bonding jumper inside the box are provided between all threaded entries in nonmetallic boxes listed for the purpose, nonmetallic boxes shall be permitted to be used with metal raceways or metal-armored cables.~~ *armored cable in accordance with 250.109(B).*

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7519_314.3.docx	For Staff Use	

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:11:41 EST 2024

Committee Statement

Committee Statement: This revision revises two exceptions into one and clarifies the exception that nonmetallic boxes are permitted to be used with metal conduit as permitted by 250.109(B) which specifies the method for an effective ground fault path.

Response Message: FR-7519-NFPA 70-2024

Public Input No. 3639-NFPA 70-2023 [Section No. 314.3]

Public Input No. 1769-NFPA 70-2023 [Section No. 314.3]

First Revision No. 7521-NFPA 70-2024 [Section No. 314.4]

314.4 Metal Boxes.

Metal boxes shall be grounded and bonded in accordance with Article 250, Parts I, IV, V, VI, VII, and ~~X of Article~~ 250 ~~as~~ X as applicable, except as permitted in 250.112(I).

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:20:10 EST 2024

Committee Statement

Committee Statement: Updated text to comply with NEC Style Manual Section 4.1.4, regarding the use of Parts.

Response Message: FR-7521-NFPA 70-2024

Public Input No. 2658-NFPA 70-2023 [Section No. 314.4]

First Revision No. 7522-NFPA 70-2024 [Section No. 314.15]

314.15 Damp or Wet Locations.

(A) Prevent Moisture. In damp or wet locations, boxes, conduit bodies, outlet box hoods, and fittings shall be placed or equipped so as to prevent moisture from entering or accumulating within the box, conduit body, or fitting.

(B) Listed. Boxes, conduit bodies, outlet box hoods, and fittings installed in wet locations shall be listed for use in wet locations.

(C) Drainage. Approved drainage openings not smaller than 3 mm (⅛ in.) and not larger than 6 mm (¼ in.) in diameter shall be permitted to be installed in the field in boxes or conduit bodies listed for use in damp or wet locations. For installation of listed drain fittings, larger openings are permitted to be installed in the field in accordance with manufacturer's instructions.

Informational Note No. 1: See 314.27(B) for boxes in floors.

Informational Note No. 2: See 300.6 for protection against corrosion.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7522_314.15.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:25:59 EST 2024

Committee Statement

Committee Statement: Created subdivisions in accordance with NEC 2023 Style Manual Section 3.5.1.2.

Response Message: FR-7522-NFPA 70-2024

Public Input No. 2922-NFPA 70-2023 [Section No. 314.15]

314.15 Damp or Wet Locations. [Move text to (A)—(C)]

~~In damp or wet locations, boxes, conduit bodies, outlet box hoods, and fittings shall be placed or equipped so as to prevent moisture from entering or accumulating within the box, conduit body, or fitting. Boxes, conduit bodies, outlet box hoods, and fittings installed in wet locations shall be listed for use in wet locations. Approved drainage openings not smaller than 3 mm (1⁄8 in.) and not larger than 6 mm (1⁄4 in.) in diameter shall be permitted to be installed in the field in boxes or conduit bodies listed for use in damp or wet locations. For installation of listed drain fittings, larger openings are permitted to be installed in the field in accordance with manufacturer's instructions.~~

~~Informational Note No. 1: See 314.27(B) for boxes in floors.~~

~~Informational Note No. 2: See 300.6 for protection against corrosion.~~

(A) Prevent Moisture.

In damp or wet locations, boxes, conduit bodies, outlet box hoods, and fittings shall be placed or equipped so as to prevent moisture from entering or accumulating within the box, conduit body, or fitting.

(B) Listed.

Boxes, conduit bodies, outlet box hoods, and fittings installed in wet locations shall be listed for use in wet locations.

(C) Drainage.

Approved drainage openings not smaller than 3 mm (1⁄8 in.) and not larger than 6 mm (1⁄4 in.) in diameter shall be permitted to be installed in the field in boxes or conduit bodies listed for use in damp or wet locations. For installation of listed drain fittings, larger openings are permitted to be installed in the field in accordance with manufacturer's instructions.

Informational Note No. 1: See 314.27(B) for boxes in floors.

Informational Note No. 2: See 300.6 for protection against corrosion.

First Revision No. 7525-NFPA 70-2024 [Section No. 314.16(B)(4)]

(4) Device or Equipment Fill.

For each yoke or strap containing one or more devices or equipment, a double volume allowance in accordance with Table 314.16(B)(1) shall be made for each yoke or strap based on the largest conductor connected to a device(s) or equipment supported by that yoke or strap. A device or utilization equipment wider than a single 50 mm (2 in.) device box as described in Table 314.16(A) shall have double volume allowances provided for each gang required for mounting.

Informational Note: See 314.24(B) for additional information on minimum box depth.

Table 314.16(B)(1) Volume Allowance Required per Conductor

Size of Conductor (AWG)	Free Space Within Box for Each Conductor	
	cm^3	$in.^3$
18	24.6	1.50
16	28.7	1.75
14	32.8	2.00
12	36.9	2.25
10	41.0	2.50
8	49.2	3.00
6	81.9	5.00

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:41:10 EST 2024

Committee Statement

Committee Statement: An informational note was added to alert code users to minimum box depth requirements.

Response Message: FR-7525-NFPA 70-2024

First Revision No. 7527-NFPA 70-2024 [Section No. 314.16(B)(6)]

(6) Terminal Block Fill.

Where a terminal block is present in a box, a single volume allowance in accordance with Table 314.16(B)(1) shall be made for each terminal block assembly based on the largest conductor(s) terminated ~~tothe~~ to the assembly.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Mon Jan 15 10:48:54 EST 2024

Committee Statement

Committee Statement: Editorial change was made to address consolidated words.
Response Message: FR-7527-NFPA 70-2024

Public Input No. 325-NFPA 70-2023 [Section No. 314.16(B)(6)]

First Revision No. 7529-NFPA 70-2024 [Section No. 314.16(B) [Excluding any Sub-Sections]]

The volumes in 314.16(B)(1) through (B)(6), as applicable, shall be added together. No allowance shall be required for small fittings such as locknuts, splicing connectors, and bushings. Each space within a box installed with a barrier shall be calculated separately.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:50:52 EST 2024

Committee Statement

Committee Statement: The term 'splicing connectors' was added to the section to clarify it is not required to be counted for box fill calculation. While not defined in article 100, the term 'splicing connectors' is used in 110.14 and should be commonly understood.

Response Message: FR-7529-NFPA 70-2024

Public Input No. 1961-NFPA 70-2023 [Section No. 314.16(B) [Excluding any Sub-Sections]]

First Revision No. 7960-NFPA 70-2024 [Section No. 314.17(A)]

(A) Openings to Be Closed.

Openings through which conductors, cables, or raceways enter shall be effectively closed ~~in an approved manner~~ .

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Thu Jan 18 12:56:12 EST 2024

Committee Statement

Committee Statement: This first revision clarifies that openings may be suitable for not only conductors, but also cables and raceways. Unused openings are addressed in 110.12(A) and are not duplicated here.

Response Message: FR-7960-NFPA 70-2024

Public Input No. 2380-NFPA 70-2023 [Section No. 314.17(A)]

First Revision No. 7531-NFPA 70-2024 [Section No. 314.20]

314.20 Flush-Mounted Installations.

(A) Noncombustible Material. Installations within or behind a surface of concrete, tile, gypsum, plaster, or other noncombustible material, including boxes employing a flush-type cover or faceplate, shall be made so that the front edge of the box, plaster ring, extension ring, or listed extender will not be set back of the finished surface more than 6 mm (¼ in.).

(B) Combustible Material. Installations within a surface of wood or other combustible surface material, boxes, plaster rings, extension rings, or listed extenders shall extend to the finished surface or project therefrom.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7531_314.20.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:57:47 EST 2024

Committee Statement

Committee Statement: Created subdivisions in accordance with NEC 2023 Style Manual Section 3.5.1.2.

Response Message: FR-7531-NFPA 70-2024

Public Input No. 3976-NFPA 70-2023 [Section No. 314.20]

314.20 Flush-Mounted Installations. [Move text to (A) and (B)]

~~Installations within or behind a surface of concrete, tile, gypsum, plaster, or other noncombustible material, including boxes employing a flush-type cover or faceplate, shall be made so that the front edge of the box, plaster ring, extension ring, or listed extender will not be set back of the finished surface more than 6 mm (1⁄4 in.).~~

~~Installations within a surface of wood or other combustible surface material, boxes, plaster rings, extension rings, or listed extenders shall extend to the finished surface or project therefrom.~~

(A) Noncombustible Material.

Installations within or behind a surface of concrete, tile, gypsum, plaster, or other noncombustible material, including boxes employing a flush-type cover or faceplate, shall be made so that the front edge of the box, plaster ring, extension ring, or listed extender will not be set back of the finished surface more than 6 mm (1⁄4 in.).

(B) Combustible Material.

Installations within a surface of wood or other combustible surface material, boxes, plaster rings, extension rings, or listed extenders shall extend to the finished surface or project therefrom.

First Revision No. 7532-NFPA 70-2024 [Section No. 314.22]

314.22 Surface Extensions.

Surface extensions shall be made by mounting and mechanically securing an extension ring over the box. Equipment grounding shall be in accordance with ~~Part VI of~~ Article 250, Part VI .

Exception: A surface extension shall be permitted to be made from the cover of a box where the cover is designed so it is unlikely to fall off or be removed if its securing means becomes loose. The wiring method shall be flexible for an approved length that permits removal of the cover and provides access to the box interior and shall be arranged so that any grounding continuity is independent of the connection between the box and cover.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:59:37 EST 2024

Committee Statement

Committee Statement: Updated to comply with the NEC 2023 Style Manual Section 4.1.4.

Response Message: FR-7532-NFPA 70-2024

Public Input No. 2659-NFPA 70-2023 [Section No. 314.22]

First Revision No. 7539-NFPA 70-2024 [Section No. 314.23(E)]

(E) Raceway-Supported Enclosure, Without Devices, Luminaires, or Lampholders.

An enclosure that does not contain a device(s), other than splicing devices, or supports a luminaire(s), a lampholder, or other equipment and is supported by entering raceways shall not exceed 1650 cm^3 (100 $in.^3$) in size. It shall have threaded entries or identified hubs. It shall be supported by two or more conduits threaded wrenchtight into the enclosure or hubs. Each conduit shall be secured within 900 mm (3 ft) of the enclosure, or within 450 mm (18 in.) of the enclosure if all conduit entries are on the same side.

Exception: ~~*The following wiring methods shall be permitted to support a*~~ *A conduit body of* ~~*any size, including a conduit body constructed with only one conduit entry, provided that the*~~ *trade size* ~~*of the conduit body is*~~ *not larger than the largest trade size of the conduit or tubing, FS or FD single gang device box, or an explosionproof conduit outlet box of any size, with one or more entries, shall be permitted to be supported by a single raceway of the following wiring methods :*

(1) Intermediate metal conduit, IMC

(2) Rigid metal conduit, RMC

(3) Rigid polyvinyl chloride conduit, PVC

(4) Reinforced thermosetting resin conduit, RTRC

(5) Electrical metallic tubing, EMT

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 11:23:26 EST 2024

Committee Statement

Committee Statement: Single gang FS and FD boxes, and explosionproof conduit outlet boxes were added to the exception to allow support by a single raceway, based on their robust construction and internal thread design.

Response Message: FR-7539-NFPA 70-2024

Public Input No. 384-NFPA 70-2023 [New Section after 314.23(E)]

First Revision No. 7541-NFPA 70-2024 [Section No. 314.23(F)]

(F) Raceway-Supported Enclosures, with Devices, Luminaires, or Lampholders.

An enclosure that contains a device(s), other than splicing devices, or supports a luminaire(s), a lampholder, or other equipment and is supported by entering raceways shall not exceed 1650 cm^3 (100 $in.^3$) in size. It shall have threaded entries or identified hubs. It shall be supported by two or more conduits threaded wrenchtight into the enclosure or hubs. Each conduit shall be secured within 450 mm (18 in.) of the enclosure.

Exception No. 1: ~~Rigid~~ A single rigid metal or intermediate metal conduit shall be permitted to support a box or conduit body ~~of any size, including a conduit body constructed~~ with ~~only one conduit entry, provided the trade size of the conduit body is~~ one or more entries as follows:

(1) Conduit body of trade size not larger than the largest trade size of the conduit.

(2) FS or FD single gang device box.

(3) Single gang explosionproof conduit outlet box of any size.

Exception No. 2: An unbroken length(s) of rigid or intermediate metal conduit shall be permitted to support a box used for luminaire or lampholder support, or to support a wiring enclosure that is an integral part of a luminaire and used in lieu of a box in accordance with 300.15(B), where all of the following conditions are met:

(1) The conduit is securely fastened at a point so that the length of conduit beyond the last point of conduit support does not exceed 900 mm (3 ft).

(2) The unbroken conduit length before the last point of conduit support is 300 mm (12 in.) or greater, and that portion of the conduit is securely fastened at some point not less than 300 mm (12 in.) from its last point of support.

(3) Where accessible to unqualified persons, the luminaire or lampholder, measured to its lowest point, is at least 2.5 m (8 ft) above grade or standing area and at least 900 mm (3 ft) measured horizontally to the 2.5 m (8 ft) elevation from windows, doors, porches, fire escapes, or similar locations.

(4) A luminaire supported by a single conduit does not exceed 300 mm (12 in.) in any direction from the point of conduit entry.

(5) The weight supported by any single conduit does not exceed 9 kg (20 lb).

(6) At the luminaire or lampholder end, the conduit(s) is threaded wrenchtight into the box, conduit body, integral wiring enclosure, or identified hubs. Where a box or conduit body is used for support, the luminaire shall be secured directly to the box or conduit body, or through a threaded conduit nipple not over 75 mm (3 in.) long.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Mon Jan 15 11:28:37 EST 2024

Committee Statement

Committee Single gang FS and FD boxes, and explosionproof conduit outlet boxes were added

Statement:	to the exception to allow support by a single raceway, based on their robust construction and internal thread design.
Response Message:	FR-7541-NFPA 70-2024

First Revision No. 7544-NFPA 70-2024 [Section No. 314.23(H)(1)]

(1) Flexible Cord.

A box shall be supported from a multiconductor cord or cable in an approved manner that protects the conductors against strain. A connection to a box equipped with a hub shall be made with a listed cord grip attachment fitting ~~marked~~ identified for use with a threaded hub.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 11:36:03 EST 2024

Committee Statement

Committee Statement: The text was revised from “marked” to “identified” to clarify where the physical marking may not be on the fitting. Identified is also a defined term.

Response Message: FR-7544-NFPA 70-2024

Public Input No. 3420-NFPA 70-2023 [Section No. 314.23(H)(1)]

First Revision No. 7553-NFPA 70-2024 [Section No. 314.25(A)]

(A) Nonmetallic or Metal Covers and Plates.

Nonmetallic or metal covers and plates shall be permitted. Where metal covers or plates are used, they shall be connected to the equipment grounding conductor in accordance with 250.110.

Informational Note: See 410.42 for metal luminaire canopies and 404.12 and 406.6(B) for metal faceplates for ~~additional grounding requirements~~ connecting to the equipment grounding conductor .

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Mon Jan 15 12:48:32 EST 2024

Committee Statement

Committee Statement: Updated text from “grounding” to “equipment grounding conductor” as defined term. CMP-8 confirmed the references in the existing text and determined they are correct.
Response Message: FR-7553-NFPA 70-2024

Public Input No. 2464-NFPA 70-2023 [Section No. 314.25(A)]

First Revision No. 7555-NFPA 70-2024 [Section No. 314.27]

[Floor boxes is relocated from (B) to (C)]

314.27 Outlet Boxes.

(A) Boxes at Luminaire or Lampholder Outlets.

Outlet boxes or fittings designed for the support of luminaires and lampholders, and installed as required by 314.23, shall be permitted to support a luminaire or lampholder.

(1) Vertical Surface Outlets.

Boxes used at luminaire or lampholder outlets in or on a vertical surface shall be identified and marked on the interior of the box to indicate the maximum weight of the luminaire that is permitted to be supported by the box if other than 23 kg (50 lb).

Exception: A vertically mounted luminaire or lampholder 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 that the luminaire or its supporting yoke, or the lampholder, is secured to the box with no fewer than two No. 6 or larger screws.

(2) Ceiling Outlets.

(a) Luminaire 23 kg (50 lb) and less. At every outlet used exclusively for lighting, the box shall be designed or installed so that a luminaire or lampholder can be attached. Boxes shall be required to support a luminaire weighing a minimum of 23 kg (50 lb).

(b) Luminaire more than 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 for not less than the weight to be supported. The interior of the box shall be marked by the manufacturer to indicate the maximum weight the box shall be permitted to support.

~~(B)~~

Exception: Ceiling outlet boxes that are integral to listed recessed luminaires are not required to comply with Section 314.27(A)(2).

(C) Floor Boxes.

Boxes listed specifically for this application shall be used for receptacles located in the floor.

Exception: Where the authority having jurisdiction judges them free from likely exposure to physical damage, moisture, and dirt, boxes located in elevated floors of show windows and similar locations shall be permitted to be other than those listed for floor applications. Receptacles and covers shall be listed as an assembly for this type of location.

(C B) 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~~ Ceiling outlet boxes mounted in a location identified by the ~~ceilings of habitable rooms of dwelling occupancies~~ installer, designer, or building owner for the installation of a ceiling-suspended (paddle) fan or mounted in the ceilings of living and sleeping areas in dwelling units in a location ~~acceptable~~ typical for the installation of a ~~ceiling-suspended~~ ceiling-suspended (paddle) fan shall comply with the with one of the following:

(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

Informational Note: A typical location for a ceiling-suspended (paddle) fan is in the center of a room or space or centered over a sitting area.

(D) Utilization Equipment.

Boxes used for the support of utilization equipment other than ceiling-suspended (paddle) fans shall meet the requirements of 314.27(A) for the support of a luminaire that is the same size and weight.

Exception: Utilization equipment 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 equipment or its supporting yoke is secured to the box with no fewer than two No. 6 or larger screws.

(E) Weight-Supporting Ceiling Receptacles (WSCR) and Weight-Supporting Attachment Fittings (WSAF).

Outlet boxes required in 314.27 shall be permitted to support listed weight-supporting ceiling receptacles (WSCR). A WSCR shall be used in combination with compatible weight-supporting attachment fittings (WSAF)that are identified for the support of equipment within the weight and mounting orientation limits of the listing. Where the WSCR is installed, it shall be included in the box fill calculation covered in 314.16(B)(4).

Listed WSCR used in combination with compatible WSAF shall be permitted to be installed in outlet boxes for the sole support of ceiling-suspended (paddle) fans, in accordance with 314.27(C).

Informational Note: See ANSI/NEMA WD-6, *American National Standard for Wiring Devices–Dimensional Specifications*, for standard configurations of weight-supporting ceiling receptacles and weight-supporting attachment fittings.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7555_314.27.docx		
NEC_CMP8_FR-7555_314.27.docx	For prod use	

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Mon Jan 15 13:04:47 EST 2024

Committee Statement

Committee Statement: Relocated 314.27(C) to 314.27(B) for usability with Boxes at Ceiling-Suspended (Paddle) Fan Outlets. Revised location requirements for ceiling-suspended (paddle) fan rated box or access through the box to structural framing to include the typical locations in lieu of mandating all locations. Exempted listed recessed luminaires from the requirements on 314.27(A)(2). Split 314.27(A)(2) to comply with the style manual for usability.

Response Message: FR-7555-NFPA 70-2024

Public Input No. 4359-NFPA 70-2023 [Section No. 314.27(C)]

Public Input No. 1095-NFPA 70-2023 [Section No. 314.27]

Public Input No. 1783-NFPA 70-2023 [Section No. 314.27(C)]

Public Input No. 2511-NFPA 70-2023 [Section No. 314.27(C)]

Public Input No. 3977-NFPA 70-2023 [Section No. 314.27(A)(2)]

Public Input No. 3642-NFPA 70-2023 [Section No. 314.27(C)]

Public Input No. 3981-NFPA 70-2023 [Section No. 314.27(C)]

Public Input No. 4093-NFPA 70-2023 [New Section after 314.27(C)]

Public Input No. 2029-NFPA 70-2023 [Section No. 314.27(C)]

Public Input No. 3792-NFPA 70-2023 [Section No. 314.27(C)]

314.27 Outlet Boxes.

(A) Boxes at Luminaire or Lampholder Outlets.

Outlet boxes or fittings designed for the support of luminaires and lampholders, and installed as required by 314.23, shall be permitted to support a luminaire or lampholder.

(1) Vertical Surface Outlets.

Boxes used at luminaire or lampholder outlets in or on a vertical surface shall be identified and marked on the interior of the box to indicate the maximum weight of the luminaire that is permitted to be supported by the box if other than 23 kg (50 lb).

Exception: A vertically mounted luminaire or lampholder 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 that the luminaire or its supporting yoke, or the lampholder, is secured to the box with no fewer than two No. 6 or larger screws.

(2) Ceiling Outlets.

(a) Luminaire 50lbs or less. At every outlet used exclusively for lighting, the box shall be designed or installed so that a luminaire or lampholder can be attached. Boxes shall be required to support a luminaire weighing a minimum of 23 kg (50 lb).

(b) Luminaire more than 50lb. A luminaire that weighs more than 23 kg (50 lb) shall be supported independently of the outlet box, unless the outlet box is listed for not less than the weight to be supported. The interior of the box shall be marked by the manufacturer to indicate the maximum weight the box shall be permitted to support.

Exception: Ceiling outlet boxes that are integral to listed recessed luminaires are not required to comply with Section 314.27(A)(2).

~~**(B) Floor Boxes.**~~ **[MOVE TO 314.27(C)]**

~~Boxes listed specifically for this application shall be used for receptacles located in the floor.~~

~~*Exception: Where the authority having jurisdiction judges them free from likely exposure to physical damage, moisture, and dirt, boxes located in elevated floors of show windows and similar locations shall be permitted to be other than those listed for floor applications. Receptacles and covers shall be listed as an assembly for this type of location.*~~

(B~~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 habitable rooms of dwelling occupancies in a location acceptable for the installation of a ceiling-suspended (paddle) fan shall comply with one of the following:~~

Ceiling outlet boxes mounted in a location identified by the installer, designer, or building owner for the installation of a ceiling-suspended (paddle) fan or mounted in the ceilings of living and sleeping areas in dwelling units in a location typical for the installation of a ceiling-suspended (paddle) fan shall comply with the with one of the following:

(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

Informational Note: A typical location for a ceiling-suspended (paddle) fan is in the center of a room or space or centered over a sitting area.

(C~~B~~) Floor Boxes. [MOVE FROM 314.27(B) TO 314.27(C))

Boxes listed specifically for this application shall be used for receptacles located in the floor.

Exception: Where the authority having jurisdiction judges them free from likely exposure to physical damage, moisture, and dirt, boxes located in elevated floors of show windows and similar locations shall be permitted to be other than those listed for floor applications. Receptacles and covers shall be listed as an assembly for this type of location.

(D) Utilization Equipment.

Boxes used for the support of utilization equipment other than ceiling-suspended (paddle) fans shall meet the requirements of 314.27(A) for the support of a luminaire that is the same size and weight.

Exception: Utilization equipment 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 equipment or its supporting yoke is secured to the box with no fewer than two No. 6 or larger screws.

(E) Weight-Supporting Ceiling Receptacles (WSCR) and Weight-Supporting Attachment Fittings (WSAF).

Outlet boxes required in 314.27 shall be permitted to support listed weight-supporting ceiling receptacles (WSCR). A WSCR shall be used in combination with compatible weight-supporting attachment fittings (WSAF)that are identified for the support of equipment within the weight and mounting orientation limits of the listing. Where the WSCR is installed, it shall be included in the box fill calculation covered in 314.16(B)(4).

Listed WSCR used in combination with compatible WSAF shall be permitted to be installed in outlet boxes for the sole support of ceiling-suspended (paddle) fans, in accordance with 314.27(C).

Formatted: Font: Not Bold

Formatted: Font: Not Bold, Italic

Informational Note: See ANSI/NEMA WD-6, *American National Standard for Wiring Devices–Dimensional Specifications*, for standard configurations of weight-supporting ceiling receptacles and weight-supporting attachment fittings.

First Revision No. 7556-NFPA 70-2024 [Section No. 314.28(A)(2)]

(2) Angle or U Pulls, or Splices.

Where splices or where angle or U pulls are made, the distance between each raceway entry inside the box or conduit body and the opposite wall of the box or conduit body shall not be less than six times the metric designator (trade size) of the largest raceway in a row. This distance shall be increased for additional entries by the amount of the sum of the diameters of all other raceway entries in the same row on the same wall of the box. Each row shall be calculated individually, and the single row that provides the maximum distance shall be used.

Exception: Where a raceway or cable entry is in the wall of a box or conduit body opposite a ~~removable~~ cover, the distance from that wall to the cover shall be permitted to comply with the distance required for one wire per terminal in Table 312.6(A).

The distance between raceway entries enclosing the same conductor shall not be less than six times the metric designator (trade size) of the larger raceway.

When transposing cable size into raceway size in 314.28(A)(1) and (A)(2), the minimum metric designator (trade size) raceway required for the number and size of conductors in the cable shall be used.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Mon Jan 15 13:12:57 EST 2024

Committee Statement

Committee Statement: Deleted the “removable” descriptor so the exception applies to all boxes and conduit bodies regardless of how the cover is attached.
Response Message: FR-7556-NFPA 70-2024

Public Input No. 204-NFPA 70-2023 [Section No. 314.28(A)(2)]

First Revision No. 7557-NFPA 70-2024 [Section No. 314.28(B)]

(B) Conductors in Pull or Junction Boxes.

In pull boxes or junction boxes having any dimension over 1.8 m (6 ft), all conductors shall be ~~cabled or racked up~~ secured in an approved manner.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 13:16:09 EST 2024

Committee Statement

Committee Statement: Revised the undefined terms ‘cabled’ and ‘racked-up’ to 'secured’ which is a recognized term and the wiring method articles provide requirements for securing and supporting.

Response Message: FR-7557-NFPA 70-2024

Public Input No. 892-NFPA 70-2023 [Section No. 314.28(B)]

First Revision No. 7516-NFPA 70-2024 [Section No. 314.29(A)]

(A) ~~In~~ Buildings and Other Structures.

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

(1) Boxes 1650 cm^3 (100 $in.^3$) or Less in Size.

The openings in the building surfaces, if reduced from the outer walls of the box, shall be centered not more than 25 mm (1 in.) from the centerline of the box, and shall not extend beyond the walls of the box. If rectangular, the opening shall be not less than 73 mm (2⅞ in.) by 45 mm (1¾ in.) in size. If circular, the opening shall not be less than 90 mm (3½ in.) in diameter.

Exception: Smaller openings in building surfaces that accommodate one or more individual devices shall be permitted if all of the following conditions are met:

(1) The ~~outlet box that supplies the device(s) is nonmetallic.~~

(2) ~~The~~ branch circuit wiring that supplies each device consists of a separate ~~nonmetallic~~ cable assembly originating outside the box, or individual sets of conductors in a single ~~nonmetallic~~ raceway, all of which originate outside the box. Other than the connections to a single device, ~~these~~ the branch circuit conductors are not spliced in the box, or continued to another device, and no other wiring or raceways enter the box.

(3) Each device is capable of removal from the building surface opening without being damaged. If a special tool is required for this purpose, the applicable circuit directory for the device records the location of the tool, together with a product code/QR code for acquiring a replacement if necessary.

(4) All connections for each device to the branch circuit wiring are made with listed clamping-type wire connectors, which are supplied with the devices. The branch-circuit conductors are arranged to permit the connector(s) to be exposed after the device has been fully removed.

(5) The device assemblies are listed for this application.

(2) Boxes Larger Than 1650 cm^3 (100 $in.^3$) in Size.

The openings shall not be smaller than the outer walls of the box.

(3) Conduit Bodies.

The openings shall not be smaller than outer walls of the conduit body.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7516_314.29.docx	For Staff Use	

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 10:00:11 EST 2024

Committee Statement

Committee Statement: This revision clarifies that the requirements apply to the exterior and interior of buildings and structures.

The panel has reviewed the text revisions issued under TIA-1690 which became PI1595. Further revisions to the text are in the exception to permit metal boxes and wiring methods with the reduced opening devices.

Response Message: FR-7516-NFPA 70-2024

Public Input No. 1750-NFPA 70-2023 [Section No. 314.29(A)]

Public Input No. 1595-NFPA 70-2023 [Section No. 314.29]

First Revision No. 7866-NFPA 70-2024 [Section No. 314.30(A)]

(A) Size.

Handhole enclosures shall be sized in accordance with 314.28(A) for conductors operating at 1000 volts ac, 1500 volts dc, nominal or below, and in accordance with 314.71 for conductors operating at over 1000 volts ac, 1500 volts dc, nominal . For handhole enclosures without bottoms where the provisions of 314.28(A)(2), Exception, or 314.71(B)(1), Exception No. 1, apply, the measurement to the removable cover shall be taken from the end of the conduit or cable assembly.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 14:29:09 EST 2024

Committee Statement

Committee Statement: Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.

Response Message: FR-7866-NFPA 70-2024

First Revision No. 7562-NFPA 70-2024 [Section No. 314.30(D)]

(D) Covers.

(1) Marking. Handhole enclosure covers shall have an identifying mark or logo that prominently identifies the function of the enclosure, such as “electric.”

(2) Access. Handhole enclosure covers shall require the use of tools to open, or they shall weigh over 45 kg (100 lb).

(3) Bonding. Metal covers and other exposed conductive surfaces shall be bonded in accordance with 250.92 if the conductors in the handhole are service conductors, or in accordance with 250.96(A) if the conductors in the handhole are feeder or branch-circuit conductors.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7562_314.30_D_.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 13:25:52 EST 2024

Committee Statement

Committee Statement: Created subdivisions in accordance with NEC 2023 Style Manual Section 3.5.1.2.

Response Message: FR-7562-NFPA 70-2024

Public Input No. 3985-NFPA 70-2023 [Section No. 314.30(D)]

(D) Covers. [Move text to (1)—(3)]

~~Handhole enclosure covers shall have an identifying mark or logo that prominently identifies the function of the enclosure, such as "electric." Handhole enclosure covers shall require the use of tools to open, or they shall weigh over 45 kg (100 lb). Metal covers and other exposed conductive surfaces shall be bonded in accordance with 250.92 if the conductors in the handhole are service conductors, or in accordance with 250.96(A) if the conductors in the handhole are feeder or branch-circuit conductors.~~

(1) Marking.

Handhole enclosure covers shall have an identifying mark or logo that prominently identifies the function of the enclosure, such as "electric."

(2) Access.

Handhole enclosure covers shall require the use of tools to open, or they shall weigh over 45 kg (100 lb).

(3) Bonding.

Metal covers and other exposed conductive surfaces shall be bonded in accordance with 250.92 if the conductors in the handhole are service conductors, or in accordance with 250.96(A) if the conductors in the handhole are feeder or branch-circuit conductors.

First Revision No. 7775-NFPA 70-2024 [Section No. 314.30 [Excluding any Sub-Sections]]

Handhole enclosures shall be designed and installed to withstand all loads likely to be imposed on them. They shall be identified for use in underground systems.

Informational Note: See ANSI/SCTE 77-~~2013~~ 2017 , *Specification for Underground Enclosure Integrity*, for additional information on deliberate and nondeliberate traffic loading that can be expected to bear on underground enclosures.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 07:30:13 EST 2024

Committee Statement

Committee Statement: Reference dates are updated to the current edition in accordance with the NEC Style Manual Section 2.1.10. This is a response to the Global PI 3085.

Response Message: FR-7775-NFPA 70-2024

First Revision No. 7869-NFPA 70-2024 [Section No. 314.70]

314.70 General.

(A) Pull and Junction Boxes.

Where pull and junction boxes are used on systems over 1000 volts ac , 1500 volts dc, nominal, the installation shall comply with Part III and with the following general provisions of this article:

(1) Part I, 314.2, 314.3, 314.4, and 314.5

(2) Part II, 314.15; 314.17; 314.20; 314.23(A), (B), or (G); 314.28(B); and 314.29

(3) Part III, 314.100(A) and (C); and 314.101

(B) Conduit Bodies.

Where conduit bodies are used on systems over 1000 volts ac , 1500 volts dc, nominal, the installation shall comply with Part III and with the following general provisions of this article:

(1) Part I, 314.4, and 314.5

(2) Part II, 314.15; 314.17; 314.23(A), (E), or (G); 314.28(A)(3); and 314.29

(3) Part III, 314.100(A) and 314.101

(C) Handhole Enclosures.

Where handhole enclosures are used on systems over 1000 volts ac , 1500 volts dc, nominal, the installation shall comply with Part III and with the following general provisions of this article:

(1) Part I, 314.3, 314.4, and 314.5

(2) Part II, 314.15, 314.17, 314.23(G), 314.28(B), 314.29, and 314.30

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 14:37:23 EST 2024

Committee Statement

Committee Statement: Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.
Response Message: FR-7869-NFPA 70-2024

First Revision No. 7656-NFPA 70-2024 [New Section after 342.1]

342.3 Reconditioned Equipment.
Reconditioned IMC, factory elbows and couplings, and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:47:00 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7656-NFPA 70-2024

First Revision No. 7790-NFPA 70-2024 [Section No. 342.6]

342.6 ~~–~~ **2** Listing Requirements.

IMC, factory elbows and couplings, and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 09:26:37 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7790-NFPA 70-2024

Public Input No. 3516-NFPA 70-2023 [Section No. 342.6]

First Revision No. 7797-NFPA 70-2024 [Section No. 342.10]

342.10 Uses Permitted.

(A) All Atmospheric Conditions and Occupancies.

Use of IMC shall be permitted under all atmospheric conditions and occupancies.

(B) Corrosion Environments.

IMC, elbows, couplings, and fittings shall be permitted to be installed in concrete, in direct contact with the earth, in direct burial applications, or in areas subject to severe corrosive influences where protected by corrosion protection approved for the condition.

Informational Note: Galvanized steel and PVC coated steel IMC are examples of corrosion protection.

(C) Cinder Fill.

IMC shall be permitted to be installed in or under cinder fill where subject to permanent moisture where protected on all sides by a layer of noncinder concrete not less than 50 mm (2 in.) thick; where the conduit is not less than 450 mm (18 in.) under the fill; or where protected by corrosion protection approved for the condition.

(D) Wet Locations.

All supports, bolts, straps, screws, and so forth, shall be of corrosion-resistant materials or protected against corrosion by corrosion-resistant materials.

Informational Note: See 300.6 for protection against corrosion.

(E) Severe Physical Damage.

IMC shall be permitted to be installed where subject to severe physical damage.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 09:53:41 EST 2024

Committee Statement

Committee Statement: This first revision adds an informational note for the use of galvanized steel and PVC coated steel conduit as examples of corrosion protection. However, for Aluminum conduit PVC is one method of corrosion resistance but not the only method and the term "PVC coated" is not found in the UL standard 6A for Aluminum conduit.

Response Message: FR-7797-NFPA 70-2024

Public Input No. 1301-NFPA 70-2023 [Section No. 342.10]

First Revision No. 7798-NFPA 70-2024 [Section No. 342.14]

342.14 Dissimilar Metals.

Where practicable, dissimilar metals in contact anywhere in the system shall be avoided to eliminate the possibility of galvanic action.

Stainless steel and aluminum fittings and enclosures shall be permitted to be used with galvanized steel IMC where not subject to severe corrosive influences.

Stainless steel IMC shall only be used with the following:

(1) Stainless steel fittings

(2) Stainless steel boxes and enclosures

(3) Steel (galvanized, painted, powder or PVC coated, and so forth) boxes and enclosures when not subject to severe corrosive influences

(4) Stainless steel, nonmetallic, or approved accessories

(5) An identified bimetallic coupling

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 09:55:43 EST 2024

Committee Statement

Committee Statement: The revision adds an additional method to mitigate galvanic corrosion.

Response Message: FR-7798-NFPA 70-2024

Public Input No. 4462-NFPA 70-2023 [Section No. 342.14]

First Revision No. 7799-NFPA 70-2024 [Section No. 342.20(B)]

(B) Maximum.

IMC larger than metric designator ~~155~~ 205 (trade size ~~6~~ 8) shall not be used.

Informational Note: See 300.1(C) for the metric designators and trade sizes. These are for identification purposes only and do not relate to actual dimensions.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 09:57:01 EST 2024

Committee Statement

Committee Statement: This revision will allow the use of conduit up to the 8" trade size when the product standard is developed.

Response Message: FR-7799-NFPA 70-2024

Public Input No. 1856-NFPA 70-2023 [Section No. 342.20(B)]

First Revision No. 7776-NFPA 70-2024 [Section No. 342.28]

342.28 Reaming and Threading.

All cut ends shall be reamed or otherwise finished to remove rough edges. Where conduit is threaded in the field, a standard cutting die with a taper of 1 in 16 (¾ in. taper per foot) shall be used.

Informational Note: See ANSI/ASME B1.20.1-2013 (R2018) , *Standard for Pipe Threads, General Purpose (Inch)*.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 07:33:04 EST 2024

Committee Statement

Committee Statement: Reference dates are updated to the current edition in accordance with the NEC Style Manual Section 2.1.10. This is a response to the Global PI 3085.

Response Message: FR-7776-NFPA 70-2024

First Revision No. 7809-NFPA 70-2024 [Section No. 342.42(A)]

(A) Threadless.

Threadless couplings and connectors shall be installed in accordance with one or more of the following:

(1) Made Tight. Threadless couplings and connectors used with conduit shall be made tight.

(2) Concrete Buried. Where buried in masonry or concrete, they shall be the ~~concretetight type. Where installed in wet locations, they shall comply with~~ 314.15 concrete-tight type.

(3) Wet Locations. Shall use fittings for wet locations.

(4) Threaded Conduit Ends . Threadless couplings and connectors shall not be used on threaded conduit ends unless listed for the purpose.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7809_342.42_A_.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 10:27:52 EST 2024

Committee Statement

Committee Statement: This revision complies with the NFPA Style manual section 3.5.1.2. Couplings and connectors are required to comply with 314.15, the text was removed to eliminate redundancy.

Response Message: FR-7809-NFPA 70-2024

Public Input No. 4074-NFPA 70-2023 [Section No. 342.42(A)]

(A) Threadless. [Text moving to (2) and (4)]

Threadless couplings and connectors ~~used with conduit shall be made tight. Where buried in masonry or concrete, they shall be the concretetight type. Where installed in wet locations, they shall comply with 314.15. Threadless couplings and connectors shall not be used on threaded conduit ends unless listed for the purpose.~~shall be installed in accordance with one or more of the following:

(1) Made Tight. Threadless couplings and connectors used with conduit shall be made tight.

(2) Concrete Buried. Where buried in masonry or concrete, they shall be the concrete-tight type.

(3) Wet Locations. Shall use fittings for wet locations.

(4) Threaded Conduit Ends. Threadless couplings and connectors shall not be used on threaded conduit ends unless listed for the purpose.

First Revision No. 7623-NFPA 70-2024 [Section No. 342.56]

~~**342.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:40:52 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7623-NFPA 70-2024

Public Input No. 4081-NFPA 70-2023 [Section No. 342.56]

First Revision No. 7657-NFPA 70-2024 [New Section after 344.1]

344.3 Reconditioned Equipment.

Reconditioned RMC, factory elbows and couplings, and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:48:53 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7657-NFPA 70-2024

First Revision No. 7816-NFPA 70-2024 [Section No. 344.6]

344.~~6~~ 2 Listing Requirements.

RMC, factory elbows and couplings, and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 10:39:21 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7816-NFPA 70-2024

Public Input No. 3517-NFPA 70-2023 [Section No. 344.6]

First Revision No. 7817-NFPA 70-2024 [Section No. 344.10]

344.10 Uses Permitted.

(A) Atmospheric Conditions and Occupancies.

(1) Galvanized Steel, PVC Coated Steel, Stainless Steel, and Red Brass RMC.

Galvanized steel, PVC coated steel, stainless steel, and red brass RMC shall be permitted under all atmospheric conditions and occupancies.

(2) Aluminum RMC.

Aluminum RMC shall be permitted to be installed where approved for the environment.

(3) Ferrous Raceways and Fittings.

Ferrous raceways and fittings protected from corrosion solely by enamel shall be permitted only indoors and in occupancies not subject to severe corrosive influences.

(B) Corrosive Environments.

(1) Galvanized Steel, PVC Coated Steel, Stainless Steel, and Red Brass RMC, Elbows, Couplings, and Fittings.

Galvanized steel, PVC coated steel, stainless steel, and red brass RMC, elbows, couplings, and fittings shall be permitted to be installed in concrete, in direct contact with the earth, in direct burial applications, or in areas subject to severe corrosive influences where protected by corrosion protection approved for the condition.

(2) Supplementary Protection of Aluminum RMC.

Aluminum RMC shall be provided with approved supplementary corrosion protection where encased in concrete or in direct contact with the earth, or in direct burial applications where identified for the application.

(C) Cinder Fill.

Galvanized steel, stainless steel, and red brass RMC shall be permitted to be installed in or under cinder fill where subject to permanent moisture where protected on all sides by a layer of noncinder concrete not less than 50 mm (2 in.) thick; where the conduit is not less than 450 mm (18 in.) under the fill; or where protected by corrosion protection approved for the condition.

(D) Wet Locations.

All supports, bolts, straps, screws, and so forth, shall be of corrosion-resistant materials or protected against corrosion by corrosion-resistant materials.

Informational Note: See 300.6 for protection against corrosion.

(E) Severe Physical Damage.

RMC shall be permitted to be installed where subject to severe physical damage.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 10:40:36 EST 2024

Committee Statement

Committee This revision adds clarity for the permitted conditions for PVC coated steel conduit.

Statement: However, for Aluminum conduit PVC is one method of corrosion resistance but not the only method and the term "PVC coated" is not found in the product standard for Aluminum conduit.

Response Message: FR-7817-NFPA 70-2024

Public Input No. 1303-NFPA 70-2023 [Section No. 344.10]

First Revision No. 7819-NFPA 70-2024 [Section No. 344.14]

344.14 Dissimilar Metals.

Where practicable, dissimilar metals in contact anywhere in the system shall be avoided to eliminate the possibility of galvanic action. Stainless steel and aluminum fittings and enclosures shall be permitted to be used with galvanized steel RMC, and galvanized steel fittings and enclosures shall be permitted to be used with aluminum RMC where not subject to severe corrosive influences. Stainless steel rigid conduit shall only be used with the following:

(1) Stainless steel fittings

(2) Stainless steel boxes and enclosures

(3) Steel (galvanized, painted, powder or PVC coated, and so forth) boxes and enclosures when not subject to severe corrosive influences

(4) Stainless steel, nonmetallic, or approved accessories

(5) An identified bimetallic coupling

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 10:44:34 EST 2024

Committee Statement

Committee Statement: The revision adds an additional method to mitigate galvanic corrosion.

Response Message: FR-7819-NFPA 70-2024

Public Input No. 4482-NFPA 70-2023 [Section No. 344.14]

First Revision No. 7821-NFPA 70-2024 [Section No. 344.20(B)]

(B) Maximum.

RMC larger than metric designator ~~155~~ 205 (trade size ~~6~~ 8) shall not be used.

Informational Note: See 300.1(C) for the metric designators and trade sizes. These are for identification purposes only and do not relate to actual dimensions.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 10:45:46 EST 2024

Committee Statement

Committee Statement: This will allow the use of conduit up to the 8" trade size when the product standard is developed.

Response Message: FR-7821-NFPA 70-2024

Public Input No. 1857-NFPA 70-2023 [Section No. 344.20(B)]

First Revision No. 7777-NFPA 70-2024 [Section No. 344.28]

344.28 Reaming and Threading.

All cut ends shall be reamed or otherwise finished to remove rough edges. Where conduit is threaded in the field, a standard cutting die with a 1 in 16 taper (¾ in. taper per foot) shall be used. PVC-coated RMC shall be threaded in accordance with manufacturer's instructions to prevent damage to the exterior coating.

Informational Note No. 1: See ANSI/ASME B1.20.1-2013 (R2018) , *Standard for Pipe Threads, General Purpose (Inch)*.

Informational Note No. 2: See NECA 101-~~2013~~ 2020 , *Standard for Installing Steel Conduits (RMC, IMC, EMT)*, for information on threading and clamping methods for RMC and PVC-coated RMC.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 07:36:06 EST 2024

Committee Statement

Committee Statement: Reference dates are updated to the current edition in accordance with the NEC Style Manual Section 2.1.10. This is a response to the Global PI 3085.

Response Message: FR-7777-NFPA 70-2024

Public Input No. 4454-NFPA 70-2023 [Section No. 344.28]

First Revision No. 7826-NFPA 70-2024 [Section No. 344.42(A)]

(A) Threadless.

Threadless couplings and connectors shall be installed in accordance with one or more of the following:

(1) Made Tight. Threadless couplings and connectors used with conduit shall be made tight.

(2) Concrete Buried. Where buried in masonry or concrete, they shall be the concrete- tight type. ~~Where installed in wet locations, they shall comply with 314.15~~

(3) Wet Locations. Shall use fittings listed for wet locations.

(4) Threaded Conduit Ends . Threadless couplings and connectors shall not be used on threaded conduit ends unless listed for the purpose.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7826_344.42_A_.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 10:59:31 EST 2024

Committee Statement

Committee Statement: This revision complies with the NFPA Style manual section 3.5.1.2. Couplings and connectors are required to comply with 314.15, the text was removed to eliminate redundancy.

Response Message: FR-7826-NFPA 70-2024

Public Input No. 4076-NFPA 70-2023 [Section No. 344.42(A)]

(A) Threadless. [Text moving to (2) and (4)]

Threadless couplings and connectors ~~used with conduit shall be made tight. Where buried in masonry or concrete, they shall be the concrete tight type. Where installed in wet locations, they shall comply with 314.15. Threadless couplings and connectors shall not be used on threaded conduit ends unless listed for the purpose.~~shall be installed in accordance with one or more of the following:

(1) Made Tight. Threadless couplings and connectors used with conduit shall be made tight.

(2) Concrete Buried. Where buried in masonry or concrete, they shall be the concrete-tight type.

(3) Wet Locations. Shall use fittings listed for wet locations.

(4) Threaded Conduit Ends. Threadless couplings and connectors shall not be used on threaded conduit ends unless listed for the purpose.

First Revision No. 7624-NFPA 70-2024 [Section No. 344.56]

~~**344.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:43:20 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7624-NFPA 70-2024

Public Input No. 4082-NFPA 70-2023 [Section No. 344.56]

First Revision No. 7645-NFPA 70-2024 [Section No. 348.2]

348.2 ~~–~~ 3 Reconditioned Equipment.

Reconditioned FMC and associated fittings shall not be ~~reconditioned~~ permitted .

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:12:27 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited. Renumbered to comply with the NEC Style Manual 2.2.1 regarding reconditioned equipment.

Response Message: FR-7645-NFPA 70-2024

Public Input No. 2602-NFPA 70-2023 [Section No. 348.2]

Public Input No. 2890-NFPA 70-2023 [Section No. 348.2]

Public Input No. 1321-NFPA 70-2023 [Section No. 348.2]

First Revision No. 7680-NFPA 70-2024 [Section No. 348.6]

348.~~6~~ 2 Listing Requirements.

FMC and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 11:04:55 EST 2024

Committee Statement

Committee Statement: Renumber to .2 in compliance with the NEC Style Manual section 2.2.1 parallel numbering required.

Response Message: FR-7680-NFPA 70-2024

Public Input No. 3518-NFPA 70-2023 [Section No. 348.6]

First Revision No. 7683-NFPA 70-2024 [Section No. 348.30(A)]

(A) Securely Fastened.

FMC shall be securely fastened in place ~~by an approved means~~ within 300 mm (12 in.) of each box, cabinet, conduit body, or other conduit termination and shall be supported and secured at intervals not to exceed 1.4 m (4½ ft). Where used, cable ties shall be listed and be identified for securement and support.

Exception No. 1: Where FMC is fished between access points through concealed spaces in finished buildings or structures and supporting is impracticable.

Exception No. 2: Where flexibility is necessary after installation, lengths from the last point where the raceway is securely fastened shall not exceed the following:

(1) 900 mm (3 ft) for metric designators 16 through 35 (trade sizes ½ through 1¼)

(2) 1200 mm (4 ft) for metric designators 41 through 53 (trade sizes 1½ through 2)

(3) 1500 mm (5 ft) for metric designators 63 (trade size 2½) and larger

Exception No. 3: Lengths not exceeding 1.8 m (6 ft) from a luminaire terminal connection for tap connections to luminaires as permitted in 410.117(C).

Exception No. 4: Lengths not exceeding 1.8 m (6 ft) from the last point where the raceway is securely fastened for connections within an accessible ceiling to a luminaire(s) or other equipment.

For the purposes of the exceptions, listed FMC fittings shall be permitted as a means of securement and support.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Tue Jan 16 11:22:28 EST 2024

Committee Statement

Committee Statement: This section was revised to improve clarity. In accordance with the NEC Style Manual 4.1.1, redundant requirements should be avoided. The general requirements already address approved means. The last sentence in exception 4 aligns with all Exceptions.

Response Message: FR-7683-NFPA 70-2024

Public Input No. 2255-NFPA 70-2023 [Section No. 348.30(A)]

Public Input No. 2892-NFPA 70-2023 [Section No. 348.30(A)]

First Revision No. 7625-NFPA 70-2024 [Section No. 348.56]

~~**348.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:44:29 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7625-NFPA 70-2024

Public Input No. 4084-NFPA 70-2023 [Section No. 348.56]

First Revision No. 7646-NFPA 70-2024 [Section No. 350.2]

350.2 ~~–~~ 3 Reconditioned Equipment.

Reconditioned LFMC and associated fittings shall not be ~~reconditioned~~ permitted .

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:15:58 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited. Renumbered to comply with the NEC Style Manual 2.2.1 regarding reconditioned equipment.

Response Message: FR-7646-NFPA 70-2024

Public Input No. 1322-NFPA 70-2023 [Section No. 350.2]

Public Input No. 2603-NFPA 70-2023 [Section No. 350.2]

Public Input No. 2893-NFPA 70-2023 [Section No. 350.2]

First Revision No. 7686-NFPA 70-2024 [Section No. 350.6]

350.6~~–~~ 2 _ Listing Requirements.

LFMC and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 11:30:18 EST 2024

Committee Statement

Committee Statement: Renumbered to ".2" in compliance with the NEC Style Manual section 2.2.1 parallel numbering required.

Response Message: FR-7686-NFPA 70-2024

Public Input No. 3519-NFPA 70-2023 [Section No. 350.6]

First Revision No. 7689-NFPA 70-2024 [Section No. 350.10]

350.10 Uses Permitted.

LFMC shall be permitted to be used in exposed or concealed locations as follows:

(1) Where conditions of installation, operation, or maintenance require flexibility or protection from machine oils, liquids, vapors, or solids.

(2) In hazardous (classified) locations where specifically permitted by Chapter 5.

(3) For direct burial where listed and marked for the purpose.

(4) Conductors or cables rated at a temperature higher than the listed temperature rating of LFMC shall be permitted to be installed in LFMC, provided the conductors or cables are not operated at a temperature higher than the listed temperature rating of the LFMC.

(5) For encasement in concrete where listed and marked for direct burial and installed in compliance with 350.42.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 11:33:50 EST 2024

Committee Statement

Committee Statement: Added clarification for LFMC encased in concrete. Aligns Article 350.10 with Article 356.10 for permitted uses. The stiffness requirements for both products are the same.

Response Message: FR-7689-NFPA 70-2024

Public Input No. 3421-NFPA 70-2023 [Section No. 350.10]

First Revision No. 7694-NFPA 70-2024 [Section No. 350.30(A)]

(A) Securely Fastened.

LFMC shall be securely fastened in place ~~by an approved means~~ within 300 mm (12 in.) of each box, cabinet, conduit body, or other conduit termination and shall be supported and secured at intervals not to exceed 1.4 m (4½ ft). Where used, cable ties shall be listed and be identified for securement and support.

Exception No. 1: Where LFMC is fished between access points through concealed spaces in finished buildings or structures and supporting is impractical.

Exception No. 2: Where flexibility is necessary after installation, lengths from the last point where the raceway is securely fastened shall not exceed the following:

(1) 900 mm (3 ft) for metric designators 16 through 35 (trade sizes ½ through 1¼)

(2) 1200 mm (4 ft) for metric designators 41 through 53 (trade sizes 1½ through 2)

(3) 1500 mm (5 ft) for metric designators 63 (trade size 2½) and larger

Exception No. 3: Lengths not exceeding 1.8 m (6 ft) from a luminaire terminal connection for tap conductors to luminaires, as permitted in 410.117(C).

Exception No. 4: Lengths not exceeding 1.8 m (6 ft) from the last point where the raceway is securely fastened for connections within an accessible ceiling to luminaire(s) or other equipment.

For the purposes of the exceptions, listed LFMC fittings shall be permitted as a means of securement and support.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 12:46:23 EST 2024

Committee Statement

Committee Statement: This section was revised to improve clarity. In accordance with the NEC Style Manual 4.1.1. redundant requirements should be avoided. The general requirements already address approved means.

Response Message: FR-7694-NFPA 70-2024

Public Input No. 2895-NFPA 70-2023 [Section No. 350.30(A)]

First Revision No. 7695-NFPA 70-2024 [Section No. 350.42]

350.42 Couplings and Connectors.

~~Only fittings listed for use with LFMC shall be used.~~ Angle connectors shall not be concealed. ~~Straight LFMC fittings shall be permitted for direct burial where marked.~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 12:55:42 EST 2024

Committee Statement

Committee Statement: Information was added to Section 350.10 in a new (5). The text was revised to not create redundant information to comply with NEC Style Manual Section 4.1.1. The requirements are revised to align with 356.42. The direct burial test requirements are the same for both types of raceways.

Response Message: FR-7695-NFPA 70-2024

Public Input No. 3422-NFPA 70-2023 [Section No. 350.42]

First Revision No. 7626-NFPA 70-2024 [Section No. 350.56]

~~**350.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:45:26 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7626-NFPA 70-2024

Public Input No. 4086-NFPA 70-2023 [Section No. 350.56]

First Revision No. 7649-NFPA 70-2024 [New Section after 352.1]

352.3 Reconditioned Equipment.
Reconditioned PVC conduit, factory elbows, and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:30:09 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7649-NFPA 70-2024

Public Input No. 600-NFPA 70-2023 [New Section after 352.1]

First Revision No. 7698-NFPA 70-2024 [Section No. 352.6]

352.6 ~~–~~ **2** Listing Requirements.

PVC conduit, factory elbows, and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 13:03:32 EST 2024

Committee Statement

Committee Statement: Renumber to .2 in compliance with the NEC Style Manual section 2.2.1 parallel numbering required.

Response Message: FR-7698-NFPA 70-2024

Public Input No. 3520-NFPA 70-2023 [Section No. 352.6]

First Revision No. 7707-NFPA 70-2024 [Section No. 352.20(B)]

(B) Maximum.

PVC conduit larger than metric designator 155 (trade size 6) shall not be used.

Exception: Listed conduit exceeding metric designator 155 (trade size 6) shall be permitted where all of the following conditions are met:

(1) It is used where no part of the conduit is installed aboveground and backfilled per 300.5(F)

(2) It is located where it does not pass through or enter, a Class I, or Zone 0, 1, or 2 hazardous (classified) location

(3) The percent of cross section of conduit for conductors and cables does not exceed the percentages shown in Chapter 9 Table 1.

Informational Note: See 300.1(C) for the trade sizes and metric designators that are for identification purposes only and ~~do~~ are not ~~relate to~~ actual dimensions.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 13:58:06 EST 2024

Committee Statement

Committee Statement: Adding an exception to the .20(B)'s simply to permit trade sizes greater than 6 for underground use is a step forward for the code and would introduce the allowance for larger trade sizes of listed conduit, elbows and fittings. The conditions listed allow for trade sizes larger than 6 because these conditions are not established elsewhere in the code.

A Nationally Recognized Testing Laboratory can develop certification requirements rather quickly for the larger trade size conduits that manufacturers are already producing and installing. The limitations of the installation code upon those larger trade size conduits e.g. underground use only, conductor fill will have to be generated. For example, for underground use only eliminates the need for support distance spacing data having to be generated.

Response Message: FR-7707-NFPA 70-2024

First Revision No. 7781-NFPA 70-2024 [Section No. 352.44(B)]

(B) Earth Movement.

~~Expansion~~ Where required by 300.5(J) or to compensate for other earth movement, the expansion fittings for underground runs of direct buried PVC conduit emerging from the ground shall be provided above grade ~~when required to compensate for earth settling or movement, including frost heave~~ .

~~Informational Note: See 300.5(J) .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 08:51:39 EST 2024

Committee Statement

Committee Statement: Modified language to clarify the method used to compensate for earth movement of any type specific to direct buried PVC conduit. Article 300.5(J) limits its scope to frost heave and earth settling and addresses all underground raceways.

Response Message: FR-7781-NFPA 70-2024

First Revision No. 7627-NFPA 70-2024 [Section No. 352.56]

~~**352.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:46:53 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7627-NFPA 70-2024

Public Input No. 4089-NFPA 70-2023 [Section No. 352.56]

First Revision No. 7570-NFPA 70-2024 [Section No. 352.60]

~~**352.60** Grounding.~~

~~Where equipment grounding is required, separate grounding conductor shall be installed in the conduit.~~

~~*Exception No. 1: The equipment grounding conductor shall be permitted to be run separately from the circuit conductors as permitted in 250.134 , Exception No. 2, for dc circuits and 250.134 , Exception No. 1, for separately run equipment grounding conductors.*~~

~~*Exception No. 2: The equipment grounding conductor shall not be required where the grounded conductor is used to ground equipment as permitted in 250.142 .*~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 13:41:50 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7570-NFPA 70-2024

Public Input No. 2355-NFPA 70-2023 [Section No. 352.60]

Public Input No. 3563-NFPA 70-2023 [Section No. 352.60]

Public Input No. 143-NFPA 70-2023 [Section No. 352.60]

Public Input No. 689-NFPA 70-2023 [Section No. 352.60]

First Revision No. 7640-NFPA 70-2024 [New Section after 353.1]

353.3 Reconditioned Equipment.
Reconditioned HDPE conduit and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 08:38:15 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7640-NFPA 70-2024

Public Input No. 602-NFPA 70-2023 [New Section after 353.1]

First Revision No. 7588-NFPA 70-2024 [Section No. 353.6]

353.~~6~~ 2 Listing Requirements.

HDPE conduit and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 15:22:04 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7588-NFPA 70-2024

Public Input No. 3521-NFPA 70-2023 [Section No. 353.6]

First Revision No. 7590-NFPA 70-2024 [Section No. 353.20(B)]

(B) Maximum.

HDPE conduit larger than metric designator 155 (trade size 6) shall not be used.

Exception: Listed conduit exceeding metric designator 155 (trade size 6) shall be permitted where all

of the following conditions are met:

(1) It is used where no part of the conduit is installed aboveground and backfilled per 300.5(F)

(2) It is located where it does not pass through or enter, a Class I, or Zone 0, 1, or 2 hazardous (classified) location

(3) The percent of cross section of conduit for conductors and cables does not exceed the percentages shown in Chapter 9 Table 1.

Informational Note: See 300.1(C) for the trade sizes and metric designators that are for identification purposes only and ~~do~~ are not ~~relate to~~ actual dimensions.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 15:26:02 EST 2024

Committee Statement

Committee Statement: Adding an exception to the .20(B)'s simply to permit trade sizes greater than 6 for underground use is a step forward for the code and would introduce the allowance for larger trade sizes of listed conduit, elbows and fittings. The conditions listed allow for trade sizes larger than 6 because these conditions are not established elsewhere in the code.

A Nationally Recognized Testing Laboratory can develop certification requirements rather quickly for the larger trade size conduits that manufacturers are already producing and installing. The limitations of the installation code upon those larger trade size conduits e.g. underground use only, conductor fill will have to be generated. For example, for underground use only eliminates the need for support distance spacing data having to be generated.

Response Message: FR-7590-NFPA 70-2024

Public Input No. 430-NFPA 70-2023 [Section No. 353.20(B)]

First Revision No. 7628-NFPA 70-2024 [Section No. 353.56]

~~**353.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:52:23 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7628-NFPA 70-2024

First Revision No. 7572-NFPA 70-2024 [Section No. 353.60]

~~**353.60** Grounding.~~

~~Where equipment grounding is required, a separate grounding conductor shall be installed in the conduit.~~

~~*Exception No. 1: The equipment grounding conductor shall be permitted to be run separately from the conduit where used for grounding dc circuits as permitted in 250.134 , Exception No. 2.*~~

~~*Exception No. 2: The equipment grounding conductor shall not be required where the grounded conductor is used to ground equipment as permitted in 250.142 .*~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 13:53:11 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7572-NFPA 70-2024

Public Input No. 690-NFPA 70-2023 [Section No. 353.60]

Public Input No. 3566-NFPA 70-2023 [Section No. 353.60]

Public Input No. 2820-NFPA 70-2023 [Section No. 353.60]

Public Input No. 144-NFPA 70-2023 [Section No. 353.60]

First Revision No. 7594-NFPA 70-2024 [New Section after 354.1]

354.3 Reconditioned Equipment.

Reconditioned NUCC and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 15:47:47 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7594-NFPA 70-2024

Public Input No. 601-NFPA 70-2023 [New Section after 354.1]

First Revision No. 7597-NFPA 70-2024 [Section No. 354.6]

354.~~6~~ 2 Listing Requirements.

NUCC and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 15:53:06 EST 2024

Committee Statement

Committee Statement: Per the 2023 NEC Style Manual, clause 2.2.1, “Required Parallel Numbering Format” Listing requirements is relocated from 354.6 to 354.2.

Response Message: FR-7597-NFPA 70-2024

Public Input No. 3522-NFPA 70-2023 [Section No. 354.6]

First Revision No. 7629-NFPA 70-2024 [Section No. 354.56]

~~**354.56** Splices and Taps.~~

~~Splices and taps shall be made in junction boxes or other enclosures.~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:56:48 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7629-NFPA 70-2024

First Revision No. 7574-NFPA 70-2024 [Section No. 354.60]

~~**354.60** Grounding.~~

~~Where equipment grounding is required, an assembly containing a separate grounding conductor shall be used.~~

~~*Exception No. 1: The equipment grounding conductor shall be permitted to be run separately from the conduit where used for grounding dc circuits as permitted in 250.134 , Exception No. 2.*~~

~~*Exception No. 2: The equipment grounding conductor shall not be required where the grounded conductor is used to ground equipment as permitted in 250.142 .*~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 14:02:18 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7574-NFPA 70-2024

Public Input No. 145-NFPA 70-2023 [Section No. 354.60]

Public Input No. 2821-NFPA 70-2023 [Section No. 354.60]

Public Input No. 692-NFPA 70-2023 [Section No. 354.60]

First Revision No. 7600-NFPA 70-2024 [New Section after 355.1]

355.3 Reconditioned Equipment.
Reconditioned RTRC, factory elbows, and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 16:07:48 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7600-NFPA 70-2024

Public Input No. 603-NFPA 70-2023 [New Section after 355.1]

First Revision No. 7602-NFPA 70-2024 [Section No. 355.6]

355.~~6~~ 2 Listing Requirements.

RTRC, factory elbows, and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 16:11:02 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7602-NFPA 70-2024

Public Input No. 3523-NFPA 70-2023 [Section No. 355.6]

First Revision No. 7605-NFPA 70-2024 [Section No. 355.20(B)]

(B) Maximum.

RTRC larger than metric designator 155 (trade size 6) shall not be used.

Exception: Listed conduit exceeding metric designator 155 (trade size 6) shall be permitted where all of the following conditions are met:

(1) It is used where no part of the conduit is installed aboveground and backfilled per 300.5(F)

(2) It is located where it does not pass through or enter, a Class I, or Zone 0, 1, or 2 hazardous (classified) Location

(3) The percent of cross section of conduit for conductors and cables does not exceed the percentages shown in Chapter 9 Table 1

Informational Note: See 300.1(C) for the trade sizes and metric designators that are for identification purposes only and do not relate to actual dimensions.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 16:13:49 EST 2024

Committee Statement

Committee Statement: Adding an exception to the .20(B)'s simply to permit trade sizes greater than 6 for underground use is a step forward for the code and would introduce the allowance for larger trade sizes of listed conduit, elbows and fittings. The conditions listed allow for trade sizes larger than 6 because these conditions are not established elsewhere in the code.

A Nationally Recognized Testing Laboratory can develop certification requirements rather quickly for the larger trade size conduits that manufacturers are already producing and installing. The limitations of the installation code upon those larger trade size conduits e.g. underground use only, conductor fill will have to be generated. For example, for underground use only eliminates the need for support distance spacing data having to be generated.

Response Message: FR-7605-NFPA 70-2024

Public Input No. 1859-NFPA 70-2023 [Section No. 355.20(B)]

First Revision No. 7630-NFPA 70-2024 [Section No. 355.56]

~~**355.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:57:44 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7630-NFPA 70-2024

First Revision No. 7575-NFPA 70-2024 [Section No. 355.60]

~~**355.60** Grounding.~~

~~Where equipment grounding is required, a separate grounding conductor shall be installed in the conduit.~~

~~*Exception No. 1: The equipment grounding conductor shall be permitted to be run separately from the circuit conductors as permitted in 250.134 , Exception No. 2, for dc circuits and 250.134 , Exception No. 1, for separately run equipment grounding conductors.*~~

~~*Exception No. 2: An equipment grounding conductor shall not be required where the grounded conductor is used to ground equipment as in 250.142(A) .*~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 14:05:52 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7575-NFPA 70-2024

Public Input No. 693-NFPA 70-2023 [Section No. 355.60]

Public Input No. 3567-NFPA 70-2023 [Section No. 355.60]

Public Input No. 2822-NFPA 70-2023 [Section No. 355.60]

Public Input No. 146-NFPA 70-2023 [Section No. 355.60]

First Revision No. 7642-NFPA 70-2024 [New Section after 356.1]

356.3 Reconditioned Equipment.

Reconditioned LFNMC and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 08:45:02 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7642-NFPA 70-2024

Public Input No. 598-NFPA 70-2023 [New Section after 356.1]

First Revision No. 7501-NFPA 70-2024 [Section No. 356.6]

356.~~6~~ 2 Listing Requirements.

LFNC and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 08:23:56 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7501-NFPA 70-2024

Public Input No. 3524-NFPA 70-2023 [Section No. 356.6]

First Revision No. 7502-NFPA 70-2024 [Section No. 356.30]

356.30 Securing and Supporting.

LFNC shall be securely fastened and supported in accordance with one of the following:

(1) Where installed in lengths exceeding 1.8 m (6 ft), the conduit shall be securely fastened at intervals not exceeding 900 mm (3 ft) and within 300 mm (12 in.) on each side of every outlet box, junction box, cabinet, or fitting. Where used, cable ties shall be listed for the application and for securing and supporting.

(2) Securing or supporting of the conduit shall not be required where it is fished, installed in lengths not exceeding 900 mm (3 ft) at terminals where flexibility is required, or installed in lengths not exceeding 1.8 m (6 ft) from a luminaire terminal connection for tap conductors to luminaires permitted in 410.117(C).

(3) Horizontal runs of LFNC supported by openings through framing members at intervals not exceeding 900 mm (3 ft) and securely fastened within 300 mm (12 in.) of termination points shall be permitted.

(4) Securing or supporting of LFNC shall not be required where installed in lengths not exceeding 1.8 m (6 ft) from the last point where the raceway is securely fastened for connections within an accessible ceiling to a luminaire(s) or other equipment. For the purpose of 356.30, listed liquidtight flexible nonmetallic conduit fittings shall be permitted as a means of support.

For the purpose of 356.30, listed liquidtight flexible nonmetallic conduit fittings shall be permitted as a means of support.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 08:41:06 EST 2024

Committee Statement

Committee Statement: This First Revision clarifies that Listed LFNC Fittings are permitted as the means of securement and support.

Response Message: FR-7502-NFPA 70-2024

Public Input No. 2258-NFPA 70-2023 [Section No. 356.30]

First Revision No. 7631-NFPA 70-2024 [Section No. 356.56]

~~**356.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:58:41 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7631-NFPA 70-2024

Public Input No. 4090-NFPA 70-2023 [Section No. 356.56]

First Revision No. 7576-NFPA 70-2024 [Section No. 356.60]

~~**356.60** Grounding.~~

~~Where equipment grounding is required, a separate grounding conductor shall be installed in the conduit.~~

~~*Exception No. 1: The equipment grounding conductor shall be permitted to be run separately from the circuit conductors as permitted in 250.134 , Exception No. 2, for dc circuits and 250.134 , Exception No. 1, for separately run equipment grounding conductors.*~~

~~*Exception No. 2: The equipment grounding conductor shall not be required where the grounded conductor is used to ground equipment as permitted in 250.142 .*~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 14:09:52 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7576-NFPA 70-2024

Public Input No. 694-NFPA 70-2023 [Section No. 356.60]

Public Input No. 2356-NFPA 70-2023 [Section No. 356.60]

Public Input No. 147-NFPA 70-2023 [Section No. 356.60]

First Revision No. 7659-NFPA 70-2024 [New Section after 358.1]

358.3 Reconditioned Equipment.

Reconditioned EMT, factory elbows, and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:51:24 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7659-NFPA 70-2024

First Revision No. 7833-NFPA 70-2024 [Section No. 358.6]

358.~~6~~ 2 Listing Requirements.

EMT, factory elbows, and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 11:24:25 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7833-NFPA 70-2024

Public Input No. 3525-NFPA 70-2023 [Section No. 358.6]

First Revision No. 7837-NFPA 70-2024 [Section No. 358.42]

358.42 Couplings and Connectors.

Couplings and connectors shall be installed in accordance with one or more of the following:

(1) Made Tight. Couplings and connectors used with EMT shall be made up tight.

(2) Concrete Buried. Where buried in masonry or concrete, they shall be ~~concretetight type. Where installed in wet locations, they shall comply with 314.15~~ . concrete-tight type.

(3) Wet Locations. Shall use fittings listed for wet locations.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7837_358.42.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 11:33:36 EST 2024

Committee Statement

Committee Statement: This revision complies with the NFPA Style manual section 3.5.1.2. Couplings and connectors are required to comply with 314.15, the text was removed to eliminate redundancy.

Response Message: FR-7837-NFPA 70-2024

Public Input No. 4091-NFPA 70-2023 [Section No. 358.42]

358.42 Couplings and Connectors. [Text moving to (2)]

Couplings and connectors ~~used with EMT shall be made up tight. Where buried in masonry or concrete, they shall be concretetight type. Where installed in wet locations, they shall comply with 314.15.~~shall be installed in accordance with one or more of the following:

(1) Made Tight. Couplings and connectors used with EMT shall be made up tight.

(2) Concrete Buried. Where buried in masonry or concrete, they shall be concrete-tight type.

(3) Wet Locations. Shall use fittings listed for wet locations.

First Revision No. 7632-NFPA 70-2024 [Section No. 358.56]

~~**358.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 07:59:33 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7632-NFPA 70-2024

Public Input No. 4095-NFPA 70-2023 [Section No. 358.56]

First Revision No. 7661-NFPA 70-2024 [New Section after 360.1]

360.3 Reconditioned Equipment.
Reconditioned FMT and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:55:49 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7661-NFPA 70-2024

Public Input No. 599-NFPA 70-2023 [New Section after 360.1]

First Revision No. 7609-NFPA 70-2024 [Section No. 360.6]

360.~~6~~ 2 Listing Requirements.

FMT and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 16:32:03 EST 2024

Committee Statement

Committee Statement: Per the 2023 NEC Style Manual, clause 2.2.1, “Required Parallel Numbering Format” Listing requirements should be relocated from 360.6 to 360.2.

Response Message: FR-7609-NFPA 70-2024

Public Input No. 3526-NFPA 70-2023 [Section No. 360.6]

First Revision No. 7873-NFPA 70-2024 [Section No. 360.10]

360.10 Uses Permitted.

FMT shall be permitted to be used for branch circuits as follows:

(1) In dry locations

(2) Where concealed

(3) In accessible locations

(4) For system voltages of 1000 volts ac, 1500 volts dc, nominal maximum

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 14:51:11 EST 2024

Committee Statement

Committee Statement: Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.

Response Message: FR-7873-NFPA 70-2024

First Revision No. 7633-NFPA 70-2024 [Section No. 360.56]

~~**360.56** Splices and Taps.~~

~~Splices and taps shall be made in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 08:00:13 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7633-NFPA 70-2024

First Revision No. 7647-NFPA 70-2024 [Section No. 362.2]

362.2 ~~–~~ 3 Reconditioned Equipment.

Reconditioned ENT and associated fittings shall not be ~~reconditioned~~ permitted .

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:22:21 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited. Renumbered to comply with the NEC Style Manual 2.2.1 regarding reconditioned equipment.

Response Message: FR-7647-NFPA 70-2024

Public Input No. 2876-NFPA 70-2023 [Section No. 362.2]

Public Input No. 1323-NFPA 70-2023 [Section No. 362.2]

Public Input No. 2604-NFPA 70-2023 [Section No. 362.2]

First Revision No. 7613-NFPA 70-2024 [Section No. 362.6]

362.6~~–~~ 2 _ Listing Requirements.

ENT and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 16:48:19 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7613-NFPA 70-2024

Public Input No. 3527-NFPA 70-2023 [Section No. 362.6]

First Revision No. 7634-NFPA 70-2024 [Section No. 362.56]

~~**362.56** Splices and Taps.~~

~~Splices and taps shall be made only in accordance with 300.15 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 08:01:04 EST 2024

Committee Statement

Committee Statement: Splices and taps are applicable to conductors, not the raceway. These requirements for splicing conductors are already addressed in Sections 110.14(B) and 300.15.

Response Message: FR-7634-NFPA 70-2024

Public Input No. 4098-NFPA 70-2023 [Section No. 362.56]

First Revision No. 7578-NFPA 70-2024 [Section No. 362.60]

~~**362.60** Grounding.~~

~~Where equipment grounding is required, a separate grounding conductor shall be installed in the raceway in compliance with Article 250 , Part VI.~~

~~*Exception No. 1: The equipment grounding conductor shall be permitted to be run separately from the raceway where used for grounding dc circuits as permitted in 250.134 , Exception No. 2.*~~

~~*Exception No. 2: The equipment grounding conductor shall not be required where the grounded conductor is used as part of the effective ground-fault path as permitted in 250.142 .*~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 14:14:59 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding 'of the wire type' does not add clarity.

Response Message: FR-7578-NFPA 70-2024

Public Input No. 695-NFPA 70-2023 [Section No. 362.60]

Public Input No. 2359-NFPA 70-2023 [Section No. 362.60]

Public Input No. 148-NFPA 70-2023 [Section No. 362.60]

First Revision No. 7662-NFPA 70-2024 [New Section after 366.1]

366.3 Reconditioned Equipment.

Reconditioned auxiliary gutters and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:58:59 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7662-NFPA 70-2024

First Revision No. 7842-NFPA 70-2024 [Section No. 366.6]

366.6 ~~–~~ **2** Listing Requirements.

(A) Outdoors.

Nonmetallic auxiliary gutters installed outdoors shall be listed for all of the following conditions:

(1) Exposure to sunlight

(2) Use in wet locations

(3) Maximum ambient temperature of the installation

(B) Indoors.

Nonmetallic auxiliary gutters installed indoors shall be listed for the maximum ambient temperature of the installation.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 12:50:35 EST 2024

Committee Statement

Committee Statement: The language from existing 366.6 is relocated without change as a new 366.2. This revision complies with the NEC Style Manual Section 2.2.1 regarding Listing Requirements and provides correlation and parallel numbering throughout the document.

Response Message: FR-7842-NFPA 70-2024

Public Input No. 2865-NFPA 70-2023 [Section No. 366.6]

Public Input No. 3528-NFPA 70-2023 [Section No. 366.6]

First Revision No. 7843-NFPA 70-2024 [Section No. 366.23]

366.23 Ampacity of Conductors.

(A) Sheet Metal Auxiliary Gutters.

Conductors contained in sheet metal auxiliary gutters shall comply with 366.23(A)(1) and 366.23(A)(2).

(1) Adjustment Factors.

The adjustment factors in 310.15(C)(1) shall be applied only where the number of current-carrying conductors, including neutral conductors classified as current-carrying under 310.15(E), exceeds 30 at any cross section of the sheet metal auxiliary gutter. 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.

(2) Bus Bar Ampacity.

The current carried continuously in bare copper bars in sheet metal auxiliary gutters shall not exceed 1.55 amperes/mm^2 (1000 amperes/in.^{2}) of cross section of the conductor. For aluminum bars, the current carried continuously shall not exceed 1.09 amperes/mm^2 (700 amperes/in.^{2}) of cross section of the conductor.

(B) Nonmetallic Auxiliary Gutters.

The adjustment factors specified in 310.15(C)(1) shall be applicable to the current-carrying conductors up to and including the 20 percent fill specified in 366.22(B).

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7843_366.23.docx		

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:00:14 EST 2024

Committee Statement

Committee Statement: Section 366.23 which contains multiple requirements is parsed into two list items without technical changes to the provisions. This change improves clarity and is in accordance with 2023 NFPA Style Manual section 3.5.1.2.

Response Message: FR-7843-NFPA 70-2024

366.23 Ampacity of Conductors.

(A) Sheet Metal Auxiliary Gutters. [Move text to (1) and (2)]

Conductors contained in sheet metal auxiliary gutters shall comply with 366.23(A)(1) and 366.23(A)(2).~~The adjustment factors in 310.15(C)(1) shall be applied only where the number of current-carrying conductors, including neutral conductors classified as current-carrying under 310.15(E), exceeds 30 at any cross section of the sheet metal auxiliary gutter. 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. The current carried continuously in bare copper bars in sheet metal auxiliary gutters shall not exceed 1.55 amperes/mm^2 (1000 amperes/in.^{2}) of cross section of the conductor. For aluminum bars, the current carried continuously shall not exceed 1.09 amperes/mm^2 (700 amperes/in.^{2}) of cross section of the conductor.~~

(1) Adjustment Factors.

The adjustment factors in 310.15(C)(1) shall be applied only where the number of current-carrying conductors, including neutral conductors classified as current-carrying under 310.15(E), exceeds 30 at any cross section of the sheet metal auxiliary gutter. 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.

(2) Bus Bar Ampacity.

The current carried continuously in bare copper bars in sheet metal auxiliary gutters shall not exceed 1.55 amperes/mm^2 (1000 amperes/in.^{2}) of cross section of the conductor. For aluminum bars, the current carried continuously shall not exceed 1.09 amperes/mm^2 (700 amperes/in.^{2}) of cross section of the conductor.

(B) Nonmetallic Auxiliary Gutters.

The adjustment factors specified in 310.15(C)(1) shall be applicable to the current-carrying conductors up to and including the 20 percent fill specified in 366.22(B).

First Revision No. 7664-NFPA 70-2024 [New Section after 368.1]

368.3 Reconditioned Equipment.
Reconditioned mylar wrapped and powder coated busways shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 10:03:51 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7664-NFPA 70-2024

Public Input No. 627-NFPA 70-2023 [New Section after 368.1]

First Revision No. 7848-NFPA 70-2024 [Section No. 368.240]

368.240 Wiring 1000 Volts ac, 1500 Volts dc, Nominal or Less~~, Nominal~~ .

Secondary control devices and wiring that are provided as part of the metal-enclosed bus run shall be insulated by fire-retardant barriers from all primary circuit elements with the exception of short lengths of wire, such as at instrument transformer terminals.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:15:48 EST 2024

Committee Statement

Committee Statement: Title is revised to include the same voltage demarcation used in many places throughout the Code.

For consistency related to PI 2424

Response Message: FR-7848-NFPA 70-2024

First Revision No. 7648-NFPA 70-2024 [Section No. 369.2]

369.2 ~~–~~ 3 _ Reconditioned Equipment.

Reconditioned IBP and IBP systems shall not be ~~reconditioned~~ permitted .

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:27:03 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited. Renumbered to comply with the NEC Style Manual 2.2.1 regarding reconditioned equipment.

Response Message: FR-7648-NFPA 70-2024

Public Input No. 1324-NFPA 70-2023 [Section No. 369.2]

Public Input No. 2866-NFPA 70-2023 [Section No. 369.2]

Public Input No. 2605-NFPA 70-2023 [Section No. 369.2]

First Revision No. 7890-NFPA 70-2024 [Section No. 369.6]

369.6~~–~~ 2 _ Listing Requirements.

IBP and IBP systems shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 15:55:53 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the 2023 NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7890-NFPA 70-2024

Public Input No. 2867-NFPA 70-2023 [Section No. 369.6]

Public Input No. 3529-NFPA 70-2023 [Section No. 369.6]

First Revision No. 7666-NFPA 70-2024 [New Section after 370.1]

370.3 Reconditioned Equipment.
Reconditioned cablebus and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Tue Jan 16 10:16:37 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7666-NFPA 70-2024

Public Input No. 615-NFPA 70-2023 [New Section after 370.1]

First Revision No. 7849-NFPA 70-2024 [Section No. 370.60]

370.60 Grounding.

A cablebus system shall be grounded and/or bonded as applicable:

(1) Cablebus framework, where bonded, shall be permitted to be used as the equipment grounding conductor for branch circuits and feeders.

(2) A cablebus installation shall be grounded and bonded in accordance with Article 250 Part V and Part VI ~~of Article 250~~ , excluding 250.86, Exception No. 2.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:19:41 EST 2024

Committee Statement

Committee Statement: The text is revised to comply with the NEC Style Manual Section 4.1.4. As revised, the article number will precede the part number.

Response Message: FR-7849-NFPA 70-2024

Public Input No. 2668-NFPA 70-2023 [Section No. 370.60]

First Revision No. 7668-NFPA 70-2024 [New Section after 371.1]

371.3 Reconditioned Equipment.

Reconditioned flexible bus systems shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 10:20:51 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7668-NFPA 70-2024

First Revision No. 7850-NFPA 70-2024 [Section No. 371.6]

371.6~~–~~ 2 _ Listing Requirements.

Flexible bus systems shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:23:45 EST 2024

Committee Statement

Committee Statement: The language from existing 371.6 is relocated without change as a new 371.2. This revision complies with the NEC Style Manual Section 2.2.1 regarding Listing Requirements and provides correlation and parallel numbering throughout the document.

Response Message: FR-7850-NFPA 70-2024

Public Input No. 2868-NFPA 70-2023 [Section No. 371.6]

Public Input No. 3530-NFPA 70-2023 [Section No. 371.6]

First Revision No. 7669-NFPA 70-2024 [New Section after 372.1]

372.3 Reconditioned Equipment.
Reconditioned cellular concrete floor raceways and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 10:23:04 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7669-NFPA 70-2024

First Revision No. 7670-NFPA 70-2024 [New Section after 374.1]

374.3 Reconditioned Equipment.

Reconditioned cellular metal floor raceways and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 10:26:26 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7670-NFPA 70-2024

First Revision No. 7856-NFPA 70-2024 [Section No. 374.6]

374.~~6~~ 2 Listing Requirements.

Cellular metal floor raceways and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:39:32 EST 2024

Committee Statement

Committee Statement: The language from existing 374.6 is relocated without change as a new 374.2. This revision complies with the 2023 NEC Style Manual Section 2.2.1 regarding Listing Requirements and provides correlation and parallel numbering throughout the document.

Response Message: FR-7856-NFPA 70-2024

Public Input No. 2869-NFPA 70-2023 [Section No. 374.6]

Public Input No. 3531-NFPA 70-2023 [Section No. 374.6]

First Revision No. 7858-NFPA 70-2024 [Section No. 374.100]

374.100 General.

Cellular metal floor raceways shall be ~~constructed~~ installed so that adequate electrical and mechanical continuity of the complete system will be ~~secured. They shall provide a complete enclosure for the conductors. The interior surfaces shall be free from burrs and sharp edges, and surfaces over which conductors are drawn shall be smooth. Suitable bushings or fittings having smooth rounded edges shall be provided where conductors pass.~~ assured.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:40:45 EST 2024

Committee Statement

Committee Statement: The construction requirements located in Part III are simplified to eliminate redundancy and align with other sections such as 376.100. Section 374.6 requires cellular metal floor raceways and associated fittings to be listed and the construction requirements previously located in Part III are covered in the associated product standard, UL 209 - Cellular Metal Floor Raceways and Fittings.

Response Message: FR-7858-NFPA 70-2024

Public Input No. 127-NFPA 70-2023 [Sections Part III., 374.100]

First Revision No. 7651-NFPA 70-2024 [New Section after 376.1]

376.3 Reconditioned Equipment.

Reconditioned metal wireways and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:33:19 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7651-NFPA 70-2024

Public Input No. 620-NFPA 70-2023 [New Section after 376.1]

First Revision No. 7860-NFPA 70-2024 [Section No. 376.56(B)(1)]

(1) Installation.

Power distribution blocks installed in metal wireways shall be listed. ~~Power distribution blocks installed on the line side of the service equipment shall be marked "suitable for use on the line side of service equipment" or equivalent.~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:53:15 EST 2024

Committee Statement

Committee Statement: The second sentence of 376.56(B)(1) is removed as it is redundant with the requirements of 230.46.

Response Message: FR-7860-NFPA 70-2024

Public Input No. 2278-NFPA 70-2023 [Section No. 376.56(B)(1)]

First Revision No. 7644-NFPA 70-2024 [New Section after 378.1]

378.3 Reconditioned Equipment.

Reconditioned nonmetallic wireways and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 08:51:40 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7644-NFPA 70-2024

Public Input No. 621-NFPA 70-2023 [New Section after 378.1]

First Revision No. 7504-NFPA 70-2024 [Section No. 378.6]

378.~~6~~ 2 Listing Requirements.

Nonmetallic wireways and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 09:06:18 EST 2024

Committee Statement

Committee Statement: Updated to comply with 2023 NEC style manual, clause 2.2.1, "Required Parallel Numbering Format" Listing requirements should be relocated from 378.6 to 378.2.

Response Message: FR-7504-NFPA 70-2024

Public Input No. 2870-NFPA 70-2023 [Section No. 378.6]

Public Input No. 3532-NFPA 70-2023 [Section No. 378.6]

First Revision No. 7507-NFPA 70-2024 [Section No. 378.44]

378.44 Expansion Fittings.

Expansion fittings for nonmetallic wireway shall be provided to compensate for thermal expansion and contraction where the length change, calculated using the values in Table 352.44(A), is expected to be 6 mm (0.25 in.) or greater in a straight run.

~~Informational Note: See Table 352.44(A) for expansion characteristics of PVC conduit. The expansion characteristics of PVC nonmetallic wireway are identical.~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 09:15:56 EST 2024

Committee Statement

Committee Statement: Transitioned from informational note to text within 378.44 and clarified the reference to table 352.44(A) applies to non-metallic wireways.

Response Message: FR-7507-NFPA 70-2024

Public Input No. 1539-NFPA 70-2023 [Section No. 378.44]

First Revision No. 7580-NFPA 70-2024 [Section No. 378.60]

~~**378.60** Grounding.~~

~~Where equipment grounding is required, a separate grounding conductor shall be installed in the nonmetallic wireway. A separate equipment grounding conductor shall not be required where the grounded conductor is used to ground equipment as permitted in 250.142 .~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 14:26:17 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7580-NFPA 70-2024

Public Input No. 696-NFPA 70-2023 [Section No. 378.60]

Public Input No. 149-NFPA 70-2023 [Section No. 378.60]

Public Input No. 3577-NFPA 70-2023 [Section No. 378.60]

Public Input No. 2828-NFPA 70-2023 [Section No. 378.60]

First Revision No. 7652-NFPA 70-2024 [New Section after 384.1]

384.3 Reconditioned Equipment.

Reconditioned strut-type channel raceway and accessories shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:37:06 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7652-NFPA 70-2024

Public Input No. 622-NFPA 70-2023 [New Section after 384.1]

First Revision No. 7892-NFPA 70-2024 [Section No. 384.6]

384.~~6~~ 2 Listing Requirements.

Strut-type channel raceways and accessories shall be listed and identified for such use.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 16:01:01 EST 2024

Committee Statement

Committee Statement: Per the 2023 NEC style manual, clause 2.2.1, “Required Parallel Numbering Format” Listing requirements should be relocated from 384.6 to 384.2.

Response Message: FR-7892-NFPA 70-2024

Public Input No. 2873-NFPA 70-2023 [Section No. 384.6]

Public Input No. 3534-NFPA 70-2023 [Section No. 384.6]

First Revision No. 7653-NFPA 70-2024 [New Section after 386.1]

386.3 Reconditioned Equipment.
Reconditioned surface metal raceways and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:40:00 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7653-NFPA 70-2024

Public Input No. 623-NFPA 70-2023 [New Section after 386.1]

First Revision No. 7893-NFPA 70-2024 [Section No. 386.6]

386.~~6~~ 2 Listing Requirements.

Surface metal raceway and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 16:04:27 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the 2023 NEC Style Manual Section 2.2.1 regarding Listing Requirements.

Response Message: FR-7893-NFPA 70-2024

Public Input No. 2874-NFPA 70-2023 [Section No. 386.6]

Public Input No. 3535-NFPA 70-2023 [Section No. 386.6]

First Revision No. 7654-NFPA 70-2024 [New Section after 388.1]

388.3 Reconditioned Equipment.

Reconditioned surface nonmetallic raceways and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:41:29 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment and maintain its listing. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7654-NFPA 70-2024

Public Input No. 624-NFPA 70-2023 [New Section after 388.1]

First Revision No. 7894-NFPA 70-2024 [Section No. 388.6]

388.~~6~~ 2 Listing Requirements.

Surface nonmetallic raceway and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 16:07:53 EST 2024

Committee Statement

Committee Statement: Per the 2023 NEC style manual, clause 2.2.1, “Required Parallel Numbering Format” Listing requirements should be relocated from 388.6 to 388.2.

Response Message: FR-7894-NFPA 70-2024

Public Input No. 2875-NFPA 70-2023 [Section No. 388.6]

Public Input No. 3536-NFPA 70-2023 [Section No. 388.6]

First Revision No. 7582-NFPA 70-2024 [Section No. 388.60]

~~**388.60** Grounding.~~

~~Where equipment grounding is required, a separate grounding conductor shall be installed in the raceway.~~

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 14:33:02 EST 2024

Committee Statement

Committee Statement: Section 250.118 does not permit non-conductive raceways to be used as an equipment grounding conductor (EGC). The requirements for having a wire type equipment grounding conductor complying with Article 250 Part VI for this wiring method is already provided in other parts of this Code.

Section 250.118 for permitted EGCs does not reference nonmetallic wiring methods and only allows metal raceways, cable tray, and similar metal wiring methods to be used as equipment grounding conductors. The xxx.60 section for this article is being removed to eliminate any confusion for installing an equipment grounding conductor with this non-metallic wiring method. Changing the title in this section and adding ‘of the wire type’ does not add clarity.

Response Message: FR-7582-NFPA 70-2024

Public Input No. 697-NFPA 70-2023 [Section No. 388.60]

Public Input No. 150-NFPA 70-2023 [Section No. 388.60]

Public Input No. 2834-NFPA 70-2023 [Section No. 388.60]

First Revision No. 7673-NFPA 70-2024 [New Section after 390.1]

390.3 Reconditioned Equipment.

Reconditioned underfloor raceways shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 10:32:21 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7673-NFPA 70-2024

First Revision No. 7896-NFPA 70-2024 [Section No. 390.57]

390.~~57~~ 58 Discontinued Outlets.

When an outlet is abandoned, discontinued, or removed, the sections of circuit conductors supplying the outlet shall be removed from the raceway. No splices or reinsulated conductors, such as would be the case with abandoned outlets on loop wiring, shall be allowed in raceways.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 16:10:41 EST 2024

Committee Statement

Committee Statement: Renumbered to comply with the 2023 NEC Style Manual Section 2.2.1 regarding parallel numbering within similar articles when possible.

Response Message: FR-7896-NFPA 70-2024

Public Input No. 664-NFPA 70-2023 [Section No. 390.57]

First Revision No. 7655-NFPA 70-2024 [New Section after 392.1]

392.3 Reconditioned Equipment.
Reconditioned cable trays and associated fittings shall not be permitted.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 09:44:56 EST 2024

Committee Statement

Committee Statement: The panel is not aware of any established programs that provide an acceptable approach to reconditioning for this type of equipment. Section 110.20 indicates that equipment is permitted to be reconditioned unless otherwise prohibited.

Response Message: FR-7655-NFPA 70-2024

Public Input No. 616-NFPA 70-2023 [New Section after 392.1]

First Revision No. 7726-NFPA 70-2024 [Section No. 392.1]

392.1 Scope.

This article covers cable tray systems, including ladder, ventilated trough, ventilated channel, solid bottom, and other similar structures.

Informational Note: See ANSI/NEMA–VE 1-2017, *Metal Cable Tray Systems*, and NECA/NEMA 105-2015, *Standard for Installing Metal Cable Tray Systems*, and NEMA VE 2-2018 *Cable Tray Installation Guidelines* , and UL 568-2002 *Standard for Safety for Nonmetallic Cable Tray Systems* for further information on cable trays.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 15:15:10 EST 2024

Committee Statement

Committee Statement: Adding reference to NEMA VE 2 and UL 568 for additional information on cable trays. Document edition dates are required per the 2023 NFPA Manual of Style Section 6.1.3.2 and should not be deleted.

Response Message: FR-7726-NFPA 70-2024

Public Input No. 1305-NFPA 70-2023 [Section No. 392.1]

Public Input No. 4452-NFPA 70-2023 [Section No. 392.1]

First Revision No. 7727-NFPA 70-2024 [Section No. 392.10(A)]

(A) Wiring Methods.

The following wiring methods ~~in Table 392.10(A)~~ shall be permitted to be installed in cable tray systems under the conditions described in their respective articles and sections.

~~Table 392.10(A) Wiring Methods~~

~~Wiring Method Article~~

1. Armored cable: Type AC

~~320~~

2. CATV cables

~~800 and 820 Class 2 and Class 3 cables 722 and 725 Communications cables 800 and 805 Communications raceways 800~~

3. Class 2 and Class 3 cables

4. Class 4 cables

5. Communications cables

6. Communications raceways

7. Electrical metallic tubing: EMT

~~358~~

8. Electrical nonmetallic tubing: ENT

~~362~~

9. Fire alarm cables

~~722 and 760~~

10. Flexible metal conduit: FMC

~~348~~

11. Flexible metallic tubing: FMT

~~360~~

12. Instrumentation tray cable: Type ITC

~~341~~

13. Intermediate metal conduit: IMC

~~342~~

14. Liquidtight flexible metal conduit: LFMC

~~350~~

15. Liquidtight flexible nonmetallic conduit: LFNC

~~356~~

16. Metal-clad cable: Type MC

~~330~~

17. Mineral-insulated, metal-sheathed cable: Type MI

~~332~~

18. Network-powered broadband communications cables

~~800 and 830~~
19. Nonmetallic-sheathed cable: Types NM, NMC, and NMS

~~334~~
20. Non–power-limited fire alarm cable

~~722 and 760~~
21. Optical fiber cables

~~722 and 770~~
22. Other factory-assembled, multiconductor control, signal, or power cables that are specifically approved for installation in cable trays

23. Power and control tray cable: Type TC

~~336~~
24. Power-limited fire alarm cable

~~722 and 760~~
25. Power-limited tray cable

~~725~~
26. Rigid metal conduit: RMC

~~344~~
27. Rigid polyvinyl chloride conduit: PVC

~~352~~
28. Reinforced thermosetting resin conduit: RTRC

~~355~~
29. Service-entrance cable: Types SE and USE

~~338~~
30. Underground feeder and branch-circuit cable: Type UF

~~340~~

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7727_392.10_A_.docx	For Staff Use	

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 15:23:36 EST 2024

Committee Statement

Committee Statement: 4.1.4 2023 NEC Style Manual References shall not be made to an entire article. References to specific parts within articles shall be permitted. References to all parts of an article shall not be permitted. Changing table to a List and all references to articles were removed. Class 4 systems are added as they are allowed in cable trays in accordance with NEC 2023.

Response Message: FR-7727-NFPA 70-2024

Public Input No. 3900-NFPA 70-2023 [Section No. 392.10(A)]

Public Input No. 994-NFPA 70-2023 [Section No. 392.10(A)]

First Revision No. 7740-NFPA 70-2024 [Section No. 392.18(F)]

(F) ~~Adequate~~ Access.

~~Sufficient space~~ The minimum space of 300mm (12in.) of access above cable trays shall be provided and maintained ~~about cable trays~~ to permit ~~adequate~~ access for installing and maintaining the cables.

Exception No. 1: Where the installation complies with Section 645.4 for IT equipment room.

Exception No. 2: In industrial establishments, where conditions of maintenance and supervision ensure that only qualified persons service the installed cable tray.

Exception No. 3: By special permission, smaller distance spaces shall be permitted.

Exception No. 4: For equipment crossing at any angle.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 15:54:04 EST 2024

Committee Statement

Committee Statement: The ambiguous terms are replaced with minimum dimensions as recommended by the (ANSI/TIA/EIA-569-A) to be in compliance with section 3.2.1 and table 3.2.1 in the NEC style manual. Also, to address concerns with the minimum dimensions prescribed exceptions which include special permissions for smaller requirements and relaxations for industrial locations.

Response Message: FR-7740-NFPA 70-2024

Public Input No. 3544-NFPA 70-2023 [Section No. 392.18(F)]

First Revision No. 7742-NFPA 70-2024 [Section No. 392.18(H)]

(H) Marking.

Cable trays containing conductors operating over ~~600 volts~~ 1000 volts ac, 1500 volts dc, nominal shall have a permanent, legible warning notice carrying the wording "DANGER — HIGH VOLTAGE — KEEP AWAY" placed in a readily visible position on all cable trays, with the spacing of warning notices not to exceed 3 m (10 ft). The danger marking(s) or labels shall comply with 110.21(B).

Exception: Where not accessible (as applied to equipment), in industrial establishments where the conditions of maintenance and supervision ensure that only qualified persons service the installation, cable tray system warning notices shall be located where necessary for the installation to ensure safe maintenance and operation.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 15:59:13 EST 2024

Committee Statement

Committee Statement: This revision correlates with the voltages identified in Sections 392.20(A)&(B). Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.

Response Message: FR-7742-NFPA 70-2024

Public Input No. 530-NFPA 70-2023 [Section No. 392.18(H)]

First Revision No. 7870-NFPA 70-2024 [Sections 392.20(A), 392.20(B)]

Sections 392.20(A), 392.20(B)

(A) Multiconductor Cables Operating at 1000 Volts ac, 1500 volts dc, nominal or Less.

Multiconductor cables operating at 1000 volts ac, 1500 volts dc, nominal or less shall be permitted to be installed in the same tray.

(B) Cables Operating at Over 1000 Volts ac, 1500 volts dc, nominal .

Cables operating at over 1000 volts ac, 1500 volts dc, nominal and those operating at 1000 volts ac, 1500 volts dc, nominal or less installed in the same cable tray shall comply with either of the following:

(1) The cables operating at over 1000 volts ac, 1500 volts dc, nominal are Type MC.

(2) The cables operating at over 1000 volts ac, 1500 volts dc, nominal are separated from the cables operating at 1000 volts ac, 1500 volts dc, nominal or less by a solid fixed barrier of a material compatible with the cable tray.

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7870_392.20.docx	For Staff Use	

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 14:47:57 EST 2024

Committee Statement

Committee Statement: Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.
Response Message: FR-7870-NFPA 70-2024

First Revision No. 7750-NFPA 70-2024 [Section No. 392.22(A)(5)]

(5) Ventilated Channel Cable Trays Containing Multiconductor Cables of Any Type.

Where ventilated channel cable trays contain multiconductor cables of any type, 392.22(A)(5)(a) and (A)(5)(b) shall apply.

(a) Where only one multiconductor cable is installed, the cross-sectional area shall not exceed the value specified in Column 1 of Table 392.22(A)(5).

(b) Where more than one multiconductor cable is installed, the sum of the cross-sectional area of all cables shall not exceed the value specified in Column 2 of Table 392.22(A)(5).

Table 392.22(A)(5) Allowable Cable Fill Area for Multiconductor Cables in Ventilated Channel Cable Trays for Cables Rated 2000 Volts or Less

Inside Width of Cable Tray				Maximum Allowable Fill Area for Multiconductor Cables				
				Column 1 One Cable			Column 2 More Than One Cable	
mm		in.		mm^2	in.^{2}		mm^2	in.^{2}
~~75~~ 50		2		850	1.3		500	0.8
75		3		1500	2.3		850	1.3
100		4		2900	4.5		1600	2.5
150		6		4500	7.0		2450	3.8

Supplemental Information

File Name	Description	Approved
NEC_CMP8_FR-7750_Table_392.22_A_5_.docx	For Staff Use	

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 16:07:05 EST 2024

Committee Statement

Committee Statement: 2” vented channel cable tray was added to Table 392.22(A)(5) to be consistent with Table 392.22(A)(6).

Response Message: FR-7750-NFPA 70-2024

Public Input No. 1300-NFPA 70-2023 [Section No. 392.22(A)(5)]

First Revision No. 7753-NFPA 70-2024 [Section No. 392.22(A) [Excluding any Sub-Sections]]

The number of multiconductor cables, rated 2000 volts or less, permitted in a single cable tray shall not exceed the requirements of this section. The conductor sizes shall apply to ~~both~~ aluminum, copper and copper-clad aluminum conductors. Where dividers are used, fill calculations shall apply to each divided section of the cable tray.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 16:24:11 EST 2024

Committee Statement

Committee Statement: The revision aligns the use of aluminum, copper, and copper-clad aluminum conductors with 392.22(B).

Response Message: FR-7753-NFPA 70-2024

First Revision No. 7752-NFPA 70-2024 [Section No. 392.22(B) [Excluding any Sub-Sections]]

The number of single conductor cables, rated 2000 volts or less, permitted in a single cable tray section shall not exceed the requirements of this section. The ~~single conductors, or~~ conductor ~~assemblies, shall be evenly distributed across the cable tray. The conductor~~ sizes shall apply to ~~both~~ aluminum, copper and copper-clad aluminum conductors.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 16:18:37 EST 2024

Committee Statement

Committee Statement: Revised to allow flexibility in the placement of cables and to support the use of copper-clad aluminum. There are general requirements for future expansion in 90.8(A) and requirements to group conductors 300.20(A) which address distribution of cables across the cable tray.

Response Message: FR-7752-NFPA 70-2024

Public Input No. 1294-NFPA 70-2023 [Section No. 392.22(B)]

Public Input No. 828-NFPA 70-2023 [Section No. 392.22(B) [Excluding any Sub-Sections]]

First Revision No. 7759-NFPA 70-2024 [Section No. 392.60(A)]

(A) Metal Cable Trays.

Metal 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 this section. Metal 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, Part IV . Metal cable trays containing only non-power, power-limited, or fault managed power conductors, shall be electrically continuous through approved connections or the use of a bonding jumper.

Informational Note: Examples of non-power conductors include nonconductive optical fiber cables ~~and~~ . Class 2 and Class 3 ~~remote~~ power ~~control~~ limited circuits , ~~signaling,~~ and Class 4 fault managed power ~~limited~~ circuits.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 16:50:04 EST 2024

Committee Statement

Committee Statement: The revised text has been modified to comply with the 2023 style manual. The text was revised to address changes in low power class circuits.

Response Message: FR-7759-NFPA 70-2024

Public Input No. 2669-NFPA 70-2023 [Section No. 392.60(A)]

Public Input No. 4336-NFPA 70-2023 [Section No. 392.60(A)]

First Revision No. 7861-NFPA 70-2024 [Section No. 394.10]

394.10 Uses Permitted.

Concealed knob-and-tube wiring shall be permitted to be installed in the hollow spaces of walls and ceilings, or in unfinished attics and roof spaces as provided by 394.23, only as follows:

(1) For extensions of existing installations

(2) Elsewhere by special permission

Informational Note: See 210.12(E) for further information on branch circuit wiring extensions, modifications, or replacements.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 13:56:10 EST 2024

Committee Statement

Committee Statement: A new informational note is added for clarity and completeness of the Code requirements when extending concealed knob-and-tube wiring.

Response Message: FR-7861-NFPA 70-2024

Public Input No. 3907-NFPA 70-2023 [Section No. 394.10]

First Revision No. 7508-NFPA 70-2024 [New Part after I.]

380.2 Listing Requirements.

Multioutlet assemblies and associated fittings shall be listed.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Mon Jan 15 09:22:50 EST 2024

Committee Statement

Committee Statement: Due to increased complexities in multioutlet assemblies a listing requirement is necessary to ensure these products meet the applicable product safety standard.

Response Message: FR-7508-NFPA 70-2024

Public Input No. 2879-NFPA 70-2023 [New Part after I.]

First Revision No. 7867-NFPA 70-2024 [Part III.]

Part III. Pull and Junction Boxes, Conduit Bodies, and Handhole Enclosures for Use on Systems over 1000 Volts ac , 1500 Volts dc, Nominal

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Wed Jan 17 14:33:51 EST 2024

Committee Statement

Committee Statement: Requirements are revised to include the same voltage demarcation used in many places throughout the Code. This is in reference to Global PI-2424.

Response Message: FR-7867-NFPA 70-2024

First Revision No. 7846-NFPA 70-2024 [Part IV.]

Part IV. Requirements for Over 1000 Volts ac , 1500 Volts dc, Nominal

Submitter Information Verification

Committee: NEC-P08
Submittal Date: Wed Jan 17 13:11:41 EST 2024

Committee Statement

Committee Statement: Title is revised to include the same voltage demarcation used in many places throughout the Code.

For consistency related to PI 2424

Response Message: FR-7846-NFPA 70-2024

Public Input No. 2424-NFPA 70-2023 [Global Input]

First Revision No. 7763-NFPA 70-2024 [Section No. Table]

Table 1

Table 1 Percent of Cross Section of Conduit and Tubing for Conductors and Cables

Number of Conductors and/or Cables	Cross-Sectional Area (%)
1	53
2	31
Over 2	40

Informational Note No. 1: Table 1 is based on common conditions of proper cabling and alignment of conductors where the length of the pull and the number of bends are within reasonable limits. It should be recognized that, for certain conditions, a larger size ~~conduit~~ raceway or a lesser ~~conduit~~ raceway fill should be considered.

Informational Note No. 2: When pulling three conductors or cables into a raceway, if the ratio of the raceway (inside diameter) to the conductor or cable (outside diameter) is between 2.8 and 3.2, jamming can occur. While jamming can occur when pulling four or more conductors or cables into a raceway, the probability is very low.

Notes to Tables

(1) See Informative Annex C for the maximum number of conductors and fixture wires, all of the same size (total cross-sectional area including insulation) permitted in trade sizes of the applicable conduit or tubing.

(2) Table 1 applies only to complete conduit or tubing systems and is not intended to apply to sections of conduit or tubing used to protect exposed wiring and cable from physical damage.

(3) Equipment grounding or bonding conductors, where installed, shall be included when calculating conduit or tubing fill. The actual dimensions of the equipment grounding or bonding conductor (insulated or bare) shall be used in the calculation.

(4) Where conduit or tubing nipples, not including connectors, having a maximum length not to exceed 600 mm (24 in.) are installed between boxes, cabinets, and similar enclosures, the nipples shall be permitted to be filled to 60 percent of their total cross-sectional area, and 310.15(C)(1) adjustment factors need not apply to this condition.

(5) For conductors not included in Chapter 9, such as multiconductor cables and optical fiber cables, the actual dimensions shall be used.

(6) For combinations of conductors of different sizes, use actual dimensions or Table 5 and Table 5A for dimensions of conductors and Table 4 for the applicable conduit or tubing dimensions.

(7) When calculating the maximum number of conductors or cables permitted in a conduit or tubing, all of the same size (total cross-sectional area including insulation), the next higher whole number shall be used to determine the maximum number of conductors or cables permitted when the calculation results in a decimal greater than or equal to 0.8. When calculating the size for conduit or tubing permitted for a single conductor or cable , one conductor or cable shall be permitted when the calculation results in a decimal greater than or equal to 0.8.

(8) Where bare conductors are ~~permitted by other sections of this~~ *Code* installed , the dimensions for bare conductors in Table 8 shall be permitted.

(9) A multiconductor cable, optical fiber cable, or flexible cord of two or more conductors shall be treated as a single conductor for calculating percentage conduit or tubing fill area. For cables that have elliptical cross sections, the cross-sectional area calculation shall be based on using the major diameter of the ellipse as a circle diameter. Assemblies of single insulated conductors without an overall covering shall not be considered a cable when determining conduit or tubing fill area. The conduit or tubing fill for the assemblies shall be calculated based upon the individual conductors.

(10) The values for approximate conductor diameter and area shown in Table 5 are based on worst-case scenario and indicate round concentric-lay-stranded conductors. Solid and round concentric-lay-stranded conductor values are grouped together for the purpose of

Table 5. Round compact-stranded conductor values are shown in Table 5A. If the actual values of the conductor diameter and area are known, they shall be permitted to be used.

Submitter Information Verification

Committee: NEC-P08

Submittal Date: Tue Jan 16 17:41:00 EST 2024

Committee Statement

Committee Statement: Informational Note 1 changed term ‘conduit’ to ‘raceway’ to be more inclusive as EMT is not a conduit, but it is a raceway.

Table Note 7 added the term ‘cable’ to clarify that it applies to both conductors and cables.

Table Note 8 now clarifies when bare conductors are installed, Table 8 is applicable to determine the conductor dimension.

Response Message: FR-7763-NFPA 70-2024

Public Input No. 2572-NFPA 70-2023 [Section No. Table]

Public Input No. 758-NFPA 70-2023 [Section No. Table]